

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/22/2019

Reviewed on 08/22/2019

1 Identification

- **Product identifier**
- **Trade name:** Reusable/ Disposable Desiccant Cartridge - Silica Gel
- **Article number:** 71212-02, 71212-04
- **CAS Number:**
112926-00-8
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

- Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.*
- Muta. 2 H341 Suspected of causing genetic defects.*
- Carc. 1B H350 May cause cancer.*
- Repr. 1B H360 May damage fertility or the unborn child.*



GHS07

- Acute Tox. 4 H302 Harmful if swallowed.*
- Skin Sens. 1 H317 May cause an allergic skin reaction.*

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07



GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**
cobalt dichloride
- **Hazard statements**
Harmful if swallowed.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

May damage fertility or the unborn child.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

If on skin: Wash with plenty of water.

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

Store in a dry place. Store in a closed container.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 2

Fire = 0

Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

· Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Substances

· CAS No. Description

112926-00-8 Precipitated silica (Silica-Amorphous)

· Dangerous components:

7646-79-9	cobalt dichloride	≤2.5%
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4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

112926-00-8	Precipitated silica (Silica-Amorphous)	18 mg/m ³
7646-79-9	cobalt dichloride	0.13 mg/m ³

- **PAC-2:**

112926-00-8	Precipitated silica (Silica-Amorphous)	200 mg/m ³
7646-79-9	cobalt dichloride	18 mg/m ³

- **PAC-3:**

112926-00-8	Precipitated silica (Silica-Amorphous)	1,200 mg/m ³
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7646-79-9 cobalt dichloride

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83 mg/m³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
*Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 Prevent formation of dust.*
- **Information about protection against explosions and fires:** *Keep respiratory protective device available.*
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *No special requirements.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *None.*
- **Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** *No further data; see item 7.*
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

112926-00-8 Precipitated silica (Silica-Amorphous)

PEL 20mppcf or 80mg/m³ /%SiO₂

REL Long-term value: 6 mg/m³
See Pocket Guide App. C

TLV TLV withdrawn

7646-79-9 cobalt dichloride

PEL Long-term value: 0.1* mg/m³
*as Co; *for metal dust and fume*

REL Long-term value: 0.05 mg/m³
as Co; metal dust fume

TLV Long-term value: (0.02) NIC-0.02* mg/m³
*as Co, *inhalable; NIC-DSEN; RSEN; BEI*

- **Additional information:** *The lists that were valid during the creation were used as basis.*
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
*Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.*
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Solid material

Color: Light blue

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapor pressure:** Not applicable.

· **Density at 20 °C (68 °F):** 2.1 g/cm³ (17.5245 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not applicable.

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- | | |
|---|--|
| · Evaporation rate | Not applicable. |
| · Solubility in / Miscibility with Water: | Insoluble. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not applicable. |
| Kinematic: | Not applicable. |
| VOC content: | 0.00 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

7646-79-9 cobalt dichloride

Oral	LD50	80 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:**
- Sensitization possible through inhalation.
- Sensitization possible through skin contact.
- **Additional toxicological information:**

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

112926-00-8	Precipitated silica (Silica-Amorphous)	3
7646-79-9	cobalt dichloride	2B

- **NTP (National Toxicology Program)**

Substance is not listed.

- **OSHA-Ca (Occupational Safety Health Administration)**

Substance is not listed.

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
 Very toxic for fish
 Toxic for fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 1 (Assessment by list): slightly hazardous for water
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
 Also poisonous for fish and plankton in water bodies.
 Very toxic for aquatic organisms
 Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*

14 Transport information

- | | |
|--|--|
| <ul style="list-style-type: none"> · UN-Number · DOT · ADR, IMDG, IATA | <p style="margin: 0;">Void
UN3077</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · ADR | <p style="margin: 0;">Void
3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.</p> |
| <ul style="list-style-type: none"> · IMDG | <p style="margin: 0;">ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.,
MARINE POLLUTANT</p> |
| <ul style="list-style-type: none"> · IATA | <p style="margin: 0;">ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.</p> |

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· **Transport hazard class(es)**· **DOT**· **Class**

Void

· **ADR, IMDG, IATA**· **Class**

9 Miscellaneous dangerous substances and articles

· **Label**

9

· **Packing group**· **DOT**

Void

· **ADR, IMDG, IATA**

III

· **Environmental hazards:**· **Marine pollutant:**

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special marking (IATA):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Miscellaneous dangerous substances and articles

· **Danger code (Kemler):**

90

· **EMS Number:**

F-A,S-F

· **Stowage Category**

A

· **Stowage Code**

SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **ADR**· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **IMDG**· **Limited quantities (LQ)**

5 kg

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **UN "Model Regulation":**

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **Sara**· **Section 355 (extremely hazardous substances):**

Substance is not listed.

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· **Section 313 (Specific toxic chemical listings):**

7646-79-9	cobalt dichloride
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· **TSCA (Toxic Substances Control Act):**

7646-79-9	cobalt dichloride	ACTIVE
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· **Hazardous Air Pollutants**

7646-79-9	cobalt dichloride
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· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

cobalt dichloride

· **Hazard statements**

Harmful if swallowed.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

May damage fertility or the unborn child.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing must not be allowed out of the workplace.

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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Wear protective gloves/protective clothing/eye protection/face protection.
 [In case of inadequate ventilation] wear respiratory protection.
 If swallowed: Call a poison center/doctor if you feel unwell.
 Rinse mouth.
 If on skin: Wash with plenty of water.
 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 IF exposed or concerned: Get medical advice/attention.
 Specific treatment (see on this label).
 If skin irritation or rash occurs: Get medical advice/attention.
 If experiencing respiratory symptoms: Call a poison center/doctor.
 Wash contaminated clothing before reuse.
 Store in a dry place. Store in a closed container.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 08/22/2019 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 1B: Carcinogenicity – Category 1B

Repr. 1B: Reproductive toxicity – Category 1B

Safety Data Sheet

according to WHS Regulations

Printing date 22.08.2019

Revision: 22.08.2019

1 Identification

· **Product identifier**

· **Trade name:** Reusable/ Disposable Desiccant Cartridge - Silica Gel

· **Article number:** 71212-02, 71212-04

· **CAS Number:**

112926-00-8

· **Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

· **Application of the substance / the mixture** Laboratory chemicals

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

ProSciTech Pty Ltd

11 Carlton Street, Kirwan QLD 4817 Australia

Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)

Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)

Website: ems.proscitech.com

Emgrid Australia Pty. Ltd.

P.O. Box 118

The Patch VIC 3792

Australia

Tel: 03 9752 1785

Fax: 03 9752 1784

Website: www.emgrid.com.au

· **Further information obtainable from:** Product safety department

· **Emergency telephone number:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

2 Hazard(s) Identification

· **Classification of the substance or mixture**



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.

Repr. 1B H360 May damage fertility or the unborn child.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

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AU

Safety Data Sheet

according to WHS Regulations

Printing date 22.08.2019

Revision: 22.08.2019

Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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- **Label elements**
- **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** *Danger*

- **Hazard-determining components of labelling:**

cobalt dichloride

- **Hazard statements**

Harmful if swallowed.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

May damage fertility or the unborn child.

- **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

Wear respiratory protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

IF ON SKIN: Wash with plenty of water.

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Wash contaminated clothing before reuse.

Store in a dry place. Store in a closed container.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition and Information on Ingredients

- **Chemical characterisation: Substances**

- **CAS No. Description**

112926-00-8 Precipitated silica (Silica-Amorphous)

(Contd. on page 3)

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according to WHS Regulations

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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· Dangerous components:		
7646-79-9	cobalt dichloride	≤2.5%
· SVHC		
7646-79-9	cobalt dichloride	

4 First Aid Measures

- **Description of first aid measures**

- **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water.

- **After swallowing:** Call for a doctor immediately.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**

- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

- **Special hazards arising from the substance or mixture** No further relevant information available.

- **Advice for firefighters**

- **Protective equipment:** No special measures required.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures** Not required.

- **Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

- **Handling:**

- **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

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- Open and handle receptacle with care.
- Prevent formation of dust.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

112926-00-8 Precipitated silica (Silica-Amorphous)

NES Long-term value: 10 mg/m³

WES Long-term value: 10 mg/m³

· **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Store protective clothing separately.
- **Respiratory protection:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
 - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
 - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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-AU-

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· Eye protection:



Tightly sealed goggles

9 Physical and Chemical Properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Solid material

Colour: Light blue

· Odour: Odourless

· Odour threshold: Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gas): Product is not flammable.

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Not determined.

· Explosive properties: Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not applicable.

· Density at 20 °C: 2.1 g/cm³

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with water:

Insoluble.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· Other information: No further relevant information available.

10 Stability and Reactivity

· Reactivity: No further relevant information available.

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- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects**

- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

7646-79-9 cobalt dichloride		
Oral	LD50	80 mg/kg (rat)

- **Primary irritant effect:**

- **Skin corrosion/irritation** No irritant effect.

- **Serious eye damage/irritation** No irritating effect.

- **Respiratory or skin sensitisation**

- Sensitisation possible through inhalation.

- Sensitisation possible through skin contact.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

- Muta. 2, Carc. 1B, Repr. 1B

12 Ecological Information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Behaviour in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Ecotoxicological effects:**

- **Remark:**

- Very toxic for fish

- Toxic for fish

- **Additional ecological information:**

- **General notes:**

- Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Also poisonous for fish and plankton in water bodies.

- Very toxic for aquatic organisms

- Toxic for aquatic organisms

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

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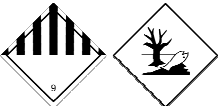
Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Contd. of page 6)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number · ADG, IMDG, IATA	UN3077
· UN proper shipping name · ADG · IMDG · IATA	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
· Transport hazard class(es) · ADG, IMDG, IATA	
	
· Class · Label	9 Miscellaneous dangerous substances and articles. 9
· Packing group · ADG, IMDG, IATA	III
· Environmental hazards: · Marine pollutant: · Special marking (ADG): · Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree)
· Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category · Stowage Code	Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG · Limited quantities (LQ)	5 kg

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· Transport category	3
· Tunnel restriction code	-
<hr style="border-top: 1px dashed #000;"/>	
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Australian Inventory of Chemical Substances**

Substance is listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

Substance is not listed.

· **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

cobalt dichloride

· **Hazard statements**

Harmful if swallowed.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

May damage fertility or the unborn child.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

Wear respiratory protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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IF ON SKIN: Wash with plenty of water.

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Wash contaminated clothing before reuse.

Store in a dry place. Store in a closed container.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** Substance is not listed.

· **Seveso category E1** Hazardous to the Aquatic Environment

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

7646-79-9	cobalt dichloride
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· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 1B: Carcinogenicity – Category 1B

Repr. 1B: Reproductive toxicity – Category 1B

Safety Data Sheet

according to HPR, Schedule 1

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Reviewed on 08/22/2019

1 Identification

- **Product identifier**
- **Trade name:** Reusable/ Disposable Desiccant Cartridge - Silica Gel
- **Article number:** 71212-02, 71212-04
- **CAS Number:**
112926-00-8
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard identification

- **Classification of the substance or mixture**



GHS08 Health hazard

- Respiratory Sensitizer - Category 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Germ Cell Mutagenicity - Category 2 H341 Suspected of causing genetic defects.
- Carcinogenicity - Category 1B H350 May cause cancer.
- Reproductive Toxicity - Category 1B H360 May damage fertility or the unborn child.



GHS07

- Acute Toxicity (Oral) - Category 4 H302 Harmful if swallowed.
- Skin Sensitizer - Category 1 H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
cobalt dichloride
- **Hazard statements**
Harmful if swallowed.

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

May damage fertility or the unborn child.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

If on skin: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Store in a dry place. Store in a closed container.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 0

3 Composition/Information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

112926-00-8 Precipitated silica (Silica-Amorphous)

· **Dangerous components:**

7646-79-9	cobalt dichloride	0.1-1% w/w *
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* Actual concentration ranges are withheld as a trade secret.

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(Contd. on page 3)

Safety Data Sheet

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of dust.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/ Personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

112926-00-8 Precipitated silica (Silica-Amorphous)

EL Long-term value: 4* 1.5** mg/m³
Precipitated and gel; *total; **respirable

EV Long-term value: 10 mg/m³

7646-79-9 cobalt dichloride

EL Long-term value: 0.02 mg/m³
as Co; IARC 2B

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Solid material

Color: Light blue

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapor pressure:** Not applicable.

· **Density at 20 °C:** 2.1 g/cm³

· **Relative density** Not determined.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

Water: Insoluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic: Not applicable.

Kinematic: Not applicable.

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid** No further relevant information available.

· **Incompatible materials:** No further relevant information available.

· **Hazardous decomposition products:** No dangerous decomposition products known.

