

## SAFETY DATA SHEET



### SUPRASEC® 9704 (STI-03-0.30-9A PUROCK 70 A)

Version 1.3      Revision Date: 03/07/2018      SDS Number: 400001000009      Date of last issue: 01/10/2017      Date of first issue: 02/10/2016

#### SECTION 1. IDENTIFICATION

Product name : SUPRASEC® 9704 (STI-03-0.30-9A PUROCK 70 A)

##### Manufacturer or supplier's details

Company name of supplier : Huntsman Polyurethanes  
Address : P.O. Box 4980  
The Woodlands,  
TX 77387  
United States of America (USA)  
Telephone : Tech Info:(800) 257-5547  
E-mail address of person responsible for the SDS : MSDS@huntsman.com  
Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

##### Recommended use of the chemical and restrictions on use

Recommended use : Component of a Polyurethane System.  
Restrictions on use : For industrial use only.

#### SECTION 2. HAZARDS IDENTIFICATION

##### GHS classification in accordance with 29 CFR 1910.1200

Acute toxicity (Inhalation) : Category 4  
Skin irritation : Category 2  
Eye irritation : Category 2B  
Respiratory sensitisation : Category 1  
Skin sensitisation : Category 1  
Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

##### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H315 + H320 Causes skin and eye irritation.  
H317 May cause an allergic skin reaction.

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H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.

##### Precautionary statements

**Prevention:**  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves.  
P285 In case of inadequate ventilation wear respiratory protection.

##### Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
P362 Take off contaminated clothing and wash before reuse.  
**Storage:**  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
**Disposal:**  
P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

##### Other hazards

None known.

#### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

##### Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Diphenylmethanediisocyanate	9016-87-9	50 - 70
4,4'-methylenediphenyl diisocyanate	101-68-8	30 - 50

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

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#### SECTION 4. FIRST AID MEASURES

- General advice** : Move out of dangerous area.  
Do not leave the victim unattended.  
Get medical attention immediately if symptoms occur.  
Show this safety data sheet to the doctor in attendance.
- If inhaled** : If breathed in, move person into fresh air.  
Call a physician or poison control centre immediately.  
Keep patient warm and at rest.  
Keep respiratory tract clear.  
If breathing is difficult, give oxygen.  
If breathing is irregular or stopped, administer artificial respiration.  
If unconscious, place in recovery position and seek medical advice.  
Consult a physician immediately if symptoms such as shortness of breath or asthma are observed.  
A hyper-reactive response to even minimal concentrations of disocyanates may develop in sensitised persons.  
The exposed person may need to be kept under medical surveillance for 48 hours.  
LC50 (rat) : ca. 490 mg/m<sup>3</sup> (4 hours) : using experimentally produced respirable aerosol having aerodynamic diameter <5microns.
- In case of skin contact** : In case of contact, immediately flush skin with soap and plenty of water.  
Take off contaminated clothing and shoes immediately.  
Wash contaminated clothing before reuse.  
Thoroughly clean shoes before reuse.  
Call a physician if irritation develops or persists.  
An MDI study has demonstrated that a polyglycol-based skin cleanser (such as D-1amTM, PEG-400) or corn oil may be more effective than soap and water.
- In case of eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed** : Gently wipe or rinse the inside of the mouth with water.  
DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
Keep respiratory tract clear.  
Keep at rest.  
If a person vomits when lying on his back, place him in the recovery position.  
Never give anything by mouth to an unconscious person.  
Take victim immediately to hospital.  
If symptoms persist, call a physician.
- Most important symptoms** : Severe allergic skin reactions, bronchospasm and

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and effects, both acute and delayed

**anaphylactic shock**  
This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitisation.

Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing.  
The onset of the respiratory symptoms may be delayed for several hours after exposure.  
A hyper-reactive response to even minimal concentrations of MDI may develop in sensitised persons.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.  
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.  
If potential for exposure exists refer to Section 8 for specific personal protective equipment.  
First Aid responders should pay attention to self-protection and use the recommended protective clothing

**Notes to physician** : Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

#### SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media** : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder
- Unsuitable extinguishing media** : Water may be used if no other available and then in copious quantities. Reaction between water and hot isocyanate may be vigorous.
- Specific hazards during firefighting** : Do not allow run-off from fire fighting to enter drains or water courses.  
The pressure in sealed containers can increase under the influence of heat.  
Exposure to decomposition products may be a hazard to health.
- Hazardous combustion products** : Combustion products may include: carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN. In the event of extreme heat (>500 degrees C), aniline is suspected of being formed.
- Specific extinguishing** : Cool containers/tanks with water spray.

