

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/24/2015

Reviewed on 07/24/2015

1 Identification

- **Product identifier**
- **Trade name:** Crystal Clear Series Part A
- **Article number:** 24200(A), 24204(A), 24206(A)
- **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: sgkcck@aol.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**



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

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

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

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

- **Hazard pictograms**



GHS06



GHS07



GHS08

- **Signal word** Danger

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Trade name: Crystal Clear Series Part A

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

4,4'-methylenedi(cyclohexyl isocyanate)

· **Hazard statements**

Toxic if inhaled.

Causes skin irritation.

Causes serious eye irritation.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

In case of inadequate ventilation wear respiratory protection.

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

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

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

If eye irritation persists: Get medical advice/attention.

If on skin: Wash with plenty of water.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	50-100%
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4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for 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. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult 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:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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 aerosols.
- **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.

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- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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:**

5124-30-1 4,4'-methylenedi(cyclohexyl isocyanate)

REL Ceiling limit value: 0.11 mg/m³, 0.01 ppm

TLV Long-term value: 0.054 mg/m³, 0.005 ppm

- **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.
 - Avoid contact with the eyes and skin.
- **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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **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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9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Liquid
Color:	Clear
Odor:	Odorless
Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	251 °C (484 °F)

- **Flash point:** 187 °C (369 °F)

- **Flammability (solid, gaseous):** Not flammable.

- **Ignition temperature:**

Decomposition temperature: Not determined.

- **Auto igniting:** Product is not selfigniting.

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

- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

- **Vapor pressure:** Not determined.

- **Density at 20 °C (68 °F):** 1.079 g/cm³ (9.004 lbs/gal)

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix.

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

- **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

- **Solvent content:**

Organic solvents: 0.0 %

Solids content: 85.0 %

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

10 Stability and reactivity

- **Reactivity**

- **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.

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- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitization:**
 - Sensitization possible through inhalation.
 - Sensitization possible through skin contact.
- **Additional toxicological information:**
 - The product shows the following dangers according to internally approved calculation methods for preparations:
 - Toxic
 - Harmful
 - Irritant
- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is 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.
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 1 (Self-assessment): slightly hazardous for water
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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.

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

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

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

None of the ingredients is listed.

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

All ingredients are listed.

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

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

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· **Hazard pictograms**



· **Signal word** *Danger*

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

4,4'-methylenedi(cyclohexyl isocyanate)

· **Hazard statements**

Toxic if inhaled.

Causes skin irritation.

Causes serious eye irritation.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

In case of inadequate ventilation wear respiratory protection.

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

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

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

If eye irritation persists: Get medical advice/attention.

If on skin: Wash with plenty of water.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

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

· **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** 07/24/2015 / -

· **Abbreviations and acronyms:**

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)

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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

Printing date 24.07.2015

Revision: 24.07.2015

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

· **Product identifier**

· **Trade name:** Crystal Clear Series Part A

· **Article number:** 24200(A), 24204(A), 24206(A)

· **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: sgkcck@aol.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)

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 Hazards identification

· **Classification of the substance or mixture**



GHS06 skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

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

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AU

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2015

Revision: 24.07.2015

Trade name: *Crystal Clear Series Part A*

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STOT SE 3 H335 *May cause respiratory irritation.*· **Label elements**· **GHS label elements** *The product is classified and labelled according to the Globally Harmonised System (GHS).*· **Hazard pictograms**

GHS06 GHS07 GHS08

· **Signal word** *Danger*· **Hazard-determining components of labelling:***4,4'-methylenedi(cyclohexyl isocyanate)*· **Hazard statements***Toxic if inhaled.**Causes skin irritation.**Causes serious eye irritation.**May cause allergy or asthma symptoms or breathing difficulties if inhaled.**May cause an allergic skin reaction.**May cause respiratory irritation.*· **Precautionary statements***In case of inadequate ventilation wear respiratory protection.**Avoid breathing dust/fume/gas/mist/vapours/spray.**Wear protective gloves/protective clothing/eye protection/face protection.**Wash thoroughly after handling.**Use only outdoors or in a well-ventilated area.**Contaminated work clothing should not be allowed out of the workplace.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Take off contaminated clothing.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**If skin irritation or rash occurs: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**IF ON SKIN: Wash with plenty of water.**Store locked up.**Store in a well-ventilated place. Keep container tightly closed.**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/information on ingredients

· **Chemical characterisation: Mixtures**· **Description:** *Mixture of substances listed below with nonhazardous additions.*· **Dangerous components:**

5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	50-100%
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· **Additional information:** *For the wording of the listed risk phrases refer to section 16.*

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according to 1907/2006/EC, Article 31

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Revision: 24.07.2015

Trade name: Crystal Clear Series Part A

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4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing equipment only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for 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. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult 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 extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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 aerosols.
- **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.

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Trade name: Crystal Clear Series Part A

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- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/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:**

5124-30-1 4,4'-methylenedi(cyclohexyl isocyanate)

NES	Short-term value: 0.07 mg/m ³
	Long-term value: 0.02 mg/m ³
	Sen, as -NCO

- **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.
 - Avoid contact with the eyes and skin.
- **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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **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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Revision: 24.07.2015

Trade name: Crystal Clear Series Part A

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9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Liquid
Colour:	Clear
Odour:	Odourless
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	251 °C

· **Flash point:** 187 °C

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Self-igniting:** Product is not selfigniting.

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

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapour pressure:** Not determined.

Density at 20 °C:	1.079 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

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

· **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

· **Solvent content:**

Organic solvents:	0.0 %
VOC (EC)	0.00 %

· **Solids content:** 85.0 %

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

10 Stability and reactivity

· **Reactivity**

· **Chemical stability**

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

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

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Trade name: Crystal Clear Series Part A

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- **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**
- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation**
Sensitisation possible through inhalation.
Sensitisation possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Toxic
Harmful
Irritant

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.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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 together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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Trade name: Crystal Clear Series Part A

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14 Transport information

- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

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

- **Australian Inventory of Chemical Substances**

All ingredients are listed.

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

None of the ingredients is listed.

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS06 GHS07 GHS08

- **Signal word** Danger

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

4,4'-methylenedi(cyclohexyl isocyanate)

- **Hazard statements**

Toxic if inhaled.

Causes skin irritation.

Causes serious eye irritation.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

- **Precautionary statements**

In case of inadequate ventilation wear respiratory protection.

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

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

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Take off contaminated clothing.

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

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

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

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

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

Printing date 24.07.2015

Revision: 24.07.2015

Trade name: Crystal Clear Series Part A

(Contd. of page 7)

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **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:

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)

VOC: Volatile Organic Compounds (USA, EU)

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

AU

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/24/2015

Reviewed on 07/24/2015

1 Identification

- **Product identifier**
- **Trade name:** Crystal Clear Series Part A
- **Article number:** 24200(A), 24204(A), 24206(A)
- **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: sgkcck@aol.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**



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

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

STOT SE 3 H335 May cause respiratory irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Not applicable.



Toxic

Toxic by inhalation.



Irritant

Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation and skin contact.

- **Information concerning particular hazards for human and environment:**
The product has to be labeled due to the calculation procedure of international guidelines.

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CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/24/2015

Reviewed on 07/24/2015

Trade name: Crystal Clear Series Part A

(Contd. of page 1)

· **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **Label elements**

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Code letter and hazard designation of product:**



Toxic

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

4,4'-methylenedi(cyclohexyl isocyanate)

· **Risk phrases:**

Toxic by inhalation.

Irritating to eyes, respiratory system and skin.

May cause sensitisation by inhalation and skin contact.