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(Contd. on page 6)

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Reviewed on 08/22/2019

Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Contd. of page 5)

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

7646-79-9 cobalt dichloride

Oral	LD50	80 mg/kg (rat)
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- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritating effect.

- **Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

- **Additional toxicological information:**

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

112926-00-8	Precipitated silica (Silica-Amorphous)	3
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7646-79-9	cobalt dichloride	2B
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- **NTP (National Toxicology Program)**

Substance is not listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability:** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential:** No further relevant information available.

- **Mobility in soil:** No further relevant information available.

- **Ecotoxicological effects:**

- **Remark:**

Very toxic for fish

Toxic for fish

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Toxic for aquatic organisms

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects:** No further relevant information available.

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(Contd. on page 7)

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Reviewed on 08/22/2019


Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Contd. of page 6)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · UN-Number · DOT/TDG · ADR, IMDG, IATA | <p style="margin: 0;">Void</p> <p style="margin: 0;">UN3077</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT/TDG · ADR · IMDG · IATA | <p style="margin: 0;">Void</p> <p style="margin: 0;">3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.</p> <p style="margin: 0;">ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MARINE POLLUTANT</p> <p style="margin: 0;">ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT/TDG (Transport dangerous goods): · Class | <p style="margin: 0;">Void</p> |
| <ul style="list-style-type: none"> · ADR, IMDG, IATA | <div style="text-align: center; margin: 10px 0;">  </div> |
| <ul style="list-style-type: none"> · Class · Label | <p style="margin: 0;">9 Miscellaneous dangerous substances and articles</p> <p style="margin: 0;">9</p> |
| <ul style="list-style-type: none"> · Packing group · DOT/TDG · ADR, IMDG, IATA | <p style="margin: 0;">Void</p> <p style="margin: 0;">III</p> |
| <ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: · Special marking (ADR): · Special marking (IATA): | <p style="margin: 0;">Symbol (fish and tree)</p> <p style="margin: 0;">Symbol (fish and tree)</p> <p style="margin: 0;">Symbol (fish and tree)</p> |
| <ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category · Stowage Code | <p style="margin: 0;">Warning: Miscellaneous dangerous substances and articles</p> <p style="margin: 0;">90</p> <p style="margin: 0;">F-A,S-F</p> <p style="margin: 0;">A</p> <p style="margin: 0;">SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.</p> |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | <p style="margin: 0;">Not applicable.</p> |

(Contd. on page 8)

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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· **Transport/Additional information:**

· **ADR**

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **IMDG**

· **Limited quantities (LQ)**

5 kg

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **UN "Model Regulation":**

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S., 9, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

7646-79-9 cobalt dichloride

· **TSCA (Toxic Substances Control Act):**

7646-79-9 cobalt dichloride

ACTIVE

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

Substance is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

7646-79-9 cobalt dichloride

· **Canadian Ingredient Disclosure list (limit 1%)**

Substance is not listed.

· **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

cobalt dichloride

· **Hazard statements**

Harmful if swallowed.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

(Contd. on page 9)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 08/22/2019

Reviewed on 08/22/2019

Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Contd. of page 8)

May cause cancer.

May damage fertility or the unborn child.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

If on skin: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Store in a dry place. Store in a closed container.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Date of the latest revision of the safety data sheet 08/22/2019 / -

· Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.08.2019

Revision: 22.08.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Reusable/ Disposable Desiccant Cartridge - Silica Gel
- **Article number:** 71212-02, 71212-04
- **CAS Number:**
112926-00-8
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 Muta. 2 H341 Suspected of causing genetic defects.
 Carc. 1B H350i May cause cancer by inhalation.
 Repr. 1B H360F May damage fertility.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
 Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
 Skin Sens. 1 H317 May cause an allergic skin reaction.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Contd. of page 1)

· Hazard pictograms



GHS07 GHS08 GHS09

· Signal word *Danger*

· Hazard-determining components of labelling:

cobalt dichloride

· Hazard statements

H302 Harmful if swallowed.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H341 Suspected of causing genetic defects.

H350i May cause cancer by inhalation.

H360F May damage fertility.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P284 [In case of inadequate ventilation] wear respiratory protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.1 Chemical characterisation: Substances

· CAS No. Description

112926-00-8 Precipitated silica (Silica-Amorphous)

· Dangerous components:

CAS: 7646-79-9	cobalt dichloride	≤2.5%
EINECS: 231-589-4	Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350i; Repr. 1B, H360F; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1, H317	

· SVHC

7646-79-9	cobalt dichloride
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SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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Safety data sheet
according to 1907/2006/EC, Article 31

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Contd. of page 2)

- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of dust.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

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Safety data sheet
according to 1907/2006/EC, Article 31

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Contd. of page 3)

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:****7646-79-9 cobalt dichloride**

WEL	Long-term value: 0.1 mg/m ³
	Carc, Sen

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· **General Information**· **Appearance:****Form:** Solid material**Colour:** Light blue· **Odour:** Odourless· **Odour threshold:** Not determined.· **pH-value:** Not applicable.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Contd. of page 4)

· Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gas):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not applicable.
· Density at 20 °C:	2.1 g/cm ³
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water:	Insoluble.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- **Acute toxicity**
Harmful if swallowed.

LD/LC50 values relevant for classification:

7646-79-9 cobalt dichloride

Oral	LD50	80 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.08.2019

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity**
Suspected of causing genetic defects.
- **Carcinogenicity**
May cause cancer by inhalation.
- **Reproductive toxicity**
May damage fertility.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **12.2 Persistence and degradability** *No further relevant information available.*
- **12.3 Bioaccumulative potential** *No further relevant information available.*
- **12.4 Mobility in soil** *No further relevant information available.*
- **Ecotoxicological effects:**
- **Remark:**
Very toxic for fish
Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*
- **12.6 Other adverse effects** *No further relevant information available.*

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** *Disposal must be made according to official regulations.*

GB

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Safety data sheet
according to 1907/2006/EC, Article 31

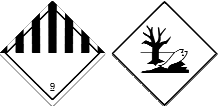
Printing date 22.08.2019

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Contd. of page 6)

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN3077
· 14.2 UN proper shipping name · ADR · IMDG · IATA	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA	
	
· Class · Label	9 Miscellaneous dangerous substances and articles. 9
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR): · Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category · Stowage Code	Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· Transport category · Tunnel restriction code	3 -
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g

(Contd. on page 8)

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Safety data sheet
according to 1907/2006/EC, Article 31

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III
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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - Directive 2012/18/EU
 - **Named dangerous substances - ANNEX I** Substance is not listed.
 - **Seveso category E1** Hazardous to the Aquatic Environment
 - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
 - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
 - **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 28, 30
 - **National regulations:**
 - **Information about limitation of use:**
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.
 - **Other regulations, limitations and prohibitive regulations**
- | | |
|--|-------------------|
| · Substances of very high concern (SVHC) according to REACH, Article 57 | |
| 7646-79-9 | cobalt dichloride |
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
- H302 Harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H341 Suspected of causing genetic defects.
- H350i May cause cancer by inhalation.
- H360F May damage fertility.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- **Abbreviations and acronyms:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 4: Acute toxicity – Category 4
- Resp. Sens. 1: Respiratory sensitisation – Category 1
- Skin Sens. 1: Skin sensitisation – Category 1
- Muta. 2: Germ cell mutagenicity – Category 2

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Trade name: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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*Carc. 1B: Carcinogenicity – Category 1B**Repr. 1B: Reproductive toxicity – Category 1B**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2*

GB

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 22.08.2019

Herziening van: 22.08.2019

RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

· 1.1 Productidentificatie

· **Handelsnaam:** Reusable/ Disposable Desiccant Cartridge - Silica Gel

· **Artikelnummer:** 71212-02, 71212-04

· **CAS-nummer:**

112926-00-8

· 1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik

Geen verdere relevante informatie verkrijgbaar.

· **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën

· 1.3 Details betreffende de verstreker van het veiligheidsinformatieblad

· **Fabrikant/leverancier:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Aurion

Binnenhaven 5

6709 PD Wageningen

The Netherlands

Tel: 31 317 415094

Fax: 31 317 415955

email: info@aurion.nl

· **Inlichtingengevende sector:** Product safety department

· 1.4 Telefoonnummer voor noodgevallen:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

· 2.1 Indeling van de stof of het mengsel

· **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS08 gezondheidsgevaar

Resp. Sens. 1 H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.

Muta. 2 H341 Verdacht van het veroorzaken van genetische schade.

Carc. 1B H350i Kan kanker veroorzaken bij inademing.

Repr. 1B H360F Kan de vruchtbaarheid schaden.



GHS09 milieu

Aquatic Acute 1 H400 Zeer giftig voor in het water levende organismen.

Aquatic Chronic 2 H411 Giftig voor in het water levende organismen, met langdurige gevolgen.



GHS07

(Vervolg op blz. 2)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 22.08.2019

Herziening van: 22.08.2019

Handelsnaam: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Vervolg van blz. 1)

Acute Tox. 4 H302 Schadelijk bij inslikken.
 Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.

· 2.2 Etiketteringselementen

· Etikettering overeenkomstig Verordening (EG) nr. 1272/2008

De stof/product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.

· Gevarenpictogrammen



GHS07 GHS08 GHS09

· Signaalwoord Gevaar

· Gevaaraanduidende componenten voor de etikettering:

kobaltdichloride

· Gevarenaanduidingen

H302 Schadelijk bij inslikken.

H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.

H317 Kan een allergische huidreactie veroorzaken.

H341 Verdacht van het veroorzaken van genetische schade.

H350i Kan kanker veroorzaken bij inademing.

H360F Kan de vruchtbaarheid schaden.

H400 Zeer giftig voor in het water levende organismen.

H411 Giftig voor in het water levende organismen, met langdurige gevolgen.

· Veiligheidsaanbevelingen

P261 Inademing van stof/rook/gas/nevel/damp/spuitnevel vermijden.

P280 Beschermende handschoenen/beschermende kleding/oogbescherming/gelaatsbescherming dragen.

P284 [Bij ontoereikende ventilatie] adembescherming dragen.

P301+P312 NA INSLIKKEN: bij onwel voelen een ANTIGIFCENTRUM/arts raadplegen.

P342+P311 Bij ademhalingsymptomen: Een ANTIGIFCENTRUM/arts raadplegen.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

· 2.3 Andere gevaren

· Resultaten van PBT- en zPzB-beoordeling

· PBT: Niet bruikbaar.

· zPzB: Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

· 3.1 Chemische karakterisering: Stoffen

· CAS-Nr. omschrijving

112926-00-8 Precipitated silica (Silica-Amorphous)

· Gevaarlijke inhoudstoffen:

CAS: 7646-79-9	kobaltdichloride	≤2,5%
EINECS: 231-589-4	Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350i; Repr. 1B, H360F; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1, H317	

(Vervolg op blz. 3)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 22.08.2019

Herziening van: 22.08.2019

Handelsnaam: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(Vervolg van blz. 2)

· SVHC

7646-79-9 kobaltdichloride

RUBRIEK 4: Eerstehulpmaatregelen

· 4.1 Beschrijving van de eerstehulpmaatregelen

· Algemene informatie:

Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.

· Na het inademen:

Veel verse lucht toedienen en voor alle zekerheid een arts raadplegen.

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

· Na huidcontact: Onmiddellijk met water en zeep afwassen en goed naspoelen.

· Na oogcontact: Ogen bij geopend ooglid meerdere minuten met stromend water spoelen

· Na inslikken: Onmiddellijk arts raadplegen.

· 4.2 Belangrijkste acute en uitgestelde symptomen en effecten Geen verdere relevante informatie verkrijgbaar.

· 4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling

Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 5: Brandbestrijdingsmaatregelen

· 5.1 Blusmiddelen

· Geschikte blusmiddelen: Brandblusmaatregelen op omgeving afstemmen.

· 5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt

Geen verdere relevante informatie verkrijgbaar.

· 5.3 Advies voor brandweerlieden

· Speciale beschermende kleding: Geen bijzondere maatregelen nodig.

RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

· 6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures Niet nodig.

· 6.2 Milieuvoorzorgsmaatregelen:

Bij indringen in afvalwater of riolering moet de bevoegde instantie gewaarschuwd worden.

Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.

· 6.3 Insluitings- en reinigingsmethoden en -materiaal:

Besmet materiaal zoals afval volgens punt 13 verwijderen.

Voor voldoende ventilatie zorgen.

· 6.4 Verwijzing naar andere rubrieken

Informatie inzake veilig gebruik - zie hoofdstuk 7.

Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.

Informatie inzake berging - zie hoofdstuk 13.

RUBRIEK 7: Hantering en opslag

· 7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel

Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.

Tanks voorzichtig openen en behandelen.

Stofvorming vermijden.

· Informatie m.b.t. brand- en ontploffingsgevaar: Ademhalingstoestellen gereedhouden.

(Vervolg op blz. 4)

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- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Geen.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.
- **8.1 Controleparameters**
- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:** Vervalt.
- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.
- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
Verwijderd houden van eet- en drinkwaren.
Verontreinigde kleding onmiddellijk uittrekken.
Vóór de pauze en aan het einde van werktijd handen wassen.
Beschermende kleding afzonderlijk bewaren.
- **Ademhalingsbescherming:**
Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingsstoestel gebruiken.
- **Handbescherming:**



Veiligheidshandschoenen

- Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.
Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliën-mengsel afgegeven worden.
Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.
- **Handschoenmateriaal**
De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant.
 - **Doordringingstijd van het handschoenmateriaal**
De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.
 - **Oogbescherming:**



Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

- **9.1 Informatie over fysische en chemische basiseigenschappen**
- **Algemene gegevens**
- **Voorkomen:**
Vorm: Vaste stof

(Vervolg op blz. 5)

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Kleur:	Lichtblauw
· Geur:	Reukloos
· Geurdrempelwaarde:	Niet bepaald.
· pH-waarde:	Niet bruikbaar.
· Toestandsverandering	
Smelt-/vriespunt:	Niet bepaald.
Beginkookpunt en kooktraject:	Niet bepaald.
· Vlampunt:	Niet bruikbaar.
· Ontvlambaarheid (vast, gas):	De stof is niet ontvlambaar.
· Ontledingstemperatuur:	Niet bepaald.
· Zelfontbrandingstemperatuur:	Niet bepaald.
· Ontploffingseigenschappen:	Het produkt is niet ontploffingsgevaarlijk.
· Ontploffingsgrenzen:	
Onderste:	Niet bepaald.
Bovenste:	Niet bepaald.
· Dampspanning:	Niet bruikbaar.
Dichtheid bij 20 °C:	2,1 g/cm ³
· Relatieve dichtheid	Niet bepaald.
· Dampdichtheid	Niet bruikbaar.
· Verdampingssnelheid	Niet bruikbaar.
· Oplosbaarheid in/mengbaarheid met Water:	Niet oplosbaar.
· Verdelingscoëfficiënt: n-octanol/water:	Niet bepaald.
· Viscositeit	
Dynamisch:	Niet bruikbaar.
Kinematisch:	Niet bruikbaar.
· 9.2 Overige informatie	Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** Geen verdere relevante informatie verkrijgbaar.
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit**
Schadelijk bij inslikken.

(Vervolg op blz. 6)

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(Vervolg van blz. 5)

Indelingsrelevantie LD/LC50-waarden:

7646-79-9 kobaltdichloride

Oraal	LD50	80 mg/kg (rat)
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Primaire aandoening:

- **Huidcorrosie/-irritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Ernstig oogletsel/oogirritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Sensibilisatie van de luchtwegen/de huid**
Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.
Kan een allergische huidreactie veroorzaken.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen**
Verdacht van het veroorzaken van genetische schade.
- **Kankerverwekkendheid**
Kan kanker veroorzaken bij inademing.
- **Giftigheid voor de voortplanting**
Kan de vruchtbaarheid schaden.
- **STOT bij eenmalige blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Ecotoxische effecten:**
- **Opmerking:**
Zeer giftig voor vissen.
Giftig voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL): A(4) Weinig schadelijk voor in water levende organismen kan in het aquatische milieu op lange termijn schadelijke effecten veroorzaken
Gevaar voor water klasse 1 (D) (Lijstclassificatie): gevaar voor water klein
Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.
In oppervlaktewater ook giftig voor vissen en plankton.
zeer giftig voor in het water levende organismen
giftig voor in het water levende organismen
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terecht komen.

(Vervolg op blz. 7)

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(Vervolg van blz. 6)

- Niet gereinigde verpakkingen:
- Aanbeveling: Afvalverwijdering volgens overheidsbepalingen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

· 14.1 VN-nummer	UN3077
· ADR, IMDG, IATA	
· 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN	3077 MILIEUGEVAARLIJKE VASTE STOF, N.E.G.
· ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MARINE POLLUTANT
· IMDG	
· IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
· 14.3 Transportgevaarenklasse(n)	
· ADR, IMDG, IATA	
	
· klasse	9 Diverse gevaarlijke stoffen en voorwerpen
· Etiket	9
· 14.4 Verpakkingsgroep:	III
· ADR, IMDG, IATA	
· 14.5 Milieugevaren:	
· Marine pollutant:	Symbool (vis en boom)
· Bijzondere kenmerking (ADR):	Symbool (vis en boom)
· Bijzondere kenmerking (IATA):	Symbool (vis en boom)
· 14.6 Bijzondere voorzorgen voor de gebruiker	Waarschuwing: Diverse gevaarlijke stoffen en voorwerpen
· Kemler-getal:	90
· EMS-nummer:	F-A,S-F
· Stowage Category	A
· Stowage Code	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code	Niet bruikbaar.
· Transport/verdere gegevens:	
· ADR	
· Beperkte hoeveelheden (LQ)	5 kg
· Uitgezonderde hoeveelheden (EQ)	Code: E1 Grootste netto hoeveelheid per binnenverpakking: 30 g Grootste netto hoeveelheid per buitenverpakking: 1000 g
· Vervoerscategorie	3
· Tunnelbeperkingscode	-

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(Vervolg van blz. 7)

· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· VN "Model Regulation":	UN 3077 MILIEUGEVAARLIJKE VASTE STOF, N.E.G., 9, III

RUBRIEK 15: Regelgeving

· 15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel

· SZW-lijst van kankerverwekkende stoffen

7646-79-9	kobaltdichloride
-----------	------------------

· SZW-lijst van mutagene stoffen

De stof is niet aanwezig.

· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid

7646-79-9	kobaltdichloride	1B
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· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling

De stof is niet aanwezig.

· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding

De stof is niet aanwezig.

· Lijst Zeer Zorgwekkende Stoffen (ZZS)

7646-79-9	kobaltdichloride
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· Lijst van Potentieel Zeer Zorgwekkende Stoffen

De stof is niet aanwezig.

· Richtlijn 2012/18/EU

· **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** De stof is niet aanwezig.

· **Seveso-categorie E1** Gevaar voor het aquatisch milieu

· **Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen** 100 t

· **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen** 200 t

· **Verordening (EG) nr. 1907/2006 BIJLAGE XVII** Beperkingsvoorwaarden: 28, 30

· Nationale voorschriften:

· Aanwijzingen m.b.t. tewerkstellingsbeperking:

Werknemers mogen aan deze gevaarlijke stof niet blootgesteld worden. In uitzonderingsgevallen kan de overheid speciale vergunningen afgeven.

· Gevaarklasse v. water:

Waterbezwaarlijkheid (NL): A(4) Weinig schadelijk voor in water levende organismen kan in het aquatische milieu op lange termijn schadelijke effecten veroorzaken

· Aanvullende voorschriften, beperkingen en verbodsverordeningen

· Zeer zorgwekkende stoffen (SVHC) volgens REACH, artikel 57

7646-79-9	kobaltdichloride
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· **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

NL

(Vervolg op blz. 9)

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RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

· **Relevante zinnen**

H302 Schadelijk bij inslikken.

H317 Kan een allergische huidreactie veroorzaken.

H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.

H341 Verdacht van het veroorzaken van genetische schade.

H350i Kan kanker veroorzaken bij inademing.

H360F Kan de vruchtbaarheid schaden.

H400 Zeer giftig voor in het water levende organismen.

H410 Zeer giftig voor in het water levende organismen, met langdurige gevolgen.

· **Afkortingen en acroniemen:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxiciteit – Categorie 4

Resp. Sens. 1: Sensibilisatie van de luchtwegen – Categorie 1

Skin Sens. 1: Sensibilisatie van de huid – Categorie 1

Muta. 2: Mutageniteit in geslachtscellen – Categorie 2

Carc. 1B: Kankerverwekkendheid – Categorie 1B

Repr. 1B: Voortplantingstoxiciteit – Categorie 1B

Aquatic Acute 1: Gevaar voor het aquatisch milieu - acuut aquatisch gevaar – Categorie 1

Aquatic Chronic 1: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 1

Aquatic Chronic 2: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 2

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 22.08.2019

Révision: 22.08.2019

RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** *Reusable/ Disposable Desiccant Cartridge - Silica Gel*
- **Code du produit:** 71212-02, 71212-04
- **No CAS:**
112926-00-8
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** *Produits chimiques pour laboratoires*
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**
*Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com*
- **Service chargé des renseignements:** *Product safety department*
- **1.4 Numéro d'appel d'urgence:**
*ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887*

RUBRIQUE 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS08 danger pour la santé

- | | | |
|----------------------|--------------|--|
| <i>Resp. Sens. 1</i> | <i>H334</i> | <i>Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.</i> |
| <i>Muta. 2</i> | <i>H341</i> | <i>Susceptible d'induire des anomalies génétiques.</i> |
| <i>Carc. 1B</i> | <i>H350i</i> | <i>Peut provoquer le cancer par inhalation.</i> |
| <i>Repr. 1B</i> | <i>H360F</i> | <i>Peut nuire à la fertilité.</i> |



GHS09 environnement

- | | | |
|--------------------------|-------------|---|
| <i>Aquatic Acute 1</i> | <i>H400</i> | <i>Très toxique pour les organismes aquatiques.</i> |
| <i>Aquatic Chronic 2</i> | <i>H411</i> | <i>Toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.</i> |



GHS07

- | | | |
|---------------------|-------------|---|
| <i>Acute Tox. 4</i> | <i>H302</i> | <i>Nocif en cas d'ingestion.</i> |
| <i>Skin Sens. 1</i> | <i>H317</i> | <i>Peut provoquer une allergie cutanée.</i> |

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** *La substance est classifiée et étiquetée selon le règlement CLP.*
(suite page 2)

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· **Pictogrammes de danger**



GHS07 GHS08 GHS09

· **Mention d'avertissement Danger**

· **Composants dangereux déterminants pour l'étiquetage:**

dichlorure de cobalt

· **Mentions de danger**

H302 Nocif en cas d'ingestion.

H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.

H317 Peut provoquer une allergie cutanée.

H341 Susceptible d'induire des anomalies génétiques.

H350i Peut provoquer le cancer par inhalation.

H360F Peut nuire à la fertilité.

H400 Très toxique pour les organismes aquatiques.

H411 Toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.

· **Conseils de prudence**

P261 Éviter de respirer les poussières/fumées/gaz/brouillards/vapeurs/aérosols.

P280 Porter des gants de protection/des vêtements de protection/un équipement de protection des yeux/du visage.

P284 [Lorsque la ventilation du local est insuffisante] porter un équipement de protection respiratoire.

P301+P312 EN CAS D'INGESTION: Appeler un CENTRE ANTIPOISON/un médecin en cas de malaise.

P342+P311 En cas de symptômes respiratoires: Appeler un CENTRE ANTIPOISON/un médecin.

P501 Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

· **2.3 Autres dangers**

· **Résultats des évaluations PBT et vPvB**

· **PBT:** Non applicable.

· **vPvB:** Non applicable.

RUBRIQUE 3: Composition/informations sur les composants

· **3.1 Caractérisation chimique: Substances**

· **No CAS Désignation**

112926-00-8 Precipitated silica (Silica-Amorphous)

· **Composants dangereux:**

CAS: 7646-79-9	dichlorure de cobalt	≤2,5%
EINECS: 231-589-4	Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350i; Repr. 1B, H360F; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1, H317	

· **SVHC**

7646-79-9	dichlorure de cobalt	
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FR

(suite page 3)

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Nom du produit: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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RUBRIQUE 4: Premiers secours

- **4.1 Description des premiers secours**
- **Remarques générales:**
Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.
- **Après inhalation:**
Donner de l'air frais en abondance et consulter un médecin pour plus de sécurité.
En cas d'inconscience, coucher et transporter la personne en position latérale stable.
- **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.
- **Après contact avec les yeux:**
Rincer les yeux, sous l'eau courante, pendant plusieurs minutes, en écartant bien les paupières.
- **Après ingestion:** Consulter immédiatement un médecin.
- **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.
- **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**
Pas d'autres informations importantes disponibles.

RUBRIQUE 5: Mesures de lutte contre l'incendie

- **5.1 Moyens d'extinction**
- **Moyens d'extinction:** Adapter les mesures d'extinction d'incendie à l'environnement.
- **5.2 Dangers particuliers résultant de la substance ou du mélange**
Pas d'autres informations importantes disponibles.
- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Aucune mesure particulière n'est requise.

RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence** Pas nécessaire.
- **6.2 Précautions pour la protection de l'environnement:**
En cas de pénétration dans les eaux ou les égouts, avertir les autorités compétentes.
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**
Evacuer les matériaux contaminés en tant que déchets conformément au point 13.
Assurer une aération suffisante.
- **6.4 Référence à d'autres rubriques**
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**
Veiller à une bonne ventilation/aspiration du poste de travail.
Ouvrir et manipuler les récipients avec précaution.
Eviter la formation de poussière.
- **Préventions des incendies et des explosions:** Tenir des appareils de protection respiratoire prêts.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.

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- **Autres indications sur les conditions de stockage:** Néant.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.
- **8.1 Paramètres de contrôle**
- **Composants présentant des valeurs-seuil à surveiller par poste de travail:** Néant
- **Remarques supplémentaires:**
Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.
- **8.2 Contrôles de l'exposition**
- **Equipement de protection individuel:**
- **Mesures générales de protection et d'hygiène:**
Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.
Retirer immédiatement les vêtements souillés ou humectés.
Se laver les mains avant les pauses et en fin de travail.
Conserver à part les vêtements de protection.
- **Protection respiratoire:**
En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.
- **Protection des mains:**



Gants de protection

- Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.
À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.
Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.
- **Matériau des gants**
Le choix de gants appropriés ne dépend pas seulement du matériau, mais également d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre.
 - **Temps de pénétration du matériau des gants**
Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.
 - **Protection des yeux:**



Lunettes de protection hermétiques

RUBRIQUE 9: Propriétés physiques et chimiques

- **9.1 Informations sur les propriétés physiques et chimiques essentielles**
- **Indications générales**
- **Aspect:**
- **Forme:** Substance solide
- **Couleur:** Bleu clair
- **Odeur:** Inodore

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· Seuil olfactif:	Non déterminé.
· valeur du pH:	Non applicable.
· Changement d'état Point de fusion/point de congélation:	Non déterminé.
Point initial d'ébullition et intervalle d'ébullition:	Non déterminé.
· Point d'éclair	Non applicable.
· Inflammabilité (solide, gaz):	La substance n'est pas inflammable.
· Température de décomposition:	Non déterminé.
· Température d'auto-inflammabilité:	Non déterminé.
· Propriétés explosives:	Le produit n'est pas explosif.
· Limites d'explosion: Inférieure:	Non déterminé.
Supérieure:	Non déterminé.
· Pression de vapeur:	Non applicable.
· Densité à 20 °C:	2,1 g/cm ³
· Densité relative	Non déterminé.
· Densité de vapeur:	Non applicable.
· Taux d'évaporation:	Non applicable.
· Solubilité dans/miscibilité avec l'eau:	Insoluble
· Coefficient de partage: n-octanol/eau:	Non déterminé.
· Viscosité: Dynamique:	Non applicable.
Cinématique:	Non applicable.
· 9.2 Autres informations	Pas d'autres informations importantes disponibles.

RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë**
Nocif en cas d'ingestion.

· **Valeurs LD/LC50 déterminantes pour la classification:**

7646-79-9 dichlorure de cobalt

Oral	LD50	80 mg/kg (rat)
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- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Lésions oculaires graves/irritation oculaire**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Sensibilisation respiratoire ou cutanée**
Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.
Peut provoquer une allergie cutanée.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**
Susceptible d'induire des anomalies génétiques.
- **Cancérogénicité**
Peut provoquer le cancer par inhalation.
- **Toxicité pour la reproduction**
Peut nuire à la fertilité.
- **Toxicité spécifique pour certains organes cibles - exposition unique**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Effets écotoxiques:**
- **Remarque:**
Très toxique chez les poissons.
Toxique chez les poissons.
- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 1 (D) (classification selon liste): peu polluant
Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.
Dans les eaux, également toxique pour les poissons et le plancton.
Très toxique pour organismes aquatiques.
Toxique pour les organismes aquatiques.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.

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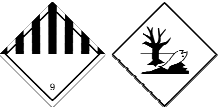
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- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.

RUBRIQUE 14: Informations relatives au transport

<ul style="list-style-type: none"> · 14.1 Numéro ONU · ADR, IMDG, IATA 	UN3077
<ul style="list-style-type: none"> · 14.2 Désignation officielle de transport de l'ONU · ADR · IMDG · IATA 	3077 MATIÈRE DANGEREUSE DU POINT DE VUE DE L'ENVIRONNEMENT, SOLIDE, N.S.A. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
<ul style="list-style-type: none"> · 14.3 Classe(s) de danger pour le transport · ADR, IMDG, IATA <div style="text-align: center; margin: 10px 0;">  </div> <ul style="list-style-type: none"> · Classe · Étiquette 	9 Matières et objets dangereux divers. 9
<ul style="list-style-type: none"> · 14.4 Groupe d'emballage · ADR, IMDG, IATA 	III
<ul style="list-style-type: none"> · 14.5 Dangers pour l'environnement: · Marine Pollutant: · Marquage spécial (ADR): · Marquage spécial (IATA): 	Signe conventionnel (poisson et arbre) Signe conventionnel (poisson et arbre) Signe conventionnel (poisson et arbre)
<ul style="list-style-type: none"> · 14.6 Précautions particulières à prendre par l'utilisateur · Indice Kemler: · No EMS: · Stowage Category · Stowage Code 	Attention: Matières et objets dangereux divers. 90 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
<ul style="list-style-type: none"> · 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC 	Non applicable.
<ul style="list-style-type: none"> · Indications complémentaires de transport: 	
<ul style="list-style-type: none"> · ADR · Quantités limitées (LQ) · Quantités exceptées (EQ) · Catégorie de transport · Code de restriction en tunnels 	5 kg Code: E1 Quantité maximale nette par emballage intérieur: 30 g Quantité maximale nette par emballage extérieur: 1000 g 3 -

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<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g</p>
<ul style="list-style-type: none"> · "Règlement type" de l'ONU: 	<p>UN 3077 MATIÈRE DANGEREUSE DU POINT DE VUE DE L'ENVIRONNEMENT, SOLIDE, N.S.A., 9, III</p>

RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
 - **Directive 2012/18/UE**
 - **Substances dangereuses désignées - ANNEXE I** la substance n'est pas comprise
 - **Catégorie SEVESO E1** Danger pour l'environnement aquatique
 - **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas** 100 t
 - **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut** 200 t
 - **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII** Conditions de limitation: 28, 30
 - **Prescriptions nationales:**
 - **Indications sur les restrictions de travail:**
Le personnel ne doit pas être exposé à cette substance dangereuse. Les autorités peuvent autoriser des exceptions dans des cas particuliers.
 - **Autres prescriptions, restrictions et règlements d'interdiction**
- | |
|--|
| <ul style="list-style-type: none"> · Substances extrêmement préoccupantes (SVHC) selon REACH, article 57 |
| 7646-79-9 dichlorure de cobalt |
- **15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

RUBRIQUE 16: Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

- **Phrases importantes**
- H302 Nocif en cas d'ingestion.
- H317 Peut provoquer une allergie cutanée.
- H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.
- H341 Susceptible d'induire des anomalies génétiques.
- H350i Peut provoquer le cancer par inhalation.
- H360F Peut nuire à la fertilité.
- H400 Très toxique pour les organismes aquatiques.
- H410 Très toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.
- **Acronymes et abréviations:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent

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*PBT: Persistent, Bioaccumulative and Toxic**SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 4: Toxicité aiguë – Catégorie 4**Resp. Sens. 1: Sensibilisation respiratoire – Catégorie 1**Skin Sens. 1: Sensibilisation cutanée – Catégorie 1**Muta. 2: Mutagénicité sur les cellules germinales – Catégorie 2**Carc. 1B: Cancérogénicité – Catégorie 1B**Repr. 1B: Toxicité pour la reproduction – Catégorie 1B**Aquatic Acute 1: Dangers pour le milieu aquatique- toxicité aiguë pour le milieu aquatique – Catégorie 1**Aquatic Chronic 1: Dangers pour le milieu aquatique- toxicité à long terme pour le milieu aquatique – Catégorie 1**Aquatic Chronic 2: Dangers pour le milieu aquatique- toxicité à long terme pour le milieu aquatique – Catégorie 2*

FR

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ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

- **1.1 Produktidentifikator**
- **Handelsname:** Reusable/ Disposable Desiccant Cartridge - Silica Gel
- **Artikelnummer:** 71212-02, 71212-04
- **CAS-Nummer:**
112926-00-8
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffs / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com

Science Services GmbH
Unterhachinger Str. 75
81737 München Germany

Tel: +49(0)89 18 93 668-0
safety@scienceservices.de

Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, www.toxinfo.org
Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS08 Gesundheitsgefahr

- | | | |
|---------------|-------|---|
| Resp. Sens. 1 | H334 | Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen. |
| Muta. 2 | H341 | Kann vermutlich genetische Defekte verursachen. |
| Carc. 1B | H350i | Kann bei Einatmen Krebs erzeugen. |
| Repr. 1B | H360F | Kann die Fruchtbarkeit beeinträchtigen. |



GHS09 Umwelt

- | | | |
|-------------------|------|---|
| Aquatic Acute 1 | H400 | Sehr giftig für Wasserorganismen. |
| Aquatic Chronic 2 | H411 | Giftig für Wasserorganismen, mit langfristiger Wirkung. |

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GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.
 Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

- 2.2 Kennzeichnungselemente
- Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008
 Der Stoff ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.
- Gefahrenpiktogramme



GHS07 GHS08 GHS09

- Signalwort Gefahr
- Gefahrbestimmende Komponenten zur Etikettierung:
 Cobaltdichlorid
- Gefahrenhinweise
 H302 Gesundheitsschädlich bei Verschlucken.
 H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.
 H317 Kann allergische Hautreaktionen verursachen.
 H341 Kann vermutlich genetische Defekte verursachen.
 H350i Kann bei Einatmen Krebs erzeugen.
 H360F Kann die Fruchtbarkeit beeinträchtigen.
 H400 Sehr giftig für Wasserorganismen.
 H411 Giftig für Wasserorganismen, mit langfristiger Wirkung.
- Sicherheitshinweise
 P261 Einatmen von Staub/Rauch/Gas/Nebel/Dampf/Aerosol vermeiden.
 P280 Schutzhandschuhe/Schutzkleidung/Augenschutz/Gesichtsschutz tragen.
 P284 [Bei unzureichender Belüftung] Atemschutz tragen.
 P301+P312 BEI VERSCHLUCKEN: Bei Unwohlsein GIFTINFORMATIONSZENTRUM/Arzt anrufen.
 P342+P311 Bei Symptomen der Atemwege: GIFTINFORMATIONSZENTRUM/Arzt anrufen.
 P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.
- Zusätzliche Angaben:
 Nur für gewerbliche Anwender.
- 2.3 Sonstige Gefahren
- Ergebnisse der PBT- und vPvB-Beurteilung
- PBT: Nicht anwendbar.
- vPvB: Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

- 3.1 Chemische Charakterisierung: Stoffe
- CAS-Nr. Bezeichnung
 112926-00-8 Precipitated silica (Silica-Amorphous)

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· Gefährliche Inhaltsstoffe:		
CAS: 7646-79-9 EINECS: 231-589-4	Cobaltdichlorid ⚠ Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350i; Repr. 1B, H360F; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	≤2,5%
· SVHC		
7646-79-9	Cobaltdichlorid	

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

- **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**
- **Allgemeine Hinweise:**
Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.
- **Nach Einatmen:**
Reichlich Frischluftzufuhr und sicherheitshalber Arzt aufsuchen.
Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.
- **Nach Hautkontakt:** Sofort mit Wasser und Seife abwaschen und gut nachspülen.
- **Nach Augenkontakt:** Augen bei geöffnetem Lidspalt mehrere Minuten mit fließendem Wasser spülen.
- **Nach Verschlucken:** Sofort Arzt aufsuchen.
- **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**
Keine weiteren relevanten Informationen verfügbar.
- **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**
Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- **5.1 Löschmittel**
- **Geeignete Löschmittel:** Feuerlöschmaßnahmen auf die Umgebung abstimmen.
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**
Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Keine besonderen Maßnahmen erforderlich.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Nicht erforderlich.
- **6.2 Umweltschutzmaßnahmen:**
Bei Eindringen in Gewässer oder Kanalisation zuständige Behörden benachrichtigen.
Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
Für ausreichende Lüftung sorgen.
- **6.4 Verweis auf andere Abschnitte**
Informationen zur sicheren Handhabung siehe Abschnitt 7.
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.
Informationen zur Entsorgung siehe Abschnitt 13.

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ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.
Behälter mit Vorsicht öffnen und handhaben.
Staubbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:** Atemschutzgeräte bereithalten.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Keine.
- **Lagerklasse:**
- **Klassifizierung nach Betriebsicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.
- **8.1 Zu überwachende Parameter**

- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

7646-79-9 Cobaltdichlorid

MAK	einatembare Fraktion; vgl.Abschn.XIII
TRGS 910	Toleranzkonzentration: 0,005 (A), Überschreitungsfaktor: -, Konzentrationen beziehen sich auf Co-Gehalt
	Akzeptanzkonzentration: 0,0005 (A)

- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.
- **8.2 Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**
Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
Beschmutzte, getränkte Kleidung sofort ausziehen.
Vor den Pausen und bei Arbeitsende Hände waschen.
Getrennte Aufbewahrung der Schutzkleidung.
- **Atemschutz:**
Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.
- **Handschutz:**



Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.
Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

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· **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich.