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#### methods

##### Further information

: Standard procedure for chemical fires.  
Due to reaction with water producing CO<sub>2</sub>-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Prevent fire extinguishing water from contaminating surface water or the ground water system.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Immediately evacuate personnel to safe areas.  
Use personal protective equipment.  
If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.  
Ensure adequate ventilation.  
Keep people away from and upwind of spill/leak.  
Only qualified personnel equipped with suitable protective equipment may intervene.  
For additional precautions and advice on safe handling, see section 7.  
Never return spills in original containers for re-use.  
Make sure that there is a sufficient amount of neutralizing/absorbent material near the storage area.  
The danger areas must be delimited and identified using relevant warning and safety signs.  
Treat recovered material as described in the section "Disposal considerations".  
For disposal considerations see section 13.

Environmental precautions

: Do not allow uncontrolled discharge of product into the environment.  
Do not allow material to contaminate ground water system.  
Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
Local authorities should be advised if significant spillages cannot be contained.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up

: Clean-up methods - small spillage  
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).  
Clean contaminated surface thoroughly.  
Sweep up or vacuum up spillage and collect in suitable

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container for disposal.  
Neutralize small spillages with decontaminant.  
The compositions of liquid decontaminants are given in Section 16.

Remove and dispose of residues.  
Clean-up methods - large spillage  
If the product is in its solid form:  
Spilled MDI flakes should be picked up carefully.  
The area should be vacuum cleaned to remove remaining dust particles completely.  
If the product is in its liquid form:  
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Leave to react for at least 30 minutes.  
Shovel into open-top drums for further decontamination.  
Wash the spillage area with water.  
Test atmosphere for MDI vapour.  
Keep in suitable, closed containers for disposal.

#### SECTION 7. HANDLING AND STORAGE

Technical measures : Ensure that eyewash stations and safety showers are close to the workstation location.

Local/Total ventilation : Use only with adequate ventilation.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : For personal protection see section 8.  
Avoid formation of aerosol.  
Do not breathe vapours or spray mist.  
Do not breathe vapours/dust.  
Do not swallow.  
Do not get in eyes or mouth or on skin.  
Do not get on skin or clothing.  
Avoid exposure - obtain special instructions before use.  
Smoking, eating and drinking should be prohibited in the application area.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Keep container closed when not in use.  
Open drum carefully as content may be under pressure.  
Dispose of rinse water in accordance with local and national regulations.  
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.  
Keep in properly labelled containers.  
Observe label precautions.  
Protect from moisture.  
Electrical installations / working materials must comply with the

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technological safety standards.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

#### Materials to avoid

: Acids  
 Amines  
 Bases  
 Metals  
 water

Recommended storage temperature

: 68 - 77 °F / 20 - 25 °C

Further information on storage stability

: Stable under recommended storage conditions.

## SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
4,4'-methylenebis(phenyl diisocyanate)	101-68-8	TWA	0.005 ppm	ACGIH
		C	0.02 ppm 0.2 mg/m <sup>3</sup>	OSHA Z-1

### Personal protective equipment

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.  
 Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.  
 In emergency, non-routine and unknown exposure situations, including confined space entries, a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied air respirator (SAR) with auxiliary self-contained air supply, should be used.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.  
 Protective gloves should be worn when handling freshly made polyurethane products to avoid contact with trace residual materials which may be hazardous in contact with skin.  
 Use chemical resistant gloves classified under Standard EN374; protective gloves against chemicals and microorganisms. Examples of glove materials that might provide suitable protection include: Butyl rubber, Chlorinated polyethylene, Polyethylene, Ethyl vinyl alcohol copolymers

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laminated ("EVAL"), Polychloroprene (Neoprene®), Nitrile/butadiene rubber ("nitrile" or "NBR"), Polyvinyl chloride ("PVC" or "vinyl"), Fluoroelastomer (Viton®).

When prolonged or frequently repeated contact may occur, a glove with protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN374) is recommended.

When only brief contact is expected, a glove with protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN374) is recommended.  
 Contaminated gloves should be decontaminated and disposed of.

Notice: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to : other chemicals that may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as instructions/specifications provided by the glove supplier.

#### Eye protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.  
 Chemical splash goggles.  
 Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.  
 Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.  
 Ensure that eyewash stations and safety showers are close to the workstation location.

#### Skin and body protection

: Impervious clothing  
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
 Recommended:  
 Overall (preferably heavy cotton) or Tyvek-Pro Tech 'C', Tyvek Pro 'F' disposable coverall.

#### Protective measures

: Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing  
 The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.  
 Ensure that eye flushing systems and safety showers are located close to the working place.

#### Hygiene measures

: Handle in accordance with good industrial hygiene and safety practice.  
 Wash face, hands and any exposed skin thoroughly after handling.  
 Remove contaminated clothing and protective equipment before entering eating areas.