· **Safety phrases:**

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

Avoid contact with skin.

Wear suitable gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

This material and its container must be disposed of as hazardous waste.

· **Hazard description:**

· **WHMIS-symbols:**

D1A - Very toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

CA

(Contd. on page 3)

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acc. to OSHA HCS

Printing date 07/24/2015

Reviewed on 07/24/2015

Trade name: Crystal Clear Series Part A

(Contd. of page 2)

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	60-100%
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4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for 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. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult 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:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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.

CA

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acc. to OSHA HCS

Printing date 07/24/2015

Reviewed on 07/24/2015

Trade name: Crystal Clear Series Part A

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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 aerosols.
- **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:** Keep receptacle tightly sealed.
- **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:**

5124-30-1 4,4'-methylenedi(cyclohexyl isocyanate)

EL	Long-term value: 0.005 ppm Ceiling limit value: 0.01 ppm
EV	Long-term value: 0.005 ppm Ceiling limit value: 0.02 ppm

- **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.
 Avoid contact with the eyes and skin.
- **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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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Reviewed on 07/24/2015

Trade name: Crystal Clear Series Part A

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- **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: Liquid

Color: Clear

- **Odor:** Odorless

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 251 °C

- **Flash point:** 187 °C

- **Flammability (solid, gaseous):** Not flammable.

- **Ignition temperature:**

Decomposition temperature: Not determined.

- **Auto igniting:** Product is not selfigniting.

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

- **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

- **Vapor pressure:** Not determined.

- **Density at 20 °C:** 1.079 g/cm³

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix.

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

- **Viscosity:**

Dynamic: Not determined.

Kinematic: Not determined.

- **Solvent content:**

Organic solvents: 0.0 %

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CA

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acc. to OSHA HCS

Printing date 07/24/2015

Reviewed on 07/24/2015

Trade name: Crystal Clear Series Part A

(Contd. of page 5)

- | | |
|--------------------------|--|
| Solids content: | 85.0 % |
| Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity**
- **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:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:**
- Sensitization possible through inhalation.
- Sensitization possible through skin contact.
- **Additional toxicological information:**
- The product shows the following dangers according to internally approved calculation methods for preparations:
- Toxic
- Harmful
- Irritant
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)
--

None of the ingredients is listed.

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

None of the ingredients is 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.
- **Additional ecological information:**
- **General notes:**
- Water hazard class 1 (Self-assessment): slightly hazardous for water
- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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Safety Data Sheet

acc. to OSHA HCS

Printing date 07/24/2015

Reviewed on 07/24/2015

Trade name: Crystal Clear Series Part A

(Contd. of page 6)

- **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

- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

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

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

None of the ingredients is listed.

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

All ingredients are listed.

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

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 07/24/2015

Trade name: Crystal Clear Series Part A

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Canadian substance listings:**

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

All ingredients are listed.

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

All ingredients are listed.

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

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Toxic

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

4,4'-methylenedi(cyclohexyl isocyanate)

· **Risk phrases:**

Toxic by inhalation.

Irritating to eyes, respiratory system and skin.

May cause sensitisation by inhalation and skin contact.

· **Safety phrases:**

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

Avoid contact with skin.

Wear suitable gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

This material and its container must be disposed of as hazardous waste.

· **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** 07/24/2015 / -

· **Abbreviations and acronyms:**

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)

WHMIS: Workplace Hazardous Materials Information System (Canada)

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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

Printing date 24.07.2015

Revision: 24.07.2015

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

- **1.1 Product identifier**
- **Trade name:** Crystal Clear Series Part A
- **Article number:** 24200(A), 24204(A), 24206(A)
- **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: sgkcck@aol.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**



GHS06 skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

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

STOT SE 3 H335 May cause respiratory irritation.

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



GHS06



GHS08

(Contd. on page 2)

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

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Revision: 24.07.2015

Trade name: Crystal Clear Series Part A

(Contd. of page 1)

· **Signal word** *Danger*· **Hazard-determining components of labelling:**

4,4'-methylenedi(cyclohexyl isocyanate)

· **Hazard statements**

H331 Toxic if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

· **Precautionary statements**

P285 In case of inadequate ventilation wear respiratory protection.

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

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

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

· **3.2 Chemical characterisation: Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	50-100%
EINECS: 225-863-2	☠ Acute Tox. 3, H331; ☠ Resp. Sens. 1, H334; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**· **General information:**

Immediately remove any clothing soiled by the product.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for 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. If symptoms persist, consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2015

Revision: 24.07.2015

Trade name: *Crystal Clear Series Part A*

(Contd. of page 2)

- **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:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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 aerosols.
- **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:** Keep container tightly sealed.
- **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.
- **8.1 Control parameters**

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

5124-30-1 4,4'-methylenedi(cyclohexyl isocyanate)

WEL	Short-term value: 0.07 mg/m ³
	Long-term value: 0.02 mg/m ³
	Sen; as -NCO

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

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2015

Revision: 24.07.2015

Trade name: Crystal Clear Series Part A

(Contd. of page 3)

- **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.
 Avoid contact with the eyes and skin.
- **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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **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:	Liquid
Colour:	Clear
Odour:	Odourless
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	251 °C

· **Flash point:** 187 °C

· **Flammability (solid, gaseous):** Not applicable.

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Safety data sheet
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(Contd. of page 4)

· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density at 20 °C:	1.079 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic:	Not determined.
· Solvent content:	
· Organic solvents:	0.0 %
· VOC (EC)	0.00 %
· Solids content:	85.0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **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**
- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation**
- Sensitisation possible through inhalation.
- Sensitisation possible through skin contact.

(Contd. on page 6)

GB

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

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· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Toxic
Harmful
Irritant

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.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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

· **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.

SECTION 14: Transport information

· **14.5 Environmental hazards:**

· **Marine pollutant:** No

· **14.6 Special precautions for user** Not applicable.

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

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** None of the ingredients is listed.

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

GB

(Contd. on page 7)

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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*H315 Causes skin irritation.**H317 May cause an allergic skin reaction.**H319 Causes serious eye irritation.**H331 Toxic if inhaled.**H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.**H335 May cause respiratory irritation.***· Abbreviations and acronyms:***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)**VOC: Volatile Organic Compounds (USA, EU)**Acute Tox. 3: Acute toxicity, Hazard Category 3**Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2**Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1**Skin Sens. 1: Sensitisation - Skin, Hazard Category 1**STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*

GB

Veiligheidsinformatieblad

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

· 1.1 Productidentificatie

· **Handelsnaam:** Crystal Clear Series Part A

· **Artikelnummer:** 24200(A), 24204(A), 24206(A)

· 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 verstrekker van het veiligheidsinformatieblad

· **Fabrikant/leverancier:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

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

email: sgkcck@aol.com

www.emsdiasum.com

Aurion

Binnenhaven 5

6709 PD Wageningen

The Netherlands

Tel: 31 317 415094

Fax: 31 317 415955

email: info@aurion.nl

· **Inlichtinggevendende 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**



GHS06 doodshoofd met gekruiste beenderen

Acute Tox. 3 H331 Giftig bij inademing.



GHS08 gezondheidsgevaar

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



GHS07

Skin Irrit. 2 H315 Veroorzaakt huidirritatie.

Eye Irrit. 2 H319 Veroorzaakt ernstige oogirritatie.

Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.

STOT SE 3 H335 Kan irritatie van de luchtwegen veroorzaken.

· 2.2 Etiketteringselementen

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

Het product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.

(Vervolg op blz. 2)

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(Vervolg van blz. 1)

· Gevarenpictogrammen



GHS06 GHS08

· Signaalwoord Gevaar

· Gevaaraanduidende componenten voor de etikettering:

dicyclohexylmethaan-4,4'-diisocynaat

· Gevarenaanduidingen

H331 Giftig bij inademing.

H315 Veroorzaakt huidirritatie.

H319 Veroorzaakt ernstige oogirritatie.

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

H317 Kan een allergische huidreactie veroorzaken.

H335 Kan irritatie van de luchtwegen veroorzaken.

· Veiligheidsaanbevelingen

P285 Bij ontoereikende ventilatie een geschikte adembescherming dragen.

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

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

P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.

P405 Achter slot bewaren.

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

· 3.2 Chemische karakterisering: Mengsels

· Beschrijving: Mengsel van na elkaar aangevoerde stoffen met onveerbarelijke bijmengingen.

· Gevaarlijke inhoudstoffen:

CAS: 5124-30-1	dicyclohexylmethaan-4,4'-diisocynaat	50-100%
EINECS: 225-863-2	⚠ Acute Tox. 3, H331; ⚠ Resp. Sens. 1, H334; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	

· Aanvullende gegevens:

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

RUBRIEK 4: Eerstehulpmaatregelen

· 4.1 Beschrijving van de eerstehulpmaatregelen

· Algemene informatie:

Verontreinigde kleding onmiddellijk uittrekken.

Ademhalingsstoestel pas afnemen nadat de verontreinigde kleding verwijderd is.

Bij onregelmatige ademhaling of ademstilstand kunstmatige ademhaling toepassen.

(Vervolg op blz. 3)

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(Vervolg van blz. 2)

- **Na het inademen:**
Verse lucht of zuurstof toedienen; deskundige medische hulp inroepen.
Bij bewusteloosheid ligging en vervoer in stabiele zijligging.
- **Na huidcontact:** Onmiddellijk met water en zeep afwassen en goed naspoelen.
- **Na oogcontact:**
De ogen gedurende verscheidene minuten onder stromend water afspoelen terwijl de oogspleet geopend blijft. Bij aanhoudende klachten een dokter raadplegen.
- **Na inslikken:** Als de klachten niet minderen, een 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:** Ademhalingstoestel aantrekken.

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:** Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 Insluutings- en reinigingsmethoden en -materiaal:**
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.
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.
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Ademhalingstoestellen gereedhouden.
- **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:** Tanks ondoordringbaar gesloten houden.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 4)

Handelsnaam: Crystal Clear Series Part A

(Vervolg van blz. 3)

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:**
 Het produkt bevat geen relevante hoeveelheden van stoffen, die met betrekking tot de werkplaatsen, qua grenswaarden gecontroleerd moeten worden.
- **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.
 Aanraking met de ogen en de huid vermijden.
- **Ademhalingsbescherming:**
 Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingstoestel 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 chemicaliënmengsel 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. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.
 - **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:** Vloeistof
- **Kleur:** Helder
- **Reuk:** Reukloos

(Vervolg op blz. 5)

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· Geurdrempelwaarde:	Niet bepaald.
· pH-waarde:	Niet bepaald.
· Toestandsverandering Smeltpunt/smeltbereik:	Niet bepaald.
Kookpunt/kookpuntbereik:	251 °C
· Vlampunt:	187 °C
· Ontvlambaarheid (vast, gasvormig):	Niet bruikbaar.
· Ontstekingstemperatuur:	
Ontbindingstemperatuur:	Niet bepaald.
· Zelfonsteking:	Het produkt ontbrandt niet uit zichzelf.
· Ontploffingsgevaar:	Het produkt is niet ontploffingsgevaarlijk.
· Ontploffingsgrenzen:	
Onderste:	Niet bepaald.
Bovenste:	Niet bepaald.
· Dampspanning:	Niet bepaald.
Dichtheid bij 20 °C:	1,079 g/cm ³
· Relatieve dichtheid	Niet bepaald.
· Dampdichtheid	Niet bepaald.
· Verdampingssnelheid	Niet bepaald.
· Oplosbaarheid in/mengbaarheid met Water:	Niet resp. gering mengbaar.
· Verdelingscoëfficiënt (n-octanol/water):	Niet bepaald.
· Viscositeit	
Dynamisch:	Niet bepaald.
Kinematisch:	Niet bepaald.
· Oplosmiddelgehalte:	
Organisch oplosmiddel:	0,0 %
VOC (EG)	0,00 %
Gehalte aan vaste bestanddelen:	85,0 %
· 9.2 Overige informatie	Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit**
- **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.

NL
 (Vervolg op blz. 6)

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Handelsnaam: Crystal Clear Series Part A

(Vervolg van blz. 5)

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit**
- **Primaire aandoening:**
- **Huidcorrosie/-irritatie** Prikkelde huid en de slijmvliezen.
- **Ernstig oogletsel/oogirritatie** Prikkeling
- **Sensibilisatie van de luchtwegen/de huid**
Kan overgevoeligheid veroorzaken bij inademing.
Kan overgevoeligheid veroorzaken bij contact met de huid.
- **Aanvullende toxicologische informatie:**
Het produkt vertoont op grond van het berekeningsprocédé van de algemene classificatie-richtlijnen van de EG voor toebereidingen in de laatste geldige redactie de volgende gevaren:
Vergiftig
Schadelijk
Irriterend

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.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL) 10: Kan in het aquatisch milieu op lange termijn schadelijke effecten veroorzaken.
Gevaar voor water klasse 1 (D) (Zelfclassificatie): gevaar voor water klein
Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.
- **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 terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- **14.5 Milieugevaren:**
- **Marine pollutant:** Neen
- **14.6 Bijzondere voorzorgen voor de gebruiker** Niet bruikbaar.

(Vervolg op blz. 7)

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(Vervolg van blz. 6)

- **14.7 Vervoer in bulk overeenkomstig bijlage II bij MARPOL 73/78 en de IBC-code** Niet bruikbaar.

RUBRIEK 15: Regelgeving

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

- **SZW-lijst van kankerverwekkende stoffen**

geen der bestanddelen staat op de lijst.

- **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling**

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

- **Richtlijn 2012/18/EU**

- **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** geen der bestanddelen staat op de lijst.

- **Nationale voorschriften:**

- **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL) 10: Saneringsinspanning A

- **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

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**

H315 Veroorzaakt huidirritatie.

H317 Kan een allergische huidreactie veroorzaken.

H319 Veroorzaakt ernstige oogirritatie.

H331 Giftig bij inademing.

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

H335 Kan irritatie van de luchtwegen veroorzaken.

- **Afkortingen en acroniemen:**

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)

VOC: Volatile Organic Compounds (USA, EU)

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 24.07.2015

Révision: 24.07.2015

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

- **1.1 Identificateur de produit**
- **Nom du produit:** Crystal Clear Series Part A
- **Code du produit:** 24200(A), 24204(A), 24206(A)
- **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: sgkcck@aol.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

SECTION 2: Identification des dangers

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



GHS06 tête de mort sur deux tibias

Acute Tox. 3 H331 Toxique par inhalation.



GHS08 danger pour la santé

Resp. Sens. 1 H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.



GHS07

Skin Irrit. 2 H315 Provoque une irritation cutanée.

Eye Irrit. 2 H319 Provoque une sévère irritation des yeux.

Skin Sens. 1 H317 Peut provoquer une allergie cutanée.

STOT SE 3 H335 Peut irriter les voies respiratoires.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.
- **Pictogrammes de danger**



GHS06



GHS08

(suite page 2)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 24.07.2015

Révision: 24.07.2015

Nom du produit: Crystal Clear Series Part A

(suite de la page 1)

- **Mention d'avertissement** Danger

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

diisocyanate de 4,4'-dicyclohexylméthanediyile

- **Mentions de danger**

H331 Toxique par inhalation.

H315 Provoque une irritation cutanée.

H319 Provoque une sévère irritation des yeux.

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

H317 Peut provoquer une allergie cutanée.

H335 Peut irriter les voies respiratoires.

- **Conseils de prudence**

P285 Lorsque la ventilation du local est insuffisante, porter un équipement de protection respiratoire.

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.

P305+P351+P338 EN CAS DE CONTACT AVEC LES YEUX: rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.

P405 Garder sous clef.

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.

SECTION 3: Composition/informations sur les composants

- **3.2 Caractérisation chimique: Mélanges**

- **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

- **Composants dangereux:**

CAS: 5124-30-1	diisocyanate de 4,4'-dicyclohexylméthanediyile	50-100%
EINECS: 225-863-2	 Acute Tox. 3, H331;  Resp. Sens. 1, H334;  Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	

- **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

SECTION 4: Premiers secours

- **4.1 Description des premiers secours**

- **Remarques générales:**

Enlever immédiatement les vêtements contaminés par le produit.

Ne retirer la protection respiratoire qu'après avoir retiré les vêtements contaminés.

Respiration artificielle dans le cas d'une respiration irrégulière ou d'un arrêt respiratoire.

- **Après inhalation:**

Donner de l'air frais ou de l'oxygène; demander d'urgence une assistance médicale.

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, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières. Si les troubles persistent, consulter un médecin.

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- **Après ingestion:** Si les troubles persistent, consulter 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.

SECTION 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:** Porter un appareil de protection respiratoire.

SECTION 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:**
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:**
Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).
Evacuer les matériaux contaminés en tant que déchets conformément au point 13.
Assurer une aération suffisante.
- **6.4 Référence à d'autres sections**
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.

SECTION 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 d'aérosols.
- **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.
- **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

SECTION 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.

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· **8.1 Paramètres de contrôle**

· **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

Le produit ne contient pas en quantité significative des substances présentant des valeurs-seuil à surveiller par poste de travail.

· **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.

Eviter tout contact avec les yeux et avec la peau.

· **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 dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

· **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

SECTION 9: Propriétés physiques et chimiques

· **9.1 Informations sur les propriétés physiques et chimiques essentielles**

· **Indications générales**

· **Aspect:**

Forme: Liquide

Couleur: Transparent

· **Odeur:** Inodore

· **Seuil olfactif:** Non déterminé.

· **valeur du pH:** Non déterminé.

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· Changement d'état Point de fusion: Point d'ébullition:	<i>Non déterminé.</i> <i>251 °C</i>
· Point d'éclair	<i>187 °C</i>
· Inflammabilité (solide, gazeux):	<i>Non applicable.</i>
· Température d'inflammation: Température de décomposition:	<i>Non déterminé.</i>
· Auto-inflammation:	<i>Le produit ne s'enflamme pas spontanément.</i>
· Danger d'explosion:	<i>Le produit n'est pas explosif.</i>
· Limites d'explosion: Inférieure: Supérieure:	<i>Non déterminé.</i> <i>Non déterminé.</i>
· Pression de vapeur:	<i>Non déterminé.</i>
· Densité à 20 °C: · Densité relative · Densité de vapeur. · Vitesse d'évaporation	<i>1,079 g/cm³</i> <i>Non déterminé.</i> <i>Non déterminé.</i> <i>Non déterminé.</i>
· Solubilité dans/miscibilité avec l'eau:	<i>Pas ou peu miscible</i>
· Coefficient de partage (n-octanol/eau):	<i>Non déterminé.</i>
· Viscosité: Dynamique: Cinématique:	<i>Non déterminé.</i> <i>Non déterminé.</i>
· Teneur en solvants: Solvants organiques: VOC (CE)	<i>0,0 %</i> <i>0,00 %</i>
Teneur en substances solides:	<i>85,0 %</i>
· 9.2 Autres informations	<i>Pas d'autres informations importantes disponibles.</i>

SECTION 10: Stabilité et réactivité

- **10.1 Réactivité**
- **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*

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SECTION 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë**
- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée** Irrite la peau et les muqueuses.
- **Lésions oculaires graves/irritation oculaire** Effet d'irritation.
- **Sensibilisation respiratoire ou cutanée**
Sensibilisation possible par inhalation.
Sensibilisation possible par contact avec la peau.
- **Indications toxicologiques complémentaires:**
Selon le procédé de calcul de la dernière version en vigueur de la directive générale CEE sur la classification des préparations, le produit présente les dangers suivants:
Toxique
Nocif
Irritant

SECTION 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.
- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 1 (D) (Classification propre): peu polluant
Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.
- **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.

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

SECTION 14: Informations relatives au transport

- **14.5 Dangers pour l'environnement:**
- **Marine Pollutant:** Non
- **14.6 Précautions particulières à prendre par l'utilisateur** Non applicable.

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- **14.7 Transport en vrac conformément à l'annexe II de la convention Marpol 73/78 et au recueil IBC** *Non applicable.*

SECTION 15: Informations réglementaires

- **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** *Aucun des composants n'est compris.*
- **15.2 Évaluation de la sécurité chimique:** *Une évaluation de la sécurité chimique n'a pas été réalisée.*

SECTION 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**

H315 Provoque une irritation cutanée.

H317 Peut provoquer une allergie cutanée.

H319 Provoque une sévère irritation des yeux.

H331 Toxique par inhalation.

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

H335 Peut irriter les voies respiratoires.

- **Acronymes et abréviations:**

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)

VOC: Volatile Organic Compounds (USA, EU)

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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ABSCHNITT 1: Bezeichnung des Stoffs bzw. des Gemischs und des Unternehmens

· **1.1 Produktidentifikator**

· **Handelsname:** Crystal Clear Series Part A

· **Artikelnummer:** 24200(A), 24204(A), 24206(A)

· **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**

Keine weiteren relevanten Informationen verfügbar.

· **Verwendung des Stoffes / 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: sgkcck@aol.com

www.emsdiasum.com

Science Services GmbH

Unterhachinger Str. 75

81737 München Germany

Tel: +49(0)89 18 93 668-0

safety@scienceservices.de

24h Giftnotruf Munchen: +49 (0)89 19240

Toxikologische Abteilung der II. Medizinischen Klinik

rechts der Isar, Munchen. - www.toxinfo.org

· **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**



GHS06 Totenkopf mit gekreuzten Knochen

Acute Tox. 3 H331 Giftig bei Einatmen.



GHS08 Gesundheitsgefahr

Resp. Sens. 1 H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.



GHS07

Skin Irrit. 2 H315 Verursacht Hautreizungen.

Eye Irrit. 2 H319 Verursacht schwere Augenreizung.

Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

STOT SE 3 H335 Kann die Atemwege reizen.

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



GHS06 GHS08

- **Signalwort Gefahr**
- **Gefahrbestimmende Komponenten zur Etikettierung:**
Dicyclohexylmethan-4,4'-diisocyanat
- **Gefahrenhinweise**
H331 Giftig bei Einatmen.
H315 Verursacht Hautreizungen.
H319 Verursacht schwere Augenreizung.
H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.
H317 Kann allergische Hautreaktionen verursachen.
H335 Kann die Atemwege reizen.
- **Sicherheitshinweise**
P285 Bei unzureichender Belüftung Atemschutz tragen.
P261 Einatmen von Staub/Rauch/Gas/Nebel/Dampf/Aerosol vermeiden.
P280 Schutzhandschuhe/Schutzkleidung/Augenschutz/Gesichtsschutz tragen.
P305+P351+P338 **BEI KONTAKT MIT DEN AUGEN:** Einige Minuten lang behutsam mit Wasser spülen.
Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.
P405 Unter Verschluss aufbewahren.
P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.
- **2.3 Sonstige Gefahren**
- **Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

- **3.2 Chemische Charakterisierung: Gemische**
- **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

Gefährliche Inhaltsstoffe:

CAS: 5124-30-1	Dicyclohexylmethan-4,4'-diisocyanat	50-100%
EINECS: 225-863-2	Acute Tox. 3, H331; Resp. Sens. 1, H334; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	

- **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

- **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**
- **Allgemeine Hinweise:**
Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.
Atemschutz erst nach Entfernen verunreinigter Kleidungsstücke abnehmen.
Bei unregelmäßiger Atmung oder Atemstillstand künstliche Beatmung.

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- **Nach Einatmen:**
*Frischluf- oder Sauerstoffzufuhr; ärztliche Hilfe in Anspruch nehmen.
 Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.*
- **Nach Hautkontakt:** *Sofort mit Wasser und Seife abwaschen und gut nachspülen.*
- **Nach Augenkontakt:**
Augen mehrere Minuten bei geöffnetem Lidspalt unter fließendem Wasser spülen. Bei anhaltenden Beschwerden Arzt konsultieren.
- **Nach Verschlucken:** *Bei anhaltenden Beschwerden Arzt konsultieren.*
- **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:** *Atemschutzgerät anlegen.*

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Nicht erforderlich.
- **6.2 Umweltschutzmaßnahmen:** *Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.*
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**
*Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.
 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.*

ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**
*Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.
 Behälter mit Vorsicht öffnen und handhaben.
 Aerosolbildung 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:** *Behälter dicht geschlossen halten.*
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -

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· **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:**
Das Produkt enthält keine relevanten Mengen von Stoffen mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten.
- **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.
Berührung mit den Augen und der Haut vermeiden.
- **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.
- **Handschuhmaterial**
Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.
 - **Durchdringungszeit des Handschuhmaterials**
Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.
 - **Augenschutz:**



Dichtschließende Schutzbrille

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ABSCHNITT 9: Physikalische und chemische Eigenschaften

· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

· Allgemeine Angaben

· Aussehen:

Form: Flüssigkeit

Farbe: Klar

· **Geruch:** Geruchlos

· **Geruchsschwelle:** Nicht bestimmt.

· **pH-Wert:** Nicht bestimmt.

· Zustandsänderung

Schmelzpunkt/Schmelzbereich: Nicht bestimmt.

Siedepunkt/Siedebereich: 251 °C

· **Flammpunkt:** 187 °C

· **Entzündlichkeit (fest, gasförmig):** Nicht anwendbar.

· Zündtemperatur:

Zersetzungstemperatur: Nicht bestimmt.

· **Selbstentzündlichkeit:** Das Produkt ist nicht selbstentzündlich.

· **Explosionsgefahr:** Das Produkt ist nicht explosionsgefährlich.

· Explosionsgrenzen:

Untere: Nicht bestimmt.

Obere: Nicht bestimmt.

· **Dampfdruck:** Nicht bestimmt.

· **Dichte bei 20 °C:** 1,079 g/cm³

· **Relative Dichte:** Nicht bestimmt.

· **Dampfdichte:** Nicht bestimmt.

· **Verdampfungsgeschwindigkeit:** Nicht bestimmt.

· Löslichkeit in / Mischbarkeit mit

Wasser: Nicht bzw. wenig mischbar.

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

· Viskosität:

Dynamisch: Nicht bestimmt.

Kinematisch: Nicht bestimmt.

· Lösemittelgehalt:

Organische Lösemittel: 0,0 %

VOC (EU) 0,00 %

Festkörpergehalt: 85,0 %

· **9.2 Sonstige Angaben** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 10: Stabilität und Reaktivität

· 10.1 Reaktivität

· 10.2 Chemische Stabilität

· Thermische Zersetzung / zu vermeidende Bedingungen:

Keine Zersetzung bei bestimmungsgemäßer Verwendung.

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- **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**
- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut** Reizt die Haut und die Schleimhäute.
- **Schwere Augenschädigung/-reizung** Reizwirkung.
- **Sensibilisierung der Atemwege/Haut**
Durch Einatmen Sensibilisierung möglich.
Durch Hautkontakt Sensibilisierung möglich.
- **Zusätzliche toxikologische Hinweise:**
Das Produkt weist aufgrund des Berechnungsverfahrens der Allgemeinen Einstufungsrichtlinie der EG für Zubereitungen in der letztgültigen Fassung folgende Gefahren auf:
Giftig
Gesundheitsschädlich
Reizend

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.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend
Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
- **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.

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ABSCHNITT 14: Angaben zum Transport

- | | |
|---|------------------|
| · 14.5 Umweltgefahren: | |
| · Marine pollutant: | Nein |
| · 14.6 Besondere Vorsichtsmaßnahmen für den Verwender | Nicht anwendbar. |
| · 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens 73/78 und gemäß IBC-Code | Nicht anwendbar. |

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** Keiner der Inhaltsstoffe ist enthalten.
 - **Nationale Vorschriften:**
 - **Technische Anleitung Luft:**
- | Klasse | Anteil in % |
|--------|-------------|
| I | 85,0 |
- **Wassergefährdungsklasse: WGK 1 (Selbsteinstufung):** schwach wassergefährdend.
 - **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**
- H315 Verursacht Hautreizungen.
- H317 Kann allergische Hautreaktionen verursachen.
- H319 Verursacht schwere Augenreizung.
- H331 Giftig bei Einatmen.
- H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.
- H335 Kann die Atemwege reizen.
- **Abkürzungen und Akronyme:**
- 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)
- VOC: Volatile Organic Compounds (USA, EU)
- Acute Tox. 3: Acute toxicity, Hazard Category 3
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Scheda di dati di sicurezza
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SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** Crystal Clear Series Part A

· **Articolo numero:** 24200(A), 24204(A), 24206(A)

· **1.2 Usi pertinenti identificati della sostanza o 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: sgkcck@aol.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**



GHS06 teschio e tibie incrociate

Acute Tox. 3 H331 Tossico se inalato.



GHS08 pericolo per la salute

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



GHS07

Skin Irrit. 2 H315 Provoca irritazione cutanea.

Eye Irrit. 2 H319 Provoca grave irritazione oculare.

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

STOT SE 3 H335 Può irritare le vie respiratorie.

· **2.2 Elementi dell'etichetta**

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

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

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· **Pittogrammi di pericolo**

GHS06 GHS08

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

dicicloesilmetan-4,4'-diisocianato

· **Indicazioni di pericolo**

H331 Tossico se inalato.

H315 Provoca irritazione cutanea.

H319 Provoca grave irritazione oculare.

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

H317 Può provocare una reazione allergica cutanea.

H335 Può irritare le vie respiratorie.

· **Consigli di prudenza**

P285 In caso di ventilazione insufficiente utilizzare un apparecchio respiratorio.

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.

P305+P351+P338 **IN CASO DI CONTATTO CON GLI OCCHI: sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.**

P405 Conservare sotto chiave.

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

· **3.2 Caratteristiche chimiche: Miscela**· **Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.· **Sostanze pericolose:**

CAS: 5124-30-1	dicicloesilmetan-4,4'-diisocianato	50-100%
EINECS: 225-863-2	⚠ Acute Tox. 3, H331; ⚠ Resp. Sens. 1, H334; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	

· **Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

SEZIONE 4: Misure di primo soccorso

· **4.1 Descrizione delle misure di primo soccorso**· **Indicazioni generali:**

Allontanare immediatamente gli abiti contaminati dal prodotto.

Levarsi la maschera protettiva solamente dopo aver tolto gli abiti contaminati.

In caso di respirazione irregolare o di blocco respiratorio praticare la respirazione artificiale.

· **Inalazione:**

Portare il soggetto in zona ben areata o somministrare ossigeno; chiedere l'intervento di un medico.

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

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- **Contatto con la pelle:** Lavare immediatamente con acqua e sapone sciacquando accuratamente.
- **Contatto con gli occhi:**
Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte Se persiste il dolore consultare il medico.
- **Ingestione:** Se il dolore persiste consultare il medico.
- **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.
- **4.3 Indicazione della 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:** Indossare il respiratore.

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:** Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**
Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).
Smaltimento del materiale contaminato conformemente al punto 13.
Provvedere ad una sufficiente areazione.
- **6.4 Riferimento ad altre sezioni**
Per informazioni relative ad un 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 aerosol.
- **Indicazioni in caso di incendio ed esplosione:** Tener pronto il respiratore.
- **7.2 Condizioni per l'immagazzinamento 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:** Mantenere i recipienti ermeticamente chiusi.
- **7.3 Usi finali specifici** 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.

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· 8.1 Parametri di controllo· **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:****5124-30-1 dicicloesilmetan-4,4'-diisocianato**TWA Valore a lungo termine: 0,0054 mg/m³, 0,005 ppm· **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.

Evitare il contatto con gli occhi e la pelle.

· **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. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego

· **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

SEZIONE 9: Proprietà fisiche e chimiche· **9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali**· **Indicazioni generali**· **Aspetto:****Forma:** Liquido**Colore:** Chiaro· **Odore:** Inodore· **Soglia olfattiva:** Non definito.· **valori di pH:** Non definito.

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· Cambiamento di stato Temperatura di fusione/ambito di fusione:	Non definito.
Temperatura di ebollizione/ambito di ebollizione:	251 °C
· Punto di infiammabilità:	187 °C
· Infiammabilità (solido, gassoso):	Non applicabile.
· Temperatura di accensione:	
Temperatura di decomposizione:	Non definito.
· Autoaccensione:	Prodotto non autoinfiammabile.
· Pericolo di esplosione:	Prodotto non esplosivo.
· Limiti di infiammabilità: Inferiore:	Non definito.
Superiore:	Non definito.
· Tensione di vapore:	Non definito.
· Densità a 20 °C:	1,079 g/cm ³
· Densità relativa	Non definito.
· Densità del vapore	Non definito.
· Velocità di evaporazione	Non definito.
· Solubilità in/Miscibilità con acqua:	Poco e/o non miscibile.
· Coefficiente di distribuzione (n-Octanol/acqua):	Non definito.
· Viscosità: Dinamica:	Non definito.
Cinematica:	Non definito.
· Tenore del solvente: Solventi organici:	0,0 %
VOC (CE)	0,00 %
· Contenuto solido:	85,0 %
· 9.2 Altre informazioni	Non sono disponibili altre informazioni.

SEZIONE 10: Stabilità e reattività

- **10.1 Reattività**
- **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.

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SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta**
- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea** Irrita la pelle e le mucose.
- **Lesioni oculari gravi/irritazioni oculari gravi** Irritante.
- **Sensibilizzazione respiratoria o cutanea**
Può provocare sensibilizzazione se inalato.
Può provocare sensibilizzazione a contatto con la pelle.
- **Ulteriori dati tossicologici:**
Il prodotto, in base al metodo di calcolo della direttiva generale della Comunità sulla classificazione dei preparati nella sua ultima versione valida, presenta i seguenti rischi:
Tossico
Nocivo
Irritante

SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** 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.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 1 (D) (Autoclassificazione): poco pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

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

- **14.5 Pericoli per l'ambiente:**
- **Marine pollutant:** No
- **14.6 Precauzioni speciali per gli utilizzatori** Non applicabile.

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- **14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL 73/78 ed il codice IBC** *Non applicabile.*

SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Norme e legislazione su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I** Nessuno dei componenti è contenuto.
- **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**

H315 Provoca irritazione cutanea.

H317 Può provocare una reazione allergica cutanea.

H319 Provoca grave irritazione oculare.

H331 Tossico se inalato.

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

H335 Può irritare le vie respiratorie.

- **Abbreviazioni e acronimi:**

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)

VOC: Volatile Organic Compounds (USA, EU)

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명:** Crystal Clear Series Part A
- **상품번호:** 24200(A), 24204(A), 24206(A)
- **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
- **제품의 권고 용도와 사용상의 제한:** 실험실 화학품
- **안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보**
- **제조자/수입자/유통업자 정보:**
 Electron Microscopy Sciences
 1560 Industry Road
 USA-Hatfield, PA 19440
 Tel: 215-412-8400 Fax: 215-412-8450
 email: sgkcck@aol.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
- **추가적인 정보 획득 가능:** Product safety department
- **비상연락 전화번호:**
 ChemTrec 1-800-424-9300 Contract CCN7661
 1-703-527-3887

2 유해성.위험성

- **순물질 또는 혼합물의 분류**



두개골과 대퇴골

급성 독성(흡입) 구분3 H331 흡입하면 유독함



건강에 위험

호흡기과민성 구분1 H334 흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음



피부 부식성/자극성 구분2 H315 피부에 자극을 일으킴
 심한 눈 손상/자극성 구분2 H319 눈에 심한 자극을 일으킴
 피부과민성 구분1 H317 알레르기성 피부 반응을 일으킬 수 있음
 표적장기-1회노출 구분3 H335 호흡기계 자극을 일으킬 수 있음

- **라벨표기 요소**

- **GHS 라벨 요소**

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

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· 그림문자



GHS06 GHS08

· 신호어 위험

· 상표상에명확히위험성이표시된성분:

4,4'-methylenedi(cyclohexyl isocyanate)

· 유해.위험 문구

- 흡입하면 유독함
- 피부에 자극을 일으킴
- 눈에 심한 자극을 일으킴
- 흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음
- 알레르기성 피부 반응을 일으킬 수 있음
- 호흡기계 자극을 일으킬 수 있음

· 예방조치 문구

- 환기가 잘 되지 않는 곳에서는 호흡기 보호구를 착용하십시오.
(분진·흡·가스·미스트·증기·스프레이)의 흡입을 피하십시오.
(보호장갑·보호의·보안경·안면보호구)를(을) 착용하십시오.
· 눈에 묻으면 몇 분간 물로 조심해서 씻으십시오. 가능하면콘택트렌즈를 제거하십시오. 계속 씻으십시오.
· 잠금장치가 있는 저장장소에 저장하십시오.
· 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· 기타 유해성

- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

3 구성성분의 명칭 및 함유량

· 화학적 특성: 혼합물

· 설명: 무해한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· 위험 요소:

5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	50-100%
	⚠ 급성 독성(흡입) 구분3, H331; ⚠ 호흡기과민성 구분1, H334; ⚠ 피부 부식성/자극성 구분2, H315; 심한 눈 손상/자극성 구분2, H319; 피부과민성 구분1, H317; 표적장기-1회노출 구분3, H335	

4 응급조치 요령

· 응급조치요령 내용

· 일반적 정보:

- 이제품에 의해 오염된 의상은 즉시 제거한다.
- 반드시 오염된 의상을 완전히 제거한 후에 호흡보호기를 떼어낸다.
- 불규칙적인 호흡이나 호흡정지상태에서는 인공호흡을 실시한다.

· 흡입했을 때:

- 신선한 공기나 산소를 공급받고, 의료진의 도움을 구한다.
- 환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.

· 피부에 접촉했을 때: 즉시물과비누로씻고잘행군다.

· 눈에 들어갔을 때: 흐르는 물에 눈을 몇분동안 씻어내고나서, 증상이 지속될 경우에는 의사와 상담한다

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- **먹었을 때:** 증상이 지속될 경우에는 의사와 상담 한다.
- **기타 의사의 주의사항:**
- **가장 중요한 급·만성 증상 및 영향** 추가적인 정보가 존재하지 않습니다.
- **즉각적인 의료처치 및 특별치료가 필요함을 시사하는 징후** 추가적인 정보가 존재하지 않습니다.

5 폭발·화재시 대처방법

- **소화제**
- **적절한 소화제:** 주변 환경에 맞는 화재 진화방법을 사용한다.
- **본 화학물질이나 혼합물에서 발생하는 특별 유해성** 추가적인 정보가 존재하지 않습니다.
- **소방관에 대한 권고사항**
- **화재 진압 시 착용할 보호구 및 예방조치:** 호흡보호장비설치.

6 누출 사고 시 대처방법

- **개인적 예방조치, 보호장비 및 응급처치 절차** 필요없음.
- **환경 관련 예방조치:** 하수도망/해수면위의물/지하수로도달하지않게한다.
- **밀폐 및 정화 방법과 소재:**
액체가 혼합된 물질 (모래, 규조토, 산성 결합 물, 일반 결합 물, 톱밥)에 흡입되도록 한다.
항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
충분한 환기가 되도록 한다.
- **타 섹션 참조**
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:**
- **안전 취급을 위한 예방조치**
작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.
조심스럽게 용기를 개봉하거나 취급한다.
연무질이 형성되는 것을 피한다.
- **화재 및 폭발 사고 예방대책에 관한 정보:** 호흡보호장비를 항상 비치한다.
- **혼합위험성 등 안전 저장 조건**
- **보관:**
- **안전한 저장 방법:** 특별한 요구사항이 없음.
- **하나의 공동 보관 시설에 대한 보관 관련 정보:** 필요없음
- **보관 조건에 관한 추가적인 정보:** 용기를 새지 않게 밀폐한 채 보관한다.
- **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

- **첨단시설 디자인에 대한 추가정보:** 더 이상 의 자료는 없음. 항목 7 을 참고하시오.

· **통제 변수**

- **화학물질의 노출기준, 생물학적 노출기준 등:**

5124-30-1 4,4'-methylenedi(cyclohexyl isocyanate)

REL (USA) 최고노출기준: 0.11 mg/m³, 0.01 ppm

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TLV (USA) 장기간의값: 0.054 mg/m³, 0.005 ppm

· **추가 정보:** 제조할 당시에 유효한 목록을 기초로 사용했다.

· **노출 통제**

· **개인 보호구**

· **일반적보호조치및위생조치:**

· 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.

· 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.

· 휴식 전이나 작업이 끝날때마다 손을 씻는다.

· 방호복은 따로 보관한다.

· 눈과 피부와의 접촉은 피한다.

· **호흡기 보호:**

· 단 시간 또는 경미한 오염의 경우에는 호흡여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

· **손 보호:**



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.

테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.

투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑의재료**

· 적합한장갑의선택은재질차이뿐만아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

· **장갑재료의투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

· **눈 보호:**



확조이는보안경

9 물리화학적 특성

· **기본 물리 및 화학적 특성에 대한 정보**

· **일반정보**

· **외형**

· 물리적 상태: 액체

· 색: 밝은

· 냄새: 무취의

· 후각역치: 알맞지않다.

· pH: 알맞지않다.

· **상태변화**

· 녹는점/어는점: 맞지않는

· 초기 끓는점과 끓는점 범위: 251 °C

· 인화점: 187 °C

· 인화성(고체, 기체): 해당사항 없음.

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· 점화온도:	
· 분해 온도:	알맞지않다.
· 자기점화:	이제품은자연발화성이없다.
· 폭발위험:	이제품은폭발위험성이없다
· 인화 또는 폭발 범위의 상한/하한	
· 아래로:	알맞지않다.
· 위로:	알맞지않다.
· 증기압:	알맞지않다.
· 밀도 의경우 20 °C:	1.079 g/cm ³
· 비중:	알맞지않다.
· 증기밀도:	알맞지않다.
· 증발 속도:	알맞지않다.
· 용해도:	
· 물:	각각의경우에따라서는거의혼합할수없는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도:	
· 역학성:	알맞지않다.
· 동점성:	알맞지않다.
· 용매내용물	
· 유기용매:	0.0 %
· VOC (EU)	0.00 %
· 고체의 함량:	85.0 %
· 기타 정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- **반응성**
- **화학적 안정성**
- **화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건:** 규정에따라사용할경우해체는없다
- **유해반응 가능성** 위험한 반응으로는알려지지않았다.
- **피해야 할 조건** 추가적인 정보가 존재하지 않습니다.
- **혼합 금지 물질:** 추가적인 정보가 존재하지 않습니다.
- **유해분해물질:** 위험성있는분해물들은알려지지않았다.

11 독성에 관한 정보

- **독성학적 영향에 대한 정보**
- **급성 독성:**
- **일차적 자극 효과:**
- **피부 부식성 또는 자극성:** 피부와점막을자극한다.
- **심한 눈 손상 또는 자극성:** 자극
- **감각화:**
- **호흡을통한감각화**가능성이있다.
- **피부접촉을통하여감각화**가능성이있다.

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· 추가적인 독성에 관한 정보:

이제 품은 유럽공동체의공동분류 원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전 준비에대하여제시하고있다.

- 독성의
- 건강에해로운
- 자극적인

12 환경에 미치는 영향

· 독성

- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **추가적인 생태학 정보:**

· 일반 특징:

- 수질오염등급 1 (자체등급분류): 약하게수질오염이된 희석시키지않은체량으로지하수나, 하천으로그리고하수도망에도달하지않게한다.
- **PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과**
- **PBT(잔류성, 생물농축성, 독성 물질):** 해당사항 없음.
- **vPvB(고 잔류성, 고 생물농축성 물질):** 해당사항 없음.
- **기타 부작용** 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

· 폐기물 처리 방법

- **권고:** 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- **비위생적 포장:**
- **권고:** 당국의지침에입각한쓰레기처리.

14 운송에 필요한 정보

· 환경적 유해물질:

· **해양오염물질:** 아니오

· 이용자 특별 예방조치

해당사항 없음.

· **MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송**

해당사항 없음.

15 법적 규제현황

· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률

· Korean Existing Chemical Inventory

5124-30-1 | 4,4'-methylenedi(cyclohexyl isocyanate)

KE-23837

· GHS 라벨 요소

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

(7 쪽에계속)

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2015.07.24

개정: 2015.07.24

제품명: Crystal Clear Series Part A

(6 쪽부터계속)

· 위험 도표



GHS06 GHS08

· 표지어 위험

· 상표상에명확히위험성이표시된성분:

4,4'-methylenedi(cyclohexyl isocyanate)

· 위험 문구

- 흡입하면 유독함
- 피부에 자극을 일으킴
- 눈에 심한 자극을 일으킴
- 흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음
- 알레르기성 피부 반응을 일으킬 수 있음
- 호흡기계 자극을 일으킬 수 있음

· 주의 문구

- 환기가 잘 되지 않는 곳에서는 호흡기 보호구를 착용하십시오.
- (분진·흙·가스·미스트·증기·스프레이)의 흡입을 피하십시오.
- (보호장갑·보호의·보안경·안면보호구)를(을) 착용하십시오.
- 눈에 묻으면 몇 분간 물로 조심해서 씻으십시오. 가능하면콘택트렌즈를 제거하십시오. 계속 씻으십시오.
- 잠금장치가 있는 저장장소에 저장하십시오.
- 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· 화학물질 안전성 평가: 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은 기술하지않았으며계약적인법률관계에기반을두고있지도않다

- **최초 작성일자:** 2015.07.24
- **개정 횟수 및 최종 개정일자:** 1 / 2015.07.24
- **약어와 두문자어:**

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)
 VOC: Volatile Organic Compounds (USA, EU)
 급성 독성(흡입) 구분3: Acute toxicity, Hazard Category 3
 피부 부식성/자극성 구분2: Skin corrosion/irritation, Hazard Category 2
 심한 눈 손상/자극성 구분2: Serious eye damage/eye irritation, Hazard Category 2
 호흡기과민성 구분1: Sensitisation - Respirat., Hazard Category 1
 피부과민성 구분1: Sensitisation - Skin, Hazard Category 1
 표적장기-1회노출 구분3: Specific target organ toxicity - Single exposure, Hazard Category 3

Ficha de datos de seguridad

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Revisión: 24.07.2015

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

· 1.1 Identificador del producto

· **Nombre comercial:** *Crystal Clear Series Part A*

· **Número del artículo:** 24200(A), 24204(A), 24206(A)

· 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: sgkcck@aol.com

www.emsdiasum.com

Aname

C/ Perez Galdos no. 2

28693 Quijorna

Madrid, Spain

Tel: +34.91.816.89.50

Fax: +34.91.816.85.94

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**



GHS06 calavera y tibias cruzadas

Acute Tox. 3 H331 Tóxico en caso de inhalación.



GHS08 peligro para la salud

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



GHS07

Skin Irrit. 2 H315 Provoca irritación cutánea.

Eye Irrit. 2 H319 Provoca irritación ocular grave.

Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.

STOT SE 3 H335 Puede irritar las vías respiratorias.

(se continua en página 2)

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(se continua en página 1)

- 2.2 Elementos de la etiqueta
- **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**
El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.
- **Pictogramas de peligro**



GHS06 GHS08

- **Palabra de advertencia Peligro**
- **Componentes peligrosos a indicar en el etiquetaje:**
diisocianato de 4,4'-diciclohexilmetano
- **Indicaciones de peligro**
H331 Tóxico en caso de inhalación.
H315 Provoca irritación cutánea.
H319 Provoca irritación ocular grave.
H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.
H317 Puede provocar una reacción alérgica en la piel.
H335 Puede irritar las vías respiratorias.
- **Consejos de prudencia**
P285 En caso de ventilación insuficiente, llevar equipo de protección respiratoria.
P261 Evitar respirar el polvo/el humo/el gas/la niebla/los vapores/el aerosol.
P280 Llevar guantes/prendas/gafas/máscara de protección.
P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.
P405 Guardar bajo llave.
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

- 3.2 Caracterización química: Mezclas
- **Descripción:** Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

Componentes peligrosos:

CAS: 5124-30-1	diisocianato de 4,4'-diciclohexilmetano	50-100%
EINECS: 225-863-2	Acute Tox. 3, H331; Resp. Sens. 1, H334; Skin Irrit. 2, H315; Eye Irrit. 2, H317; Skin Sens. 1, H317; STOT SE 3, H335	

- **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

SECCIÓN 4: Primeros auxilios

- 4.1 Descripción de los primeros auxilios
- **Instrucciones generales:**
Quitarse de inmediato toda prenda contaminada con el producto.
Antes de quitarse la protección respiratoria, quítese la ropa contaminada.
En caso de respiración irregular o apnea (paro respiratorio), hágase la respiración artificial.

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- **En caso de inhalación del producto:**
Suministrar aire fresco u oxígeno; solicitar ayuda médica.
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 trastornos persistentes consultar un médico.
- **En caso de ingestión:** Consultar un médico si los trastornos persisten.
- **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:** Colocarse la protección respiratoria.

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:**
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **6.3 Métodos y material de contención y de limpieza:**
Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).
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 aerosoles.
- **Prevención de incendios y explosiones:** Tener preparados los aparatos respiratorios.
- **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:**
Mantener el recipiente cerrado herméticamente.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

ES

(se continua en página 4)

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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:**

5124-30-1 diisocianato de 4,4'-diciclohexilmetano

LEP	Valor de larga duración: 0,055 mg/m ³ , 0,005 ppm
Sen	

· **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.

Evitar el contacto con los ojos y la piel.

· **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. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

· **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.

· **Protección de ojos:**



Gafas de protección herméticas

ES

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SECCIÓN 9: Propiedades físicas y químicas

· 9.1 Información sobre propiedades físicas y químicas básicas

· Datos generales

· Aspecto:

Forma: Líquido

Color: Claro

· Olor: Inodoro

· Umbral olfativo: No determinado.

· valor pH: No determinado.

· Cambio de estado

Punto de fusión /campo de fusión: Indeterminado.

Punto de ebullición /campo de ebullición: 251 °C

· Punto de inflamación: 187 °C

· Inflamabilidad (sólido, gaseiforme): No aplicable.

· Temperatura de ignición:

Temperatura de descomposición: No determinado.

· Autoinflamabilidad: El producto no es autoinflamable.

· Peligro de explosión: El producto no es explosivo.

· Límites de explosión:

Inferior: No determinado.

Superior: No determinado.

· Presión de vapor: No determinado.

· Densidad a 20 °C: 1,079 g/cm³

· Densidad relativa: No determinado.

· Densidad de vapor: No determinado.

· Velocidad de evaporación: No determinado.

· Solubilidad en / miscibilidad con agua: Poco o no mezclable.

· Coeficiente de reparto (n-octanol/agua): No determinado.

· Viscosidad:

Dinámica: No determinado.

Cinemática: No determinado.

· Concentración del disolvente:

Disolventes orgánicos: 0,0 %

VOC (CE) 0,00 %

Contenido de cuerpos sólidos: 85,0 %

· 9.2 Información adicional: No existen más datos relevantes disponibles.

SECCIÓN 10: Estabilidad y reactividad

· 10.1 Reactividad

· 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.

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- **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**
- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas** Irrita la piel y las mucosas.
- **Lesiones o irritación ocular graves** Produce irritaciones.
- **Sensibilización respiratoria o cutánea**
Posible sensibilización al aspirarse.
Posible sensibilización al entrar en contacto con la piel.
- **Indicaciones toxicológicas adicionales:**
En conformidad con el procedimiento de cálculo contenido en la última versión de la Normativa General de Clasificación de la CE para Preparados, el producto tiene los siguientes riesgos:
Tóxico
Nocivo
Irritante

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.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 1 (autoclasificación): 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.
- **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

- **14.5 Peligros para el medio ambiente:**
- **Contaminante marino:** No

(se continua en página 7)

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· **14.6 Precauciones particulares para los usuarios** No aplicable.

· **14.7 Transporte a granel con arreglo al anexo II del Convenio Marpol 73/78 y del Código IBC** No aplicable.

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** ninguno de los componentes está incluido en una lista
- **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**

H315 Provoca irritación cutánea.

H317 Puede provocar una reacción alérgica en la piel.

H319 Provoca irritación ocular grave.

H331 Tóxico en caso de inhalación.

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

H335 Puede irritar las vías respiratorias.

· **Abreviaturas y acrónimos:**

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)

VOC: Volatile Organic Compounds (USA, EU)

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3