· **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

· **Augenschutz:**



Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

· **Allgemeine Angaben**

· **Aussehen:**

Form: Fester Stoff

Farbe: Hellblau

· **Geruch:** Geruchlos

· **Geruchsschwelle:** Nicht bestimmt.

· **pH-Wert:** Nicht anwendbar.

· **Zustandsänderung**

Schmelzpunkt/Gefrierpunkt: Nicht bestimmt.

Siedebeginn und Siedebereich: Nicht bestimmt.

· **Flammpunkt:** Nicht anwendbar.

· **Entzündbarkeit (fest, gasförmig):** Der Stoff ist nicht entzündlich.

· **Zersetzungstemperatur:** Nicht bestimmt.

· **Selbstentzündungstemperatur:** Nicht bestimmt.

· **Explosive Eigenschaften:** Das Produkt ist nicht explosionsgefährlich.

· **Explosionsgrenzen:**

Untere: Nicht bestimmt.

Obere: Nicht bestimmt.

· **Dampfdruck:** Nicht anwendbar.

· **Dichte bei 20 °C:** 2,1 g/cm³

· **Relative Dichte** Nicht bestimmt.

· **Dampfdichte** Nicht anwendbar.

· **Verdampfungsgeschwindigkeit** Nicht anwendbar.

· **Löslichkeit in / Mischbarkeit mit**

Wasser: Unlöslich.

· **Verteilungskoeffizient: n-Octanol/Wasser:** Nicht bestimmt.

· **Viskosität:**

Dynamisch: Nicht anwendbar.

Kinematisch: Nicht anwendbar.

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· 9.2 Sonstige Angaben

Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
 - **Akute Toxizität**
Gesundheitsschädlich bei Verschlucken.
- | | | |
|--|------|----------------|
| · Einstufungsrelevante LD/LC50-Werte: | | |
| 7646-79-9 Cobaltdichlorid | | |
| Oral | LD50 | 80 mg/kg (rat) |
- **Primäre Reizwirkung:**
 - **Ätz-/Reizwirkung auf die Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
 - **Schwere Augenschädigung/-reizung** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
 - **Sensibilisierung der Atemwege/Haut**
Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.
Kann allergische Hautreaktionen verursachen.
 - **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
 - **Keimzell-Mutagenität**
Kann vermutlich genetische Defekte verursachen.
 - **Karzinogenität**
Kann bei Einatmen Krebs erzeugen.
 - **Reproduktionstoxizität**
Kann die Fruchtbarkeit beeinträchtigen.
 - **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
 - **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
 - **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.

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- **Ökotoxische Wirkungen:**
- **Bemerkung:**
*Sehr giftig für Fische.
 Giftig für Fische.*
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
*Wassergefährdungsklasse 1 (Listeneinstufung): schwach wassergefährdend
 Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
 In Gewässern auch giftig für Fische und Plankton.
 sehr giftig für Wasserorganismen
 giftig für Wasserorganismen*
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** *Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.*
- **Ungereinigte Verpackungen:**
- **Empfehlung:** *Entsorgung gemäß den behördlichen Vorschriften.*

ABSCHNITT 14: Angaben zum Transport

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 UN-Nummer · ADR, IMDG, IATA | UN3077 |
| <ul style="list-style-type: none"> · 14.2 Ordnungsgemäße UN-Versandbezeichnung · ADR · IMDG · IATA | 3077 UMWELTGEFÄHRDENDER STOFF, FEST, N.A.G.
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S., MARINE POLLUTANT
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S. |
| <ul style="list-style-type: none"> · 14.3 Transportgefahrenklassen · ADR, IMDG, IATA <div style="display: flex; align-items: center; gap: 10px;"> </div> | <ul style="list-style-type: none"> · Klasse · Gefahrzettel 9 Verschiedene gefährliche Stoffe und Gegenstände
9 |
| <ul style="list-style-type: none"> · 14.4 Verpackungsgruppe · ADR, IMDG, IATA | III |
| <ul style="list-style-type: none"> · 14.5 Umweltgefahren: · Marine pollutant: · Besondere Kennzeichnung (ADR): | Symbol (Fisch und Baum)
Symbol (Fisch und Baum) |

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· Besondere Kennzeichnung (IATA):	Symbol (Fisch und Baum)
· 14.6 Besondere Vorsichtsmaßnahmen für den Verwender	Achtung: Verschiedene gefährliche Stoffe und Gegenstände
· Kemler-Zahl:	90
· EMS-Nummer:	F-A,S-F
· Stowage Category	A
· Stowage Code	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code	Nicht anwendbar.
· Transport/weitere Angaben:	
· ADR	
· Begrenzte Menge (LQ)	5 kg
· Freigestellte Mengen (EQ)	Code: E1 Höchste Nettomenge je Innenverpackung: 30 g Höchste Nettomenge je Außenverpackung: 1000 g
· Beförderungskategorie	3
· Tunnelbeschränkungscode	-
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN 3077 UMWELTGEFÄHRDENDER STOFF, FEST, N.A.G., 9, III

ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
 - **Richtlinie 2012/18/EU**
 - **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Der Stoff ist nicht enthalten.
 - **Seveso-Kategorie E1** Gewässergefährdend
 - **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse** 100 t
 - **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse** 200 t
 - **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII** Beschränkungsbedingungen: 28, 30
 - **Nationale Vorschriften:**
 - **Hinweise zur Beschäftigungsbeschränkung:**
Arbeitnehmer dürfen diesem Gefahrstoff nicht ausgesetzt sein. Im Einzelfall kann die Behörde Ausnahmen zulassen.
 - **Technische Anleitung Luft:**
- | Klasse | Anteil in % |
|--------|-------------|
| II | 1,0 |
- **Wassergefährdungsklasse: WGK 1 (Listeneinstufung):** schwach wassergefährdend.

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· **Sonstige Vorschriften, Beschränkungen und Verbotsverordnungen**

Das Produkt unterliegt der Anlage 2 der Chemikalienverbotsverordnung (ChemVerbotsV) - Anforderungen in Bezug auf die Abgabe

· **Besonders besorgniserregende Stoffe (SVHC) gemäß REACH, Artikel 57**

7646-79-9	Cobaltdichlorid
-----------	-----------------

· **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

· **Relevante Sätze**

H302 Gesundheitsschädlich bei Verschlucken.

H317 Kann allergische Hautreaktionen verursachen.

H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.

H341 Kann vermutlich genetische Defekte verursachen.

H350i Kann bei Einatmen Krebs erzeugen.

H360F Kann die Fruchtbarkeit beeinträchtigen.

H400 Sehr giftig für Wasserorganismen.

H410 Sehr giftig für Wasserorganismen mit langfristiger Wirkung.

· **Abkürzungen und Akronyme:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Akute Toxizität – Kategorie 4

Resp. Sens. 1: Sensibilisierung der Atemwege – Kategorie 1

Skin Sens. 1: Sensibilisierung der Haut – Kategorie 1

Muta. 2: Keimzellmutagenität – Kategorie 2

Carc. 1B: Karzinogenität – Kategorie 1B

Repr. 1B: Reproduktionstoxizität – Kategorie 1B

Aquatic Acute 1: Gewässergefährdend - akut gewässergefährdend – Kategorie 1

Aquatic Chronic 1: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 1

Aquatic Chronic 2: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 2

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

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SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** Reusable/ Disposable Desiccant Cartridge - Silica Gel

· **Articolo numero:** 71212-02, 71212-04

· **Numero CAS:**

112926-00-8

· **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**

Non sono disponibili altre informazioni.

· **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio

· **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**

· **Produttore/fornitore:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: www.sichim.com

· **Informazioni fornite da:** Product safety department

· **1.4 Numero telefonico di emergenza:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SEZIONE 2: Identificazione dei pericoli

· **2.1 Classificazione della sostanza o della miscela**

· **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS08 pericolo per la salute

Resp. Sens. 1 H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.

Muta. 2 H341 Sospettato di provocare alterazioni genetiche.

Carc. 1B H350i Può provocare il cancro se inalato.

Repr. 1B H360F Può nuocere alla fertilità.



GHS09 ambiente

Aquatic Acute 1 H400 Molto tossico per gli organismi acquatici.

Aquatic Chronic 2 H411 Tossico per gli organismi acquatici con effetti di lunga durata.



GHS07

Acute Tox. 4 H302 Nocivo se ingerito.

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Skin Sens. 1 H317 Può provocare una reazione allergica cutanea.

· **2.2 Elementi dell'etichetta**

· **Etichettatura secondo il regolamento (CE) n. 1272/2008**

La sostanza è classificata ed etichettata conformemente al regolamento CLP.

· **Pittogrammi di pericolo**



GHS07 GHS08 GHS09

· **Avvertenza Pericolo**

· **Componenti pericolosi che ne determinano l'etichettatura:**

dicloruro di cobalto

· **Indicazioni di pericolo**

H302 Nocivo se ingerito.

H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.

H317 Può provocare una reazione allergica cutanea.

H341 Sospettato di provocare alterazioni genetiche.

H350i Può provocare il cancro se inalato.

H360F Può nuocere alla fertilità.

H400 Molto tossico per gli organismi acquatici.

H411 Tossico per gli organismi acquatici con effetti di lunga durata.

· **Consigli di prudenza**

P261 Evitare di respirare la polvere/i fumi/i gas/la nebbia/i vapori/gli aerosol.

P280 Indossare guanti/indumenti protettivi/Proteggere gli occhi/il viso.

P284 [Quando la ventilazione del locale è insufficiente] indossare un apparecchio di protezione respiratoria.

P301+P312 IN CASO DI INGESTIONE: contattare un CENTRO ANTIVELENI/un medico in caso di malessere.

P342+P311 In caso di sintomi respiratori: contattare un CENTRO ANTIVELENI/un medico.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

· **2.3 Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti

· **3.1 Caratteristiche chimiche: Sostanze**

· **Numero CAS**

112926-00-8 Precipitated silica (Silica-Amorphous)

· **Sostanze pericolose:**

CAS: 7646-79-9	dicloruro di cobalto	≤2,5%
EINECS: 231-589-4	Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350i; Repr. 1B, H360F; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1, H317	

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· SVHC

7646-79-9 | dicloruro di cobalto

SEZIONE 4: Misure di primo soccorso

· **4.1 Descrizione delle misure di primo soccorso**

· **Indicazioni generali:**

I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.

· **Inalazione:**

Portare il soggetto in zona molto ben areata e per sicurezza consultare un medico.

Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.

· **Contatto con la pelle:** *Lavare immediatamente con acqua e sapone sciacquando accuratamente.*

· **Contatto con gli occhi:** *Lavare con acqua corrente per alcuni minuti tenendo le palpebre ben aperte.*

· **Ingestione:** *Chiamare subito il medico.*

· **4.2 Principali sintomi ed effetti, sia acuti che ritardati** *Non sono disponibili altre informazioni.*

· **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**

Non sono disponibili altre informazioni.

SEZIONE 5: Misure antincendio

· **5.1 Mezzi di estinzione**

· **Mezzi di estinzione idonei:** *Adottare provvedimenti antiincendio nei dintorni della zona colpita.*

· **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** *Non sono disponibili altre informazioni.*

· **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**

· **Mezzi protettivi specifici:** *Non sono richiesti provvedimenti particolari.*

SEZIONE 6: Misure in caso di rilascio accidentale

· **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza** *Non necessario.*

· **6.2 Precauzioni ambientali:**

In caso di infiltrazione nei corpi d'acqua o nelle fognature avvertire le autorità competenti.

Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.

· **6.3 Metodi e materiali per il contenimento e per la bonifica:**

Smaltimento del materiale contaminato conformemente al punto 13.

Provvedere ad una sufficiente areazione.

· **6.4 Riferimento ad altre sezioni**

Per informazioni relative ad una manipolazione sicura, vedere capitolo 7.

Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.

Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

· **7.1 Precauzioni per la manipolazione sicura**

Accurata ventilazione/aspirazione nei luoghi di lavoro.

Aprire e manipolare i recipienti con cautela.

Evitare la formazione di polvere.

· **Indicazioni in caso di incendio ed esplosione:** *Tener pronto il respiratore.*

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- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Nessuno.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.

· **8.1 Parametri di controllo**

- **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

112926-00-8 Precipitated silica (Silica-Amorphous)

TWA Valore a lungo termine: (10) mg/m³

- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

· **8.2 Controlli dell'esposizione**

- **Mezzi protettivi individuali:**

- **Norme generali protettive e di igiene del lavoro:**

Tenere lontano da cibo, bevande e foraggi.
Togliere immediatamente gli abiti contaminati.
Lavarsi le mani prima dell'intervallo o a lavoro terminato.
Custodire separatamente l'equipaggiamento protettivo.

- **Maschera protettiva:**

Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.

- **Guanti protettivi:**



Guanti protettivi

Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.

A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.

Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

- **Materiale dei guanti**

La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro.

- **Tempo di permeazione del materiale dei guanti**

Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

- **Occhiali protettivi:**



Occhiali protettivi a tenuta

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Scheda di dati di sicurezza
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Stampato il: 22.08.2019

Revisione: 22.08.2019

Denominazione commerciale: Reusable/ Disposable Desiccant Cartridge - Silica Gel

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SEZIONE 9: Proprietà fisiche e chimiche

· 9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali

· Indicazioni generali

· Aspetto:

Forma: Sostanza solida

Colore: Celeste

· Odore: Inodore

· Soglia olfattiva: Non definito.

· valori di pH: Non applicabile.

· Cambiamento di stato

Punto di fusione/punto di congelamento: Non definito.

Punto di ebollizione iniziale e intervallo di ebollizione: Non definito.

· Punto di infiammabilità: Non applicabile.

· Infiammabilità (solidi, gas): Sostanza non infiammabile.

· Temperatura di decomposizione: Non definito.

· Temperatura di autoaccensione: Non definito.

· Proprietà esplosive: Prodotto non esplosivo.

· Limiti di infiammabilità:

Inferiore: Non definito.

Superiore: Non definito.

· Tensione di vapore: Non applicabile.

· Densità a 20 °C: 2,1 g/cm³

· Densità relativa Non definito.

· Densità di vapore: Non applicabile.

· Velocità di evaporazione Non applicabile.

· Solubilità in/Miscibilità con acqua: Insolubile.

· Coefficiente di ripartizione: n-ottanolo/acqua: Non definito.

· Viscosità:

Dinamica: Non applicabile.

Cinematica: Non applicabile.

· 9.2 Altre informazioni Non sono disponibili altre informazioni.

SEZIONE 10: Stabilità e reattività

· 10.1 Reattività Non sono disponibili altre informazioni.

· 10.2 Stabilità chimica

· Decomposizione termica/ condizioni da evitare: Il prodotto non si decompone se utilizzato secondo le norme.

· 10.3 Possibilità di reazioni pericolose Non sono note reazioni pericolose.

· 10.4 Condizioni da evitare Non sono disponibili altre informazioni.

· 10.5 Materiali incompatibili: Non sono disponibili altre informazioni.

· 10.6 Prodotti di decomposizione pericolosi: Non sono noti prodotti di decomposizione pericolosi.

IT

(continua a pagina 6)

Scheda di dati di sicurezza
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SEZIONE 11: Informazioni tossicologiche

· **11.1 Informazioni sugli effetti tossicologici**

· **Tossicità acuta**

Nocivo se ingerito.

· **Valori LD/LC50 rilevanti per la classificazione:**

7646-79-9 dicloruro di cobalto

Orale	LD50	80 mg/kg (rat)
-------	------	----------------

· **Irritabilità primaria:**

· **Corrosione/irritazione cutanea** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Lesioni oculari gravi/irritazioni oculari gravi**

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Sensibilizzazione respiratoria o cutanea**

Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.

Può provocare una reazione allergica cutanea.

· **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**

· **Mutagenicità delle cellule germinali**

Sospettato di provocare alterazioni genetiche.

· **Cancerogenicità**

Può provocare il cancro se inalato.

· **Tossicità per la riproduzione**

Può nuocere alla fertilità.

· **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

SEZIONE 12: Informazioni ecologiche

· **12.1 Tossicità**

· **Tossicità acuta:** Non sono disponibili altre informazioni.

· **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.

· **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.

· **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.

· **Effetti tossici per l'ambiente:**

· **Osservazioni:**

Molto tossico per i pesci.

Tossico per i pesci.

· **Ulteriori indicazioni in materia ambientale:**

· **Ulteriori indicazioni:**

Pericolosità per le acque classe 1 (D) (Classif. secondo le liste): poco pericoloso

Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.

Tossico per pesci e plancton.

Molto tossico per gli organismi acquatici

tossico per gli organismi acquatici

· **12.5 Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

· **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

IT

(continua a pagina 7)

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SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.

SEZIONE 14: Informazioni sul trasporto

· 14.1 Numero ONU · ADR, IMDG, IATA	UN3077
· 14.2 Nome di spedizione dell'ONU · ADR · IMDG · IATA	3077 MATERIA PERICOLOSA PER L'AMBIENTE, SOLIDA, N.A.S. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
· 14.3 Classi di pericolo connesso al trasporto · ADR, IMDG, IATA	
	
· Classe · Etichetta	9 Materie ed oggetti pericolosi diversi 9
· 14.4 Gruppo di imballaggio · ADR, IMDG, IATA	III
· 14.5 Pericoli per l'ambiente: · Marine pollutant: · Marcatura speciali (ADR): · Marcatura speciali (IATA):	Simbolo (pesce e albero) Simbolo (pesce e albero) Simbolo (pesce e albero)
· 14.6 Precauzioni speciali per gli utilizzatori · Numero Kemler: · Numero EMS: · Stowage Category · Stowage Code	Attenzione: Materie ed oggetti pericolosi diversi 90 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC	Non applicabile.
· Trasporto/ulteriori indicazioni:	
· ADR · Quantità limitate (LQ) · Quantità esenti (EQ)	5 kg Codice: E1 Quantità massima netta per imballaggio interno: 30 g Quantità massima netta per imballaggio esterno: 1000 g

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· Categoria di trasporto	3
· Codice di restrizione in galleria	-
<hr/>	
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN 3077 MATERIA PERICOLOSA PER L'AMBIENTE, SOLIDA, N.A.S., 9, III

SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I** La sostanza non è contenuta
- **Categoria Seveso E1** Pericoloso per l'ambiente acquatico
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 100 t**
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 200 t**
- **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 28, 30

- **Disposizioni nazionali:**

- **Indicazioni relative alla limitazione delle attività lavorative:**

Il personale non deve essere esposto a questa sostanza pericolosa L'autorità può ammettere nei singoli casi delle eccezioni.

- **Ulteriori disposizioni, limitazioni e decreti proibitivi**

- **Sostanze estremamente preoccupanti (SVHC) ai sensi della regolamento REACH, articolo 57**

7646-79-9	dicloruro di cobalto
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- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

- **Fraasi rilevanti**

H302 Nocivo se ingerito.

H317 Può provocare una reazione allergica cutanea.

H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.

H341 Sospettato di provocare alterazioni genetiche.

H350i Può provocare il cancro se inalato.

H360F Può nuocere alla fertilità.

H400 Molto tossico per gli organismi acquatici.

H410 Molto tossico per gli organismi acquatici con effetti di lunga durata.

- **Abbreviazioni e acronimi:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

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ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Tossicità acuta – Categoria 4

Resp. Sens. 1: Sensibilizzazione delle vie respiratorie – Categoria 1

Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1

Muta. 2: Mutagenicità sulle cellule germinali – Categoria 2

Carc. 1B: Cancerogenicità – Categoria 1B

Repr. 1B: Tossicità per la riproduzione – Categoria 1B

Aquatic Acute 1: Pericoloso per l'ambiente acquatico - pericolo acuto per l'ambiente acquatico – Categoria 1

Aquatic Chronic 1: Pericoloso per l'ambiente acquatico - pericolo a lungo termine per l'ambiente acquatico – Categoria 1

Aquatic Chronic 2: Pericoloso per l'ambiente acquatico - pericolo a lungo termine per l'ambiente acquatico – Categoria 2

IT

물질안전보건자료 GHS에 따라라따

기압점: 2019.08.22

개정: 2019.08.22

1 화학제품과 회사에 관한 정보

제품제품제명

· **제품명:** Reusable/ Disposable Desiccant Cartridge - Silica Gel

· **상품번호:** 71212-02, 71212-04

· **번호번호번호**
112926-00-8

해당 해당 물질이나 혼합물 관련 권고 사용 용도 및 사용 금지 용도 추가적인 정보가 존재하지 않습니다.

· **제품의 권고 용도와 사용 용도에 대한 제한 사항** 실화 학품

· **안전데이터표(Safety Data Sheet) 내 공급 업체 관련 정보**

· **제조사/수입자/유통 업체 정보**

Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com

Samchang Commercial Co., Ltd.
Yeo Eui Do
PO Box 1110
Seoul, Korea
Tel: 82 2 703 3040
Fax: 82 2 717 3298

Daedok Science, Co. Ltd.
34141 E10 Korea Advanced Institute of Science
Guseong-Dong, Yuseong-gu, Daejeon,
Korea
Phone: 82 42 710 2091
Fax: 82 42 367 0005
Website: www.labsmro.com

· **추가적인 정보** 제품 특성 등 제품 가능 product safety department

· **비상연락 전화번호:**

ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 유해성·위험성

· **순물질 또는 혼합물** 분류분류



건강에 위험

호흡기 과민성 - 구분 1 H334 흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음
생식세포 변이원성 - 구분 2 H341 유전적인 결함을 일으킬 것으로 의심됨
발암성 - 구분 1B H350 암을 일으킬 수 있음
생식독성 - 구분 1B H360 태아 또는 생식능력에 손상을 일으킬 수 있음



환경

수생환경 유해성 - 급성 1 H400 수생생물에 매우 유독함
수생환경 유해성 - 만성 2 H411 장기적인 영향에 의해 수생생물에게 유독함

(2 쪽에 계속)

물질안전보건자료 GHS에 따라라따

기압점: 2019.08.22

개정: 2019.08.22

제품명: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(1 쪽부터계속)



급성 독성 - 경구 - 구분 4 H302 삼키면 유해함
피부 과민성 - 구분 1 H317 알레르기성 피부 반응을 일으킬 수 있음

- 라벨 표기 요소요소
- 라벨 라벨 요소
- 그림문자



GHS07 GHS08 GHS09

- 신호어 위험
- 상표상에명확히위험성이표시된성분:

cobalt dichloride

유해 위험 문구

삼키면 유해함
 흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음
 알레르기성 피부 반응을 일으킬 수 있음
 유전적인 결함을 일으킬 것으로 의심됨
 암을 일으킬 수 있음
 태아 또는 생식능력에 손상을 일으킬 수 있음
 수생생물에 매우 유독함
 장기적인 영향에 의해 수생생물에게 유독함

- 예방 조차 문구문구

(분진·흙·가스·미스트·증기·스프레이)의 흡입을 피하시오.
 (보호장갑·보호의·보안경·안면보호구)를(을) 착용하시오.
 환기가 잘 되지 않는 경우 호흡기 보호구를 착용하시오.
 삼켰을 시: 몸에 이상이 있을 시 독성물질 센터/병원 연락 필요.
 호흡기 증상이 있을 시: 독성물질 센터/병원 연락 필요.
 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

기타기타 유해성

- PBT(잔류성, 생물농축성, 독성물질) 및 vPvB(고 잔류성, 고 생물농축성) 물질이 포함되어 있지 않음.
- PBT(잔류성, 생물농축성, 독성물질) 물질이 포함되어 있지 않음.
- vPvB(고 잔류성, 고 생물농축성) 물질이 포함되어 있지 않음.

3 구성성분의 명칭 및 함유량

- 화학적 특성: 화학물질
- CAS-번호표시
112926-00-8 Precipitated silica (Silica-Amorphous)

- 위험 요소요소

7646-79-9	cobalt dichloride 	≤2.5%
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KR

(3 쪽에계속)

물질안전보건자료 GHS에 따라

기압점: 2019.08.22

개정: 2019.08.22

제품명: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(2 쪽부터 계속)

4 응급조치 요령

- **응급조치요령 내용내용**
 - **일반적 정보정보**
중독 증상은 몇 시간 이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간동안은 의료진의 관찰을 받아야 한다.
 - **흡입했을 때:**
신선한 공기를 쐬고 나서 반드시 의료진의 도움을 구한다.
환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.
 - **피부에 접촉했을 때:** 즉시 물과 비누로 씻고 잘 행군다.
 - **눈에 눈에 들어갔을 때:** 흐르는 물에 눈을 몇 분 동안 씻어낸다.
 - **먹었을 때:** 즉시 의사의 도움을 구한다.
- 기타 기타 **각각**의 주의사항:
가장 가장 **중요**한 **정보**는 **응급**시 **행동**에 **영향**을 **줄** 수 **있는** **정보**가 존재하지 않습니다.
· **즉각적인 의료처리 및 특별치료가 필요함을 시사하는 징후**가 존재하지 않습니다.

5 폭발·화재시 대처방법

- **소화제**
 - 적절한 소화제: 주변 환경에 맞는 화재 진화방법을 사용한다.
 - **본 화학물질이나 혼합물에서 발생가능한 특별한 위험성** 추가적인 정보가 존재하지 않습니다.
 - **소방관**에 대한 **대응** 사항
- 화재 **회피**를 **위한** **적용**할 **보호구** 및 **예방조치**: 특별한 조치가 필요없음.

6 누출 사고 시 대처방법

- **개인적 예방조치, 보호장비 및 응급 처치 절차** 없음.
- 환경**에 **대한** **조치**:
하천이나 하수도로 유입되었을 경우 해당 관청에 보고한다.
하수도망/하수면 위 의물/지하수로도 달하지 않게 한다.
- 밀폐** **용기**에 **대한** **조치**:
항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
충분한 환기가 되도록 한다.
- 식별** **시스템**에 **대한** **조치**:
안전 관리에 대한 정보는 제7 장 을 참고하시오.
개인 보호 장비에 대한 정보는 제8 장 을 참고하시오.
쓰레기 처리에 대한 정보는 제13 장 을 참고하시오.

7 취급 및 저장방법

- 취급** **취급** **취급**
안전 **장비**를 **위한** **조치**:
작업장에서는 통풍이 잘 되고 습기 제거가 잘 되게 주의한다.
조심스럽게 용기를 개봉하거나 취급한다.
먼지 발생을 피한다.
- 화재** **회피**를 **위한** **조치**:
화재 위험성을 줄이기 위해 화재 예방에 관한 정보를 보호장비를 항상 비치한다.
- **혼합 위험성**에 대한 정보 없음
 - **보관** **장소** **제한** 없음
 - **안정성** **정보** **제한** 없음
 - **하수도** **방출** **조치** **제한** 없음

(4 쪽에 계속)

물질안전보건자료

GHS에 따라 라다

기압점: 2019.08.22

개정: 2019.08.22

제품명: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(3 쪽부터 계속)

- 보관 조건에 관한 추가적인 정보 없음
- 구체적 최종 사용자 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

- 첨단시설 디자입에 대한 추가 정보: 더 이상 의 자료는 없음. 항 목 7 을 참고하시 오.

통제 통제 통제 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:	
112926-00-8 Precipitated silica (Silica-Amorphous)	
PEL (US)	20mppcf or 80mg/m3 /%SiO2
REL (US)	장기간의값: 6 mg/m ³ See Pocket Guide App. C
TLV (US)	TLV withdrawn
7646-79-9 cobalt dichloride	
TLV (KR)	장기간의값: 0.02 mg/m ³ as Co
PEL (US)	장기간의값: 0.1* mg/m ³ as Co; *for metal dust and fume
REL (US)	장기간의값: 0.05 mg/m ³ as Co; metal dust fume
TLV (US)	장기간의값: (0.02) NIC-0.02* mg/m³ as Co, *inhalable; NIC-DSEN; RSEN; BEI

- 추가 정보 정보 할 당시에 유효 한 목록을 기초로 사용했다.

노출 통제 통제 통제
개인 개인 개인 보호구

· **일반적 보호조치 및 위생조치:**

- 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
- 더러워지거나 음식물이나 옷은 즉시 탈의한다.
- 휴식 전이나 작업이 끝날 때마다 손을 씻는다.
- 방호복은 따로 보관한다.

· **호흡기 보호보호**

- 단 시간 또는 경미한 오염의 경우에는 호흡 여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

· **보수 보호보호**



보호용 장갑

장갑재질은 제품 / 원료 / 조제를 통과시키지 않아야 하고, 내구성이 있어야 한다.
테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.
투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑 의 재료**

적합한 장갑의 선정은 재질 차이뿐 아니라 품질 기준의 차이도 고려하여 이루어져야 하고 제조업자에 따라서도 다르게 선정되어야 한다.

- **장갑 재료의 투과 시간** 정확한 관통 시간은 보호장갑 제조자에 의하여 인지도고, 준수되어야 한다.

(5 쪽에 계속)

물질안전보건자료 GHS에 따라라다

기압점: 2019.08.22

개정: 2019.08.22

제품명: Reusable/ Disposable Desiccant Cartridge - Silica Gel

보통 보호보호

(4 쪽부터계속)



꼭조이는보안경

9 물리화학적 특성

기본 물리화학적 특성에 대한 기본 정보

· 일반정보	
외형외형의형	단단한물질
· 물리적상태상태	연한 파랑
· 색:	무취의
· 냄새냄새냄새	알맞지않다.
· 후각역치	
· pH:	해당사항 없음.
· 상태변화	
· 녹는점/어는점:	맞지않는
· 초기초기끓는점과 끓는점범위범위	맞지않는
· 인화점:	해당사항 없음.
· 인화성고체고체기체	이제품은 가연성이없다.
· 분해분해온도	알맞지않다.
· 자기점화:	알맞지않다.
· 폭발위험:	이제품은폭발위험성이없다
· 인화안화온도폭발한계상한상한	하한
· 아래로:	알맞지않다.
· 위로위로위로	알맞지않다.
· 증기압:	해당사항 없음.
· 밀도밀도밀도경우 20 °C:	2.1 g/cm ³
· 비중비중비중	알맞지않다.
· 증기밀도:	해당사항 없음.
· 증발증발증발 속도	해당사항 없음.
· 용해도:	
· 물:	불용해성의
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도점도점도	
· 역학성:	해당사항 없음.
· 동점성:	해당사항 없음.
· 기타 정보정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

· 반응성 추가적인 정보가 존재하지 않습니다.

(6 쪽에계속)

물질안전보건자료 GHS에 따라라따

기압점: 2019.08.22

개정: 2019.08.22

제품명: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(5 쪽부터계속)

- **화학적 안정성**
- **화학적 안정성 및 유해 반응의 가능성 / 피해 야할 조건 조건**에 따라 사용 할 경우 해체는 없다
- **유해 반응 가능성** 위험한 반응으로는 알려지지 않았다.
- **피해 야할 조건 조건** 추가적인 정보가 존재 하지 않습니다.
- **혼합 혼합물 혼합물** 추가적인 정보가 존재 하지 않습니다.
- **유해 본해 물질:** 위험성 있는 본해 물질은 알려지지 않았다.

11 독성에 관한 정보

· **독성학적 영향에 대한 정보**
급성 독성 독성 독성

· LD/LC50-수 체에 따른 분류
7646-79-9 cobalt dichloride
구강의 LD50 80 mg/kg (rat)

· **입체적 자극 효과**
 피부 피부 자극성 또는 자극성: 무 자극
 심한 심한 자극성 또는 자극성: 무 자극.

· **감각 화:**
 호흡을 통한 감각 화 가능성이 있다.
 피부 접촉을 통하여 감각 화 가능성이 있다.

다음 다음 동물 의 잠재적인 효과에 대한 정보

· **CMR 효과 유해 발 유해 번이성 그랑괴 생생 독성**
 생식세포 번이원성 - 구분 2, 발암성 - 구분 1B, 생식독성 - 구분 1B

12 환경에 미치는 영향

독성 독성 독성
 · **수생 독성:** 추가적인 정보가 존재 하지 않습니다.
 · **지속성 및 분해성** 추가적인 정보가 존재 하지 않습니다.
 · **환 경 시스템에서의 행동:**
 · **생물 농축 잠재성** 추가적인 정보가 존재 하지 않습니다.
 · **토양 내 이동성** 추가적인 정보가 존재 하지 않습니다.
 · **생태 독성:**

의견 의견 의견

어류 에 매우 독성임
 어류 에 독이 됨

· **추가적인 생태학 정보 정보**

일반 일반 일반 특징

수질 오염 등급 1 (목록 분류): 약하게 수질 오염이 된
 회석 시키지 않은 채 대량으로 지 하 수나, 하천으로 그리고 하수도 망에 도달 하지 않게 한다.
 하천에서는 역시 물고기나 플랑크톤 계는 독성이 있다.
 물속의 유기체에 아주 독이 되는 것
 물속의 유기체에 독이 되는 것

· **PBT(잔류성, 생물 농 축성, 물 질 오염 잠재성) vPvB(고 잔류성, 고 생물 농 축성, 물 질 오염 잠재성) 결과**
 · **PBT(잔류성, 생물 농 축성, 물 질 오염 잠재성) 결과** 당사 항 없음.
 · **vPvB(고 잔류성, 고 생물 농 축성, 물 질 오염 잠재성) 결과** 당사 항 없음.
 기타 기타 부대 용 추가적인 정보가 존재 하지 않습니다.

KR

(7 쪽에 계속)


제품명: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(6 쪽부터계속)

13 폐기시 주의사항

- 폐기물 처리 방법
권고 권고 생활 쓰레기와 함께 처리되어서는 안된다. 하수도망으로 유입되어서는 안된다.
- 비위생적 포장 포장
권고 권고 국외의 지침에 입각한 쓰레기 처리.

14 운송에 필요한 정보

유엔 유엔 번호 · ADR, IMDG, IATA	UN3077
· 적정 적정 · ADR · IMDG · IATA	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
교통 교통 · ADR, IMDG, IATA	
	
등급 등급 · 위험 라벨라벨	9 여러모로 위험한 물 질과 물체 9
· 용기 등급 · ADR, IMDG, IATA	III
· 환경적 유해물질: · 해양 오염물질: 특수 특 (R): 특수 특 (A):	심벌 (물고기와 나무) 심벌 (물고기와 나무) 심벌 (물고기와 나무)
· 이 용기 특별 조치 위험 코드 · 번호 · Stowage Category · Stowage Code	경고: 여러모로 위험한 물 질과 물체 90 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· MARPOL73/78(선박으로부터의 해양 오염 방지협약) 부속서 2 및 IBC Code(국제 선적 화물 코드) 별크 별크 운송 운송	해당 사항 없음.
· 운송/ 추가 정보 · ADR	
한정 한량 (kg)	5 kg

(8 쪽에 계속)

물질안전보건자료

GHS에 따라 라다

기압점: 2019.08.22

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(7 쪽부터 계속)

· Excepted quantities (EQ) 운송 위험성 구분 터널 내 운반 제한 코드	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g 3 -
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· UN 위험물 분류 코드	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

15 법적 규제 현황

· 산업안전보건법에 의한 유해화학물질 규제		
제조제한금지물질:		
성분이 포함되어 있지 않다		
· 허가대상물질:		
성분이 포함되어 있지 않다		
· 관리대상유해물질:		
7646-79-9	cobalt dichloride	
· 작업환경측정 대상 유해인자		
7646-79-9	cobalt dichloride	1B20
· 특수건강진단 대상 유해인자		
7646-79-9	cobalt dichloride	1B17
해당해당 유해물질 또는 혼합물 등에 대한 유해인자 측정 방법 규정을 적용		
· Korean Existing Chemical Inventory		
112926-00-8	Precipitated silica (Silica-Amorphous)	KE-32733
7646-79-9	cobalt dichloride	KE-06095
· 화학물질관리법		
· 사고대비물질		
성분이 포함되어 있지 않다		
· 금지물질		
성분이 포함되어 있지 않다		
· 제한물질		
성분이 포함되어 있지 않다		
· 유독물질		
성분이 포함되어 있지 않다		
· 허가물질		
성분이 포함되어 있지 않다		
· GHS 라벨링 요소 본 화학물질은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.		

(9 쪽에 계속)

제품명: Reusable/ Disposable Desiccant Cartridge - Silica Gel

(8 쪽부터 계속)

· **그림문자**



GHS07 GHS08 GHS09

· **신호어 위험**

· **상표상에 명확히 위험성이 표시된 성분:**

cobalt dichloride

유해·위험·예방·응급 대응 문구

삼키면 유해함

흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음

알레르기성 피부 반응을 일으킬 수 있음

유전적인 결함을 일으킬 것으로 의심됨

압을 일으킬 수 있음

태아 또는 생식능력에 손상을 일으킬 수 있음

수생생물에 매우 유독함

장기적인 영향에 의해 수생생물에게 유독함

· **예방 조치 문구**

(분진·흡·가스·미스트·증기·스프레이)의 흡입을 피하십시오.

(보호장갑·보호의·보안경·안면보호구)를(을) 착용하십시오.

환기가 잘 되지 않는 경우 호흡기 보호구를 착용하십시오.

삼켰을 시: 몸에 이상이 있을 시 독성물질 센터/병원 연락 필요.

호흡기 증상이 있을 시: 독성물질 센터/병원 연락 필요.

현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· **국내 규정:**

· **사용 제한에 대한 정보**

노동자들은 이러한 위험물질을 내버리지 말아야 한다. 개별적인 경우에 관청은 예외를 허가할 수 있다.

· **화학물질 안전성 평가** 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이 보고는 우리 지식에 대한 오늘날의 상태에 대하여 평가하고 있다, 하지만 이 보고서는 생산 특성에 관한 보증은 기술하지 않았으며 계약적인 법률 관계에 기반을 두고 있지 않다

최초 작성 일자: 2019.08.22

개정 일자: 1 / 2019.08.22

· **약어와 두문자어:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 22.08.2019

Revisión: 22.08.2019

SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

· **Nombre comercial:** *Reusable/ Disposable Desiccant Cartridge - Silica Gel*

· **Número del artículo:** 71212-02, 71212-04

· **Número CAS:**

112926-00-8

· **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**

No existen más datos relevantes disponibles.

· **Utilización del producto / de la elaboración** *Sustancias químicas de laboratorio*

· 1.3 Datos del proveedor de la ficha de datos de seguridad

· **Fabricante/distribuidor:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Aname

C/ Perez Galdos no. 2

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email: ventas@aname.es

· **Área de información:** *Product safety department*

· 1.4 Teléfono de emergencia:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SECCIÓN 2: Identificación de los peligros

· 2.1 Clasificación de la sustancia o de la mezcla

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS08 peligro para la salud

Resp. Sens. 1 H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

Muta. 2 H341 Se sospecha que provoca defectos genéticos.

Carc. 1B H350i Puede provocar cáncer por inhalación.

Repr. 1B H360F Puede perjudicar a la fertilidad.



GHS09 medio ambiente

Aquatic Acute 1 H400 Muy tóxico para los organismos acuáticos.

Aquatic Chronic 2 H411 Tóxico para los organismos acuáticos, con efectos nocivos duraderos.



GHS07

(se continua en página 2)

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Acute Tox. 4 H302 Nocivo en caso de ingestión.
 Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.

· 2.2 Elementos de la etiqueta

· Etiquetado con arreglo al Reglamento (CE) n° 1272/2008

La sustancia se ha clasificado y etiquetado de conformidad con el reglamento CLP.

· Pictogramas de peligro



GHS07 GHS08 GHS09

· Palabra de advertencia Peligro

· Componentes peligrosos a indicar en el etiquetaje:

dicloruro de cobalto

· Indicaciones de peligro

H302 Nocivo en caso de ingestión.

H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

H317 Puede provocar una reacción alérgica en la piel.

H341 Se sospecha que provoca defectos genéticos.

H350i Puede provocar cáncer por inhalación.

H360F Puede perjudicar a la fertilidad.

H400 Muy tóxico para los organismos acuáticos.

H411 Tóxico para los organismos acuáticos, con efectos nocivos duraderos.

· Consejos de prudencia

P261 Evitar respirar el polvo/el humo/el gas/la niebla/los vapores/el aerosol.

P280 Llevar guantes/prendas/gafas/máscara de protección.

P284 [En caso de ventilación insuficiente,] llevar equipo de protección respiratoria.

P301+P312 EN CASO DE INGESTIÓN: Llamar a un CENTRO DE TOXICOLOGÍA/médico si la persona se encuentra mal.

P342+P311 En caso de síntomas respiratorios: Llamar a un CENTRO DE TOXICOLOGÍA/médico.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

· 2.3 Otros peligros

· Resultados de la valoración PBT y mPmB

· PBT: No aplicable.

· mPmB: No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

· 3.1 Caracterización química: Sustancias

· Denominación N° CAS

112926-00-8 Precipitated silica (Silica-Amorphous)

· Componentes peligrosos:

CAS: 7646-79-9	dicloruro de cobalto	≤2,5%
EINECS: 231-589-4	Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350i; Repr. 1B, H360F; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1, H317	

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· SVHC

7646-79-9 dicloruro de cobalto

SECCIÓN 4: Primeros auxilios

· 4.1 Descripción de los primeros auxilios

· Instrucciones generales:

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

· En caso de inhalación del producto:

Suministrar suficiente aire fresco y, para mayor seguridad, consultar el médico.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

· En caso de contacto con la piel: Lavar inmediatamente con agua y jabón y enjuagar bien.

· En caso de con los ojos: Limpiar los ojos abiertos durante varios minutos con agua corriente.

· En caso de ingestión: Consultar inmediatamente un médico.

· 4.2 Principales síntomas y efectos, agudos y retardados No existen más datos relevantes disponibles.

· 4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente No existen más datos relevantes disponibles.

SECCIÓN 5: Medidas de lucha contra incendios

· 5.1 Medios de extinción

· Sustancias extintoras apropiadas: Combatir los incendios con medidas adaptados al ambiente circundante.

· 5.2 Peligros específicos derivados de la sustancia o la mezcla No existen más datos relevantes disponibles.

· 5.3 Recomendaciones para el personal de lucha contra incendios

· Equipo especial de protección: No se requieren medidas especiales.

SECCIÓN 6: Medidas en caso de vertido accidental

· 6.1 Precauciones personales, equipo de protección y procedimientos de emergencia No es necesario.

· 6.2 Precauciones relativas al medio ambiente:

Al penetrar en las aguas o en el alcantarillado, avisar a las autoridades pertinentes.

Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.

· 6.3 Métodos y material de contención y de limpieza:

Desechar el material contaminado como vertido según ítem 13.

Asegurar suficiente ventilación.

· 6.4 Referencia a otras secciones

Ver capítulo 7 para mayor información sobre una manipulación segura.

Ver capítulo 8 para mayor información sobre el equipo personal de protección.

Para mayor información sobre cómo desechar el producto, ver capítulo 13.

SECCIÓN 7: Manipulación y almacenamiento

· 7.1 Precauciones para una manipulación segura

Asegurar suficiente ventilación /aspiración en el puesto de trabajo.

Abrir y manejar el recipiente con cuidado.

Evitar la formación de polvo.

· Prevención de incendios y explosiones: Tener preparados los aparatos respiratorios.

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- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:** Ningunos, -as.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.

· 8.1 Parámetros de control

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

112926-00-8 Precipitated silica (Silica-Amorphous)

LEP Valor de larga duración: 10 mg/m³
gel

7646-79-9 dicloruro de cobalto

LEP Valor de larga duración: 0,02 mg/m³
C1B, Sen, r, TR1B, VLB, como Co

- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

· 8.2 Controles de la exposición

· **Equipo de protección individual:**

· **Medidas generales de protección e higiene:**

Mantener alejado de alimentos, bebidas y alimentos para animales.

Quitarse de inmediato la ropa ensuciada o impregnada.

Lavarse las manos antes de las pausas y al final del trabajo.

Guardar la ropa protectora por separado.

· **Protección respiratoria:**

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

· **Protección de manos:**



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

· **Material de los guantes**

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro.

· **Tiempo de penetración del material de los guantes**

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

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· **Protección de ojos:**

Gafas de protección herméticas

SECCIÓN 9: Propiedades físicas y químicas

· **9.1 Información sobre propiedades físicas y químicas básicas**· **Datos generales**· **Aspecto:**

Forma:

Substancia sólida

Color:

Azul claro

· **Olor:**

Inodoro

· **Umbral olfativo:**

No determinado.

· **valor pH:**

No aplicable.

· **Cambio de estado**

Punto de fusión/punto de congelación:

Indeterminado.

Punto inicial de ebullición e intervalo de ebullición: Indeterminado.

· **Punto de inflamación:**

No aplicable.

· **Inflamabilidad (sólido, gas):**

La sustancia no es inflamable.

· **Temperatura de descomposición:**

No determinado.

· **Temperatura de auto-inflamación:**

No determinado.

· **Propiedades explosivas:**

El producto no es explosivo.

· **Límites de explosión:**

Inferior:

No determinado.

Superior:

No determinado.

· **Presión de vapor:**

No aplicable.

· **Densidad a 20 °C:**2,1 g/cm³· **Densidad relativa**

No determinado.

· **Densidad de vapor**

No aplicable.

· **Tasa de evaporación:**

No aplicable.

· **Solubilidad en / miscibilidad con agua:**

Insoluble.

· **Coefficiente de reparto: n-octanol/agua:**

No determinado.

· **Viscosidad:**

Dinámica:

No aplicable.

Cinemática:

No aplicable.

· **9.2 Otros datos**

No existen más datos relevantes disponibles.

SECCIÓN 10: Estabilidad y reactividad

· **10.1 Reactividad** No existen más datos relevantes disponibles.

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- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

SECCIÓN 11: Información toxicológica

· 11.1 Información sobre los efectos toxicológicos

· Toxicidad aguda

Nocivo en caso de ingestión.

· Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:

7646-79-9 dicloruro de cobalto

Oral	LD50	80 mg/kg (rat)
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- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Lesiones o irritación ocular graves**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Sensibilización respiratoria o cutánea**
Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.
Puede provocar una reacción alérgica en la piel.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**
Se sospecha que provoca defectos genéticos.
- **Carcinogenicidad**
Puede provocar cáncer por inhalación.
- **Toxicidad para la reproducción**
Puede perjudicar a la fertilidad.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Efectos ecotóxicos:**
- **Observación:**
Muy tóxico para peces.
Tóxico para peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 1 (clasificación de listas): escasamente peligroso para el agua
En estado no diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.

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Vertido en aguas superficiales, también es tóxico para los peces y el plancton.
muy tóxico para organismos acuáticos
tóxico para organismos acuáticos

- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

SECCIÓN 14: Información relativa al transporte

- | | |
|--|---|
| · 14.1 Número ONU
· ADR, IMDG, IATA | UN3077 |
| · 14.2 Designación oficial de transporte de las Naciones Unidas
· ADR
· IMDG
· IATA | 3077 SUSTANCIA SÓLIDA POTENCIALMENTE PELIGROSA PARA EL MEDIO AMBIENTE, N.E.P.
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MARINE POLLUTANT
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| · 14.3 Clase(s) de peligro para el transporte
· ADR, IMDG, IATA | |
| | |
| · Clase
· Etiqueta | 9 Materias y objetos peligrosos diversos
9 |
| · 14.4 Grupo de embalaje
· ADR, IMDG, IATA | III |
| · 14.5 Peligros para el medio ambiente:
· Contaminante marino:
· Marcado especial (ADR):
· Marcado especial (IATA): | Símbolo (pez y árbol)
Símbolo (pez y árbol)
Símbolo (pez y árbol) |
| · 14.6 Precauciones particulares para los usuarios
· Número Kemler:
· Número EMS:
· Stowage Category
· Stowage Code | Atención: Materias y objetos peligrosos diversos
90
F-A,S-F
A
SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9. |

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· 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC	No aplicable.
· Transporte/datos adicionales:	
· ADR	
· Cantidades limitadas (LQ)	5 kg
· Cantidades exceptuadas (EQ)	Código: E1 Cantidad neta máxima por envase interior: 30 g Cantidad neta máxima por embalaje exterior: 1000 g
· Categoría de transporte	3
· Código de restricción del túnel	-
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· "Reglamentación Modelo" de la UNECE:	UN 3077 SUSTANCIA SÓLIDA POTENCIALMENTE PELIGROSA PARA EL MEDIO AMBIENTE, N.E.P., 9, III

SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- **Directiva 2012/18/UE**
- **Sustancias peligrosas nominadas - ANEXO I** No contiene la sustancia.
- **Categoría Seveso E1** Peligroso para el medio ambiente acuático
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior** 100 t
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior** 200 t
- **REGLAMENTO (CE) n° 1907/2006 ANEXO XVII** Restricciones: 28, 30

- **Disposiciones nacionales:**

- **Indicaciones sobre las limitaciones de trabajo:**

Los empleados no deben exponerse a esta sustancia peligrosa. En casos aislados las autoridades pueden hacer excepciones.

- **Demás disposiciones, limitaciones y decretos prohibitivos**

- **Sustancias altamente preocupantes (SVHC) según REACH, artículo 57**

7646-79-9	dicloruro de cobalto
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- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

- **Frases relevantes**

H302 Nocivo en caso de ingestión.

H317 Puede provocar una reacción alérgica en la piel.

H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

H341 Se sospecha que provoca defectos genéticos.

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H350i Puede provocar cáncer por inhalación.

H360F Puede perjudicar a la fertilidad.

H400 Muy tóxico para los organismos acuáticos.

H410 Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.

· Abreviaturas y acrónimos:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Toxicidad aguda – Categoría 4

Resp. Sens. 1: Sensibilización respiratoria – Categoría 1

Skin Sens. 1: Sensibilización cutánea – Categoría 1

Muta. 2: Mutagenicidad en células germinales – Categoría 2

Carc. 1B: Carcinogenicidad – Categoría 1B

Repr. 1B: Toxicidad para la reproducción – Categoría 1B

Aquatic Acute 1: Peligroso para el medio ambiente acuático - peligro acuático agudo – Categoría 1

Aquatic Chronic 1: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 1

Aquatic Chronic 2: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 2