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When using do not eat, drink or smoke.  
Contaminated work clothing should not be allowed out of the workplace.  
Wash hands before breaks and immediately after handling the product.  
Wash hands before breaks and at the end of workday.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid  
Colour : brown, clear  
Odour : slight, musty  
Odour Threshold : No data is available on the product itself.  
pH : No data is available on the product itself.  
Freezing point : No data is available on the product itself.  
Melting point : No data is available on the product itself.  
Boiling point : No data is available on the product itself.  
Flash point : > 302 °F / > 150 °C  
Method: closed cup  
Evaporation rate : No data is available on the product itself.  
Flammability (solid, gas) : No data is available on the product itself.  
Flammability (liquids) : No data is available on the product itself.  
Upper explosion limit / Upper flammability limit : No data is available on the product itself.  
Lower explosion limit / Lower flammability limit : No data is available on the product itself.  
Vapour pressure : < 0.00001 hPa (68 °F / 20 °C)  
Relative vapour density : No data is available on the product itself.  
Relative density : 1.23  
Density : 1.23 g/cm3 (68 °F / 20 °C)  
Method: estimated  
Solubility(ies)  
Water solubility : Decomposes in contact with water. (68 °F / 20 °C)  
Method: Information given is based on data obtained from similar substances.

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Solubility in other solvents : No data is available on the product itself.  
Partition coefficient: n-octanol/water : No data is available on the product itself.  
Auto-ignition temperature : No data is available on the product itself.  
Thermal decomposition : No data is available on the product itself.  
Self-Accelerating decomposition temperature (SADT) : No data is available on the product itself.  
Viscosity : 200 mPa.s (77 °F / 25 °C)  
Viscosity, dynamic : No data is available on the product itself.  
Explosive properties : No data is available on the product itself.  
Oxidizing properties : No data is available on the product itself.  
Particle size : No data is available on the product itself.

#### SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.  
Chemical stability : Stable under normal conditions.  
Possibility of hazardous reactions : Reaction with water (moisture) produces CO<sub>2</sub>-gas.  
Exothermic reaction with materials containing active hydrogen groups.  
The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents.  
MDI is insoluble with, and heavier than water and sinks to the bottom but reacts slowly at the interface.  
A solid water-insoluble layer of polyurea is formed at the interface by liberating carbon dioxide gas.  
Conditions to avoid : Extremes of temperature and direct sunlight.  
Exposure to air or moisture over prolonged periods.  
Incompatible materials : Acids  
Amines  
Bases  
Metals  
water  
Hazardous decomposition products : Combustion products may include: carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN. In the event of extreme heat (>500 degrees C), aniline is suspected of being formed.

#### SECTION 11. TOXICOLOGICAL INFORMATION

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Information on likely routes of exposure : No data is available on the product itself.

#### Acute toxicity

Acute oral toxicity - Product : LD50 (Rat, male): > 10,000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity - Product : Acute toxicity estimate: 1.36 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

Acute dermal toxicity - Product : LD50 (Rabbit, male and female): > 9,400 mg/kg  
Method: OECD Test Guideline 402

Acute toxicity (other routes of administration) : No data available

#### Skin corrosion/irritation

##### Components:

Diphenylmethanedisocyanate:  
Species: Rabbit  
Assessment: Irritating to skin.  
Method: OECD Test Guideline 404  
Result: Skin irritation

4,4'-methylenediphenyl diisocyanate:  
Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Irritating to skin.

#### Serious eye damage/eye irritation

##### Components:

Diphenylmethanedisocyanate:  
Species: Rabbit  
Result: Irritation to eyes, reversing within 7 days  
Assessment: Mild eye irritant  
Method: OECD Test Guideline 405

4,4'-methylenediphenyl diisocyanate:  
Species: Rabbit  
Result: Mild eye irritation

#### Respiratory or skin sensitisation

##### Components:

Diphenylmethanedisocyanate:  
Exposure routes: Skin  
Species: Guinea pig  
Method: OECD Test Guideline 406

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Result: May cause sensitisation by skin contact.

Exposure routes: Respiratory Tract

Species: Rat  
Result: May cause sensitisation by inhalation.

4,4'-methylenediphenyl diisocyanate:

Exposure routes: Skin  
Species: Mouse  
Method: OECD Test Guideline 429  
Result: May cause sensitisation by skin contact.

Exposure routes: Respiratory Tract

Species: Guinea pig  
Result: May cause sensitisation by inhalation.

Assessment:

May cause an allergic skin reaction., May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### Germ cell mutagenicity

##### Product:

Genotoxicity in vitro : Concentration: 200 ug/plate  
Metabolic activation: with and without metabolic activation  
Method: Directive 67/548/EEC, Annex, B.13/14  
Result: negative

##### Product:

Genotoxicity in vivo : Application Route: Inhalation  
Result: Not classified due to inconclusive data.

Application Route: Inhalation

Exposure time: 3 Weeks

Dose: 113 mg/m<sup>3</sup>

Method: OECD Test Guideline 474

Result: negative

##### Product:

Germ cell mutagenicity-Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

#### Carcinogenicity

##### Product:

Remarks: Rats have been exposed for two years to a respirable aerosol of polymeric MDI which resulted in a chronic pulmonary irritation at high concentrations. Only at the top level (6 mg/m<sup>3</sup>), there was a significant incidence of a benign tumour of the lung (adenoma) and one malignant tumour (adenocarcinoma). There were no lung tumours at 1 mg/m<sup>3</sup> and no effects at 0.2 mg/m<sup>3</sup>. Overall, the tumour incidence, both benign and malignant, and the number of animals with the tumours were not different from controls. The increased incidence of lung tumours is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung, which occurred throughout the study. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that tumour formation will occur.

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Species: Rat, male and female  
Application Route: Inhalation  
Exposure time: 24 month(s)  
Dose: 1 mg/m<sup>3</sup>  
Frequency of Treatment: 5 daily  
Method: OECD Test Guideline 453  
Result: positive

Species: Rat, male and female  
Application Route: Inhalation  
Exposure time: 24 month(s)  
Dose: 1 mg/m<sup>3</sup>  
Frequency of Treatment: 5 daily  
Method: OECD Test Guideline 453  
Result: positive

Carcinogenicity - Assessment : No data available

**IARC**  
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH**  
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**OSHA**  
No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP**  
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

#### Reproductive toxicity

##### Product:

Effects on fertility

: Species: Rat, male and female

Application Route: Inhalation

Method: OECD Test Guideline 414

Remarks: No significant adverse effects were reported

##### Product:

Effects on foetal development

: Species: Rat, male and female

Application Route: Inhalation

General Toxicity Maternal: 4 mg/m<sup>3</sup>

Method: OECD Test Guideline 414

Result: No teratogenic effects

##### Product:

Reproductive toxicity - Assessment

: No toxicity to reproduction  
No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

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#### STOT - single exposure

##### Product:

Exposure routes: Inhalation

Target Organs: Respiratory Tract

Assessment: May cause respiratory irritation.

#### STOT - repeated exposure

##### Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Remarks: Lung decrement has been reported in some studies as a consequence of repeated exposure to MDI. However, this effect can only be observed after inhalation exposure in the tissue at the point of contact and does not represent systemic toxicity. It is a local effect that is already covered by respiratory irritation (STOT single exposure, Cat. 3) and respiratory sensitization (Category 1).

In humans some, but not all epidemiological studies have found long term decreases in ventilatory function and respiratory symptoms (EU RA 2005). However there is generally co-exposure to other materials and sometimes also to the diisocyanate toluene diisocyanate which may have contribute to lung decrement. Therefore, it is concluded that possible lung effects do not qualify as specific target organ systemic toxicity after repeated exposure in accordance to chapter 3.9.1.6. of the GHS (UNECE 2003). In addition, all warning and safety measures for local effects as well as for acute inhalation toxicity already provide for a protection of workers and professional users that are involved in the handling of MDI.

#### Repeated dose toxicity

##### Product:

Species: Rat, male and female

: 0.2 mg/m<sup>3</sup>

Exposure time: 2 yr

Number of exposures: 5 d

Method: OECD Test Guideline 453

Repeated dose toxicity - Assessment : No data available

#### Aspiration toxicity

No data available

#### Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

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Version 1.3      Revision Date: 03/07/2018      SDS Number: 400001000009      Date of last issue: 01/10/2017      Date of first issue: 02/10/2016

Ingestion: No data available

**Toxicology, Metabolism, Distribution**  
No data available

**Neurological effects**  
No data available

**Further information**  
Ingestion: No data available

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**  
Toxicity to fish - Product : LC50 (Brachydanio rerio (zebrafish)): > 1,000 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 203  
LC0: > 1,000 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates - Product : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l  
Exposure time: 24 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

Toxicity to algae - Product : EC50 (Desmodesmus subspicatus (green algae)): > 1,640 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : No data available

Toxicity to fish (Chronic toxicity) : No data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) - Product : NOEC (Daphnia magna (Water flea)): >= 10 mg/l  
Exposure time: 21 d  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 211

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M-Factor (Chronic aquatic toxicity) : No data available

Toxicity to microorganisms - Product : EC50 (activated sludge): > 100 mg/l  
Exposure time: 3 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 209

Toxicity to soil dwelling organisms - Product : EC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg  
Exposure time: 336 h  
Method: OECD Test Guideline 207

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial organisms : No data available

Ecotoxicology Assessment Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

**Persistence and degradability**

Biodegradability - Product : Inoculum: Domestic sewage  
Concentration: 30 mg/l  
Result: Not biodegradable  
Biodegradation: 0 %  
Exposure time: 28 d  
Method: Inherent Biodegradability: Modified MITI Test (II)

Biochemical Oxygen Demand (BOD) : No data available

Chemical Oxygen Demand (COD) : No data available

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon (DOC) : No data available



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Physico-chemical removability : No data available

#### Components:

Diphenyl(methanediisocyanate): Stability in water

: Degradation half life(DT50): 0.8 d (77 °F / 25 °C)  
Method: No information available.  
Remarks: Fresh water

4,4'-methylene(diphenyl diisocyanate):

Stability in water : Degradation half life(DT50): 20 hrs (77 °F / 25 °C)  
Remarks: Fresh water

Photodegradation : No data available

Impact on Sewage Treatment : No data available

#### Bioaccumulative potential

Bioaccumulation - Product

: Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): 200  
Remarks: Bioaccumulation is unlikely.

#### Components:

4,4'-methylene(diphenyl diisocyanate):

Partition coefficient: n-octanol/water : log Pow: 4.51 (68 °F / 20 °C)  
pH: 7  
Method: OECD Test Guideline 117

#### Mobility in soil

Mobility

: No data available

Distribution among environmental compartments

: No data available

Stability in soil

: No data available

#### Other adverse effects

Environmental fate and pathways

: No data available

Results of PBT and vPvB assessment

: No data available

Endocrine disrupting potential

: No data available

Adsorbed organic bound halogens (AOX)

: No data available

#### Hazardous to the ozone layer

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Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82  
Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No data available

Global warming potential (GWP) : No data available

#### SECTION 13. DISPOSAL CONSIDERATIONS

##### Disposal methods

Waste from residues

: Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging

: Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

#### SECTION 14. TRANSPORT INFORMATION

##### International Regulations

IATA

: Not regulated as dangerous goods

IMDG

: Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable for product as supplied.

##### National Regulations

DOT Classification

UN/ID/NA number : NA 3082

Proper shipping name

: OTHER REGULATED SUBSTANCES, LIQUID, N.O.S.  
(Methylene Diphenyl Diisocyanate)

Class : 9

Packing group : III

Labels : CLASS 9

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ERG Code : 171  
 Marine pollutant : no

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**SECTION 15. REGULATORY INFORMATION****EP CRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
4,4'-methylenebiphenyl diisocyanate	101-68-8	5000	11904
chlorobenzene	108-90-7	100	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)  
 Skin corrosion or irritation  
 Serious eye damage or eye irritation  
 Respiratory or skin sensitisation  
 Specific target organ toxicity (single or repeated exposure)

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

Diphenylmethanediisocyanate	9016-87-9	>= 50 - < 70 %
4,4'-methylenebiphenyl diisocyanate	101-68-8	>= 30 - < 50 %

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

4,4'-methylenebiphenyl diisocyanate 101-68-8

**California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**The components of this product are reported in the following inventories:**

CH INV : On the inventory, or in compliance with the inventory  
 DSL : All components of this product are on the Canadian DSL  
 AICS : On the inventory, or in compliance with the inventory  
 NZIoC : On the inventory, or in compliance with the inventory  
 ENCS : On the inventory, or in compliance with the inventory  
 KECI : On the inventory, or in compliance with the inventory  
 PICCS : On the inventory, or in compliance with the inventory  
 IECSC : On the inventory, or in compliance with the inventory

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TCSI : On the inventory, or in compliance with the inventory  
 TSCA : On the inventory, or in compliance with the inventory

**Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

**TSCA - 5(a) Significant New Use Rule List of Chemicals**

No substances are subject to a Significant New Use Rule.

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**

No substances are subject to TSCA 12(b) export notification requirements.

**SECTION 16. OTHER INFORMATION****Further information****NFPA 704:**

HMIS® IV:

HEALTH	*	2
FLAMMABILITY		1
PHYSICAL HAZARD		0

Flammability



Health

Instability

Special hazard.

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "0" represents the absence of a chronic hazard.

Liquid decontaminants (percentages by weight or volume) :

Decontaminant 1 : \*- sodium carbonate : 5 - 10 % \*- liquid detergent : 0.2 - 2 % \*- water : to make up to 100 %

Decontaminant 2 : \*- concentrated ammonia solution : 3 - 8 % \*- liquid detergent : 0.2 - 2 % \*- water : to make up to 100 %

Decontaminant 1 reacts slower with diisocyanates but is more environmentally friendly than decontaminant 2.

Decontaminant 2 contains ammonia. Ammonia presents health hazards. (See supplier safety information.)

Revision Date : 03/07/2018

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
 OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1

ACGIH / TWA : 8-hour, time-weighted average  
 OSHA Z-1 / C : Ceiling

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The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION, WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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## SAFETY DATA SHEET



### STI-70-0.30B PUROCK

Version 1.0      Revision Date: 02/12/2016      SDS Number: 400001016381      Date of last issue: -      Date of first issue: 02/12/2016

#### SECTION 1. IDENTIFICATION

Product name : STI-70-0.30B PUROCK

#### Manufacturer or supplier's details

Company name of supplier : Huntsman Polyurethanes  
Address : P.O. Box 4980  
The Woodlands,  
TX 77387

Telephone : Tech Info.(800) 257-5547  
United States of America

E-mail address of person responsible for the SDS : MSDS@huntsman.com

Emergency telephone : Chemtrec: (800) 424-9300 or (703) 527-3887

#### Recommended use of the chemical and restrictions on use

Recommended use : Component of a Polyurethane System.  
Industrial use

#### SECTION 2. HAZARDS IDENTIFICATION

##### GHS Classification

Acute toxicity (Oral) : Category 4  
Skin irritation : Category 2  
Eye irritation : Category 2A  
Skin sensitization : Category 1  
Specific target organ systemic toxicity - single exposure : Category 2 (Central nervous system, Kidney)  
Specific target organ systemic toxicity - repeated exposure : Category 2 (Central nervous system, Kidney, Liver)  
Acute aquatic toxicity : Category 3  
Chronic aquatic toxicity : Category 3

##### GHS Label element

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Hazard pictograms :



Signal Word : Warning

Hazard Statements :

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H371 May cause damage to organs (Central nervous system, Kidney).  
H373 May cause damage to organs (Central nervous system, Kidney, Liver) through prolonged or repeated exposure.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements :

**P260** Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
**P264** Wash skin thoroughly after handling.  
**P270** Do not eat, drink or smoke when using this product.  
**P272** Contaminated work clothing must not be allowed out of the workplace.  
**P273** Avoid release to the environment.  
**P280** Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**P285** In case of inadequate ventilation wear respiratory protection.  
**Response:**  
**P301 + P312 + P330** IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.  
**P302 + P352** IF ON SKIN: Wash with plenty of soap and water.  
**P305 + P351 + P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P308 + P311** IF exposed or concerned: Call a POISON CENTER or doctor/ physician.  
**P333 + P313** If skin irritation or rash occurs: Get medical advice/ attention.  
**P337 + P313** If eye irritation persists: Get medical advice/ attention.  
**P362** Take off contaminated clothing and wash before reuse.  
**Storage:**  
**P403 + P233** Store in a well-ventilated place. Keep container tightly closed.  
**P405** Store locked up.  
**Disposal:**  
**P501** Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Substance / Mixture : Mixture

## Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Polyether polyol	-	60 - 100
Glycol	-	13 - 30
Tertiary amine 3	-	1 - 3
4-sec-butyl-2,6-di-tert-butylphenol	17540-75-9	0.1 - 1

## SECTION 4. FIRST AID MEASURES

General advice :

Move out of dangerous area.  
Do not leave the victim unattended.  
Consult a physician.  
Show this material safety data sheet to the doctor in attendance.

If inhaled :

If inhaled, remove to fresh air.  
Keep patient warm and at rest.  
Keep respiratory tract clear.  
If breathing is labored, administer oxygen.  
If breathing is irregular or stopped, administer artificial respiration.  
If unconscious place in recovery position and seek medical advice.  
If symptoms persist, call a physician.

In case of skin contact :

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Wash contaminated clothing before reuse.  
Thoroughly clean shoes before reuse.  
Call a physician if irritation develops or persists.

In case of eye contact :

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.

If swallowed :

Induce vomiting immediately and call a physician.  
Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed

: None known.

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#### Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training.  
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.  
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

#### Notes to physician

: Treatment with ethyl alcohol is indicated if toxic ingestion is suspected or if there is metabolic acidosis following ingestion of this product. Administer ethyl alcohol sufficient to maintain blood ethyl alcohol levels of above 100 mg/dL.

4-Methylpyrazole (Fomepizole, Antizole) is also a recognized antidote for this product.

#### SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke), Nitrogen oxides (NOx)

Specific extinguishing methods : Cool containers/tanks with water spray.

Further information : Standard procedure for chemical fires.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Prevent fire extinguishing water from contaminating surface water or the ground water system.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Evacuate personnel to safe areas.  
Ensure adequate ventilation.  
Keep people away from and upwind of spill/leak.  
Only qualified personnel equipped with suitable protective equipment may intervene.

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Never return spills in original containers for re-use.  
Treat recovered material as described in the section "Disposal considerations".  
For disposal considerations see section 13.  
Make sure that there is a sufficient amount of neutralizing/absorbent material near the storage area.  
Mark the contaminated area with signs and prevent access to unauthorized personnel.

Environmental precautions : Do not allow uncontrolled discharge of product into the environment.

Do not allow contact with soil, surface or ground water.  
Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.  
Local authorities should be advised if significant spillages cannot be contained.

If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up

: Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).  
Keep in suitable, closed containers for disposal.

#### SECTION 7. HANDLING AND STORAGE

Technical measures : Ensure that eyewash stations and safety showers are close to the workstation location.

Local/Total ventilation : Use only with adequate ventilation.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : For personal protection see section 8.

Do not breathe vapors/dust.

Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.

Smoking, eating and drinking should be prohibited in the application area.

Dispose of rinse water in accordance with local and national regulations.

Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Observe label precautions.

Electrical installations / working materials must comply with the technological safety standards.

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#### SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

##### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

##### Personal protective equipment

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.  
Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

##### Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

##### Eye protection

: Chemical resistant goggles must be worn.  
Wear face-shield and protective suit for abnormal processing problems.  
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.  
Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.  
Ensure that eyewash stations and safety showers are close to the workstation location.

##### Skin and body protection

: Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

##### Protective measures

: Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing  
The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.  
Ensure that eye flushing systems and safety showers are located close to the working place.

##### Hygiene measures

: Handled in accordance with good industrial hygiene and safety practice.  
Wash face, hands and any exposed skin thoroughly after handling.  
Remove contaminated clothing and protective equipment before entering eating areas.  
When using do not eat or drink.  
When using do not smoke.  
Contaminated work clothing should not be allowed out of the workplace.  
Wash hands before breaks and at the end of workday.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance : Liquid  
Color : No data is available on the product itself.  
Odor : No data is available on the product itself.  
Odor Threshold : No data is available on the product itself.  
pH : No data is available on the product itself.  
Flash point : > 250 °C  
Method: Seta closed cup, closed cup  
Evaporation rate : No data is available on the product itself.  
Flammability (solid, gas) : No data is available on the product itself.  
Upper explosion limit : No data is available on the product itself.  
Lower explosion limit : No data is available on the product itself.  
Vapor pressure : No data is available on the product itself.  
Relative vapor density : No data is available on the product itself.  
Relative density : 1.04  
Density : No data is available on the product itself.  
Solubility(ies)  
Water solubility : No data is available on the product itself.  
Solubility in other solvents : No data is available on the product itself.  
Partition coefficient: n-octano/water : No data is available on the product itself.  
Autoignition temperature : No data is available on the product itself.  
Thermal decomposition : No data is available on the product itself.  
Viscosity : No data is available on the product itself.  
Self-Accelerating decomposition temperature (SADT) : No data is available on the product itself.

#### SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.  
Chemical stability : The product is chemically stable.  
Possibility of hazardous reactions : No decomposition if stored and applied as directed.  
Conditions to avoid : No data available

Hazardous decomposition : Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of

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products      nitrogen (NOx), dense black smoke.

#### SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : No data is available on the product itself.

##### Acute toxicity

Acute oral toxicity - Product : Acute toxicity estimate : 790.26 mg/kg  
Method: Calculation method

Acute inhalation toxicity - Product : Acute toxicity estimate: > 40 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Method: Calculation method

Acute dermal toxicity - Product : Acute toxicity estimate : > 5,000 mg/kg  
Method: Calculation method

Acute toxicity (other routes of administration) : No data available

##### Skin corrosion/irritation

##### Product:

Remarks: May cause skin irritation and/or dermatitis.

##### Serious eye damage/eye irritation

##### Product:

Remarks: May cause irreversible eye damage.

##### Respiratory or skin sensitization

##### Product:

Remarks: Causes sensitization.

##### Ingredients:

Polyether polyol:  
Assessment: Harmful if swallowed.

##### Germ cell mutagenicity

##### Ingredients:

Polyether polyol:  
Genotoxicity in vitro : Test Type: Ames test  
Species: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

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Test Type: Chromosome aberration test in vitro  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Species: Chinese hamster cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative

Tertiary amine 3:  
Genotoxicity in vitro : Concentration: 5000 µg/plate  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

Concentration: 1698 - 2547 µg/L  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: negative

Concentration: 849 µg/L  
Metabolic activation: negative  
Method: OECD Test Guideline 482  
Result: negative

##### Ingredients:

Glycol: Genotoxicity in vivo : Cell type: Somatic  
Application Route: Intraperitoneal injection  
Dose: 500 - 2000 mg/kg  
Method: OECD Test Guideline 474  
Result: negative

##### Carcinogenicity

##### Ingredients:

Glycol: Species: Rat, (male and female)  
Application Route: Oral  
Exposure time: 108 weeks  
Dose: 1160 - 1210 mg/kg  
Frequency of Treatment: 7 daily  
Result: negative

Carcinogenicity - Assessment : No data available

##### IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

##### OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential

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carcinogen by OSHA.

#### NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

#### Reproductive toxicity

Effects on fertility : No data available

#### Ingredients:

Glycol: Effects on fetal development : Species: Rabbit  
Application Route: Oral  
Dose: 1000 milligram per kilogram  
Method: OECD Test Guideline 414  
Result: No teratogenic effects.

#### Tertiary amine 3:

Species: Rat, male and female  
Application Route: Oral  
General Toxicity Maternal: NOAEL (No observed adverse effect level): > 1,500 mg/kg body weight  
Method: OECD Test Guideline 422  
Result: No teratogenic effects.

#### Reproductive toxicity -

Assessment : No data available

#### STOT-single exposure

##### Ingredients:

Glycol: Target Organs: Central nervous system, Kidney  
Assessment: May cause damage to organs.

#### STOT-repeated exposure

##### Ingredients:

Glycol: Target Organs: Kidney, Liver, Central nervous system  
Assessment: May cause damage to organs through prolonged or repeated exposure.

#### Repeated dose toxicity

##### Ingredients:

Polyether polyol: Species: Rat, male and female  
NOAEL (No observed adverse effect level): >= 1000 mg/kg  
Application Route: Oral  
Exposure time: 31 Days  
Number of exposures: 11 hours/day  
Method: OECD Test Guideline 407

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#### Glycol:

Species: Rat, male and female  
No-observed-effect level: 150 mg/kg  
Application Route: Ingestion  
Exposure time: 28 Days  
Method: Subacute toxicity

#### Tertiary amine 3:

Species: Rat, male and female  
NOEC: 750 ppm  
Application Route: Ingestion  
Test atmosphere: vapor  
Exposure time: 11 Days  
Number of exposures: 5 d  
Method: OECD Test Guideline 422

#### Species: Rat, male and female

NOAEL (No observed adverse effect level): 85 - 147 mg/kg  
Application Route: Ingestion  
Method: OECD Test Guideline 422

#### Ingredients:

Polyether polyol: Repeated dose toxicity -  
Assessment : Harmful if swallowed.

#### Aspiration toxicity

No data available

#### Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

#### Toxicology, Metabolism, Distribution

No data available

#### Neurological effects

No data available



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#### Further information

##### Product:

Remarks: No data available

#### SECTION 12. ECOLOGICAL INFORMATION

##### Ecotoxicity

##### Ingredients:

Polyether polyol:  
Toxicity to fish

: LC50 (Leuciscus idus (Golden orfe)): > 1,000 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 203

Glycol:  
Toxicity to fish

: LC50 (Pimephales promelas (fathead minnow)): 75,200 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
Test substance: Fresh water  
Remarks: Toxic to aquatic organisms.

Tertiary amine 3:  
Toxicity to fish

: LC50 (Leuciscus idus (Golden orfe)): > 21.5 - < 46 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: DIN 38412

##### Ingredients:

Polyether polyol:  
Toxicity to daphnia and other  
aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

Glycol:  
Toxicity to daphnia and other  
aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 10,000 mg/l  
Exposure time: 24 h  
Test Type: static test  
Test substance: Fresh water  
Method: DIN 38412

Tertiary amine 3:  
Toxicity to daphnia and other  
aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 75 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

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##### Ingredients:

Polyether polyol:  
Toxicity to algae

: LC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

Tertiary amine 3:  
Toxicity to algae

: ErC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 2 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic  
toxicity)

: No data available

##### Ingredients:

Glycol:  
Toxicity to fish (Chronic  
toxicity)

: NOEC (Pimephales promelas (fathead minnow)): 15,380 mg/l  
Exposure time: 17 d  
Test substance: Fresh water

##### Ingredients:

Polyether polyol:  
Toxicity to daphnia and other  
aquatic invertebrates  
(Chronic toxicity)

: NOEC (Daphnia magna (Water flea)): >= 10 mg/l  
Exposure time: 21 d  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 211

Glycol:  
Toxicity to daphnia and other  
aquatic invertebrates  
(Chronic toxicity)

: NOEC (Ceriodaphnia (water flea)): 8,590 mg/l  
Exposure time: 7 d  
Test Type: static test  
Test substance: Fresh water

M-Factor (Chronic aquatic  
toxicity)

: No data available

##### Ingredients:

Polyether polyol:  
Toxicity to bacteria

: IC50 (activated sludge): > 10,000 mg/l  
Exposure time: 3 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 209

Glycol:  
Toxicity to bacteria

: IC50: > 1,000 mg/l  
Exposure time: 3 h

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Method: OECD Test Guideline 209

- Toxicity to soil dwelling organisms : No data available
- Plant toxicity : No data available
- Sediment toxicity : No data available
- Toxicity to terrestrial organisms : No data available

#### Ecotoxicology Assessment

#### Ingredients:

Tertiary amine 3:  
Acute aquatic toxicity : Toxic to aquatic life.

#### Ingredients:

Tertiary amine 3:  
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

Further information:  
No data available

#### Persistence and degradability

#### Ingredients:

Polