

Printing date 03/15/2017

Reviewed on 07/10/2015

**1 Identification**

- **Product identifier**
- **Trade name:** *Dr. Schutz Crosslinker G / Crosslinker M*
- **Application of the substance / the mixture** Coating compound/ Surface coating/ paint
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Supplier:  
Dr. Schutz GmbH  
Holbeinstraße 17  
D-53175 Bonn  
Tel: +49 228/95 35 2-0  
Fax: +49 228/95 35 2-46  
E-Mail: export@dr-schutz.com
- **Import:**  
Dr. Schutz NA  
4701 Bath St. 46  
Philadelphia PA 19137  
Tel.: 001/877 2724889  
E-Mail: sam@schutzna.com
- **Information department:**  
E-Mail: sam@schutzna.com  
Department for product development
- **Emergency telephone number:**  
Dr. Schutz NA,  
Tel.: 001/877 2724889  
Mo-Fr 8am - 7pm

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS07

Acute Tox. 4 H332 Harmful if inhaled.  
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.

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Flam. Liq. 4 H227 Combustible liquid.

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



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**  
Hydrophilic aliphatic polyisocyanate  
Di(propylene glycol) dimethyl ether  
hexamethylene-di-isocyanate
- **Hazard statements**  
Combustible liquid.

(Contd. on page 2)

Printing date 03/15/2017

Reviewed on 07/10/2015

**Trade name:** *Dr. Schutz Crosslinker G / Crosslinker M*

(Contd. of page 1)

Harmful if inhaled.  
 Causes skin irritation.  
 Causes serious eye irritation.  
 May cause an allergic skin reaction.  
 May cause respiratory irritation.

- **Precautionary statements**

Wear protective gloves / eye protection.  
 Take off contaminated clothing.  
 Store locked up.

- **NFPA ratings (scale 0 - 4)**



Health = 1  
 Fire = 2  
 Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 1  
 Fire = 2  
 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:**

160994-68-3	Hydrophilic aliphatic polyisocyanate	50-100%
111109-77-4	Di(propylene glycol) dimethyl ether	25-50%

### 4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

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

- **After inhalation:**

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

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

- **After skin contact:**

After each cleaning use treatment creams, for very dry skin greasy ointments.

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:**

Call a doctor immediately.

Rinse out mouth and then drink plenty of water.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

(Contd. on page 3)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 03/15/2017

Reviewed on 07/10/2015

Trade name: Dr. Schutz Crosslinker G / Crosslinker M

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Not applicable.
- **Special hazards arising from the substance or mixture** Danger of toxic pyrolysis products.
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Do not inhale explosion gases or combustion gases.  
Mouth respiratory protective device.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Avoid contact with the eyes and skin.  
Do not inhale gases / fumes / aerosols.  
Ensure adequate ventilation
- **Environmental precautions:**  
Prevent from spreading (e.g. by damming-in or oil barriers).  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
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.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

822-06-0	hexamethylene-di-isocyanate	0.018 ppm
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· **PAC-2:**

822-06-0	hexamethylene-di-isocyanate	0.2 ppm
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· **PAC-3:**

822-06-0	hexamethylene-di-isocyanate	3 ppm
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## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Avoid contact with the eyes and skin.  
Follow instructions on the label and in the Technical Product Information Sheet.  
Wear protective equipment. Keep unprotected persons away.  
Do not inhale gases / fumes / aerosols.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.

(Contd. on page 4)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 03/15/2017

Reviewed on 07/10/2015

Trade name: *Dr. Schutz Crosslinker G / Crosslinker M*

(Contd. of page 3)

- **Information about protection against explosions and fires:**  
No special precautions are necessary if used correctly.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in unopened original receptacles.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**  
Store under lock and key and out of the reach of children.  
Keep receptacle tightly sealed.  
Store receptacle in a well ventilated area.
- **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:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Clean skin thoroughly immediately after handling the product.  
Do not eat, drink, smoke or sniff while working.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.
- **Breathing equipment:**  
Not necessary if room is well-ventilated.  
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:**  
Impervious gloves



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 glove material has to be impermeable and resistant to the product/ the substance/ the preparation. 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:**  
Where there is a danger of the eyes coming into contact with splashes of liquid (i.e. when refilling larger quantities), safety goggles according to EN 166 (i.e. goggles with side shields) are recommended.
- **Body protection:** Light weight protective clothing

(Contd. on page 5)

Printing date 03/15/2017

Reviewed on 07/10/2015

Trade name: *Dr. Schutz Crosslinker G / Crosslinker M*

(Contd. of page 4)

**· Limitation and supervision of exposure into the environment**

Follow instructions for use, dosage and waste disposal.

**9 Physical and chemical properties****· Information on basic physical and chemical properties****· General Information****· Appearance:**

**Form:** Fluid  
**Color:** Colorless

**· Odor:** Ester-like**· Odor threshold:** Not determined.**· pH-value:** Not applicable.**· Change in condition****Melting point/Melting range:** Undetermined.**Boiling point/Boiling range:** 175 °C (347 °F)**· Flash point:** 65 °C (149 °F) (Seta Flash Closed Cup)**· Flammability (solid, gaseous):** Undetermined.**· Ignition temperature:** 165 °C (329 °F)**· Decomposition temperature:** Not determined.**· Auto igniting:** Product is not selfigniting.**· Danger of explosion:** Not determined.**· Explosion limits:****Lower:** 0.9 Vol %**Upper:** 0.0 Vol %**· Vapor pressure:** Not determined.**· Density at 20 °C (68 °F):** 1.075 g/cm<sup>3</sup> (8.971 lbs/gal)**· Relative density** Not determined.**· Vapor 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 at 20 °C (68 °F):** 26 s (DIN 53211/4)**· Solvent content:****Organic solvents:** 30.0 %**VOC content ASTM D3960:** 30.0 %

322.5 g/l / 2.69 lb/gl

**· Other information**

No further relevant information available.

**10 Stability and reactivity****· Reactivity** see section "Possibility of hazardous reactions".**· Chemical stability** No information available.

(Contd. on page 6)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 03/15/2017

Reviewed on 07/10/2015

Trade name: Dr. Schutz Crosslinker G / Crosslinker M

(Contd. of page 5)

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** Reacts with alcohols, amines, aqueous acids and alkalis.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**  
Reacts with water gently forming carbon dioxide. In case of moisture access pressure build-up and danger of bursting in closed packings.
- **Hazardous decomposition products:** Danger of toxic pyrolysis products.

## \* 11 Toxicological information

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

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

**822-06-0 hexamethylene-di-isocyanate**

Oral	LD50	738 mg/kg (rat)
Dermal	LD50	593 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No data available.
- **on the eye:** No irritating effect.
- **Sensitization:**  
No sensitizing effects known.  
Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
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:** Undetermined.
- **Persistence and degradability** The solvent is biodegradable.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** Undetermined.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow to reach ground water/water course. Do not allow undiluted product or large quantities of it to reach sewage system.  
Harmful to aquatic organisms

(Contd. on page 7)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 03/15/2017

Reviewed on 07/10/2015

Trade name: *Dr. Schutz Crosslinker G / Crosslinker M*

(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 be specially treated adhering to official regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**  
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.  
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

**14 Transport information**

- |  |                     |
|--|---------------------|
| • <b>UN-Number</b>   |                     |
| • <b>DOT, ADR, ADN</b>   | Void                |
| • <b>IMDG, IATA</b>  | Void                |
|  | No dangerous goods. |
| • <b>UN proper shipping name</b>   |                     |
| • <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void                |
| • <b>Transport hazard class(es)</b>  |                     |
| • <b>DOT, ADR, ADN, IMDG, IATA</b>   |                     |
| • <b>Class</b>   | Void                |
| • <b>Packing group</b>   | Not applicable.     |
| • <b>DOT, ADR, IMDG, IATA</b>  | Void                |
| • <b>Environmental hazards:</b>  |                     |
| • <b>Marine pollutant:</b>   | No                  |
| • <b>Special precautions for user</b>  | Not applicable.     |
| • <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.     |
| • <b>UN "Model Regulation":</b>  | Void                |

**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):**

822-06-0 | hexamethylene-di-isocyanate

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

All ingredients are listed.

(Contd. on page 8)

Printing date 03/15/2017

Reviewed on 07/10/2015

Trade name: *Dr. Schutz Crosslinker G / Crosslinker M*

(Contd. of page 7)

- **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.

- **Carcinogen 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).

- **Hazard pictograms**



GHS07

- **Signal word** Warning

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

Hydrophilic aliphatic polyisocyanate  
Di(propylene glycol) dimethyl ether  
hexamethylene-di-isocyanate

- **Hazard statements**

Combustible liquid.  
Harmful if inhaled.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause an allergic skin reaction.  
May cause respiratory irritation.

- **Precautionary statements**

Wear protective gloves / eye protection.  
Take off contaminated clothing.  
Store locked up.

- **National regulations:**

- **Information about limitation of use:**

Employment restrictions concerning young persons must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.  
People who suffer from allergies, asthma, chronic or recurring respiratory illnesses should not be deployed in any process using the product.

- **Other regulations, limitations and prohibitive regulations**

Other regulations (EC): Directive 2004/42/EC

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

US

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/15/2017

Reviewed on 07/10/2015

**Trade name:** *Dr. Schutz Crosslinker G / Crosslinker M*

(Contd. of page 8)

## 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.

· **Training hints** ---

· **Recommended restriction of use**

Not intended for spraying and industrial processing.

Only for trade users

People who suffer from allergies, asthma, chronic or recurring respiratory illnesses should not be deployed in any process using the product.

· **Department issuing SDS:** Department for product development

· **Contact:**

Dr. Reindl

Dr. Olaf Janßen

· **Date of preparation / last revision** 03/15/2017 / 12

· **Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Liq. 4: Flammable liquids – Category 4

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **\* Data compared to the previous version altered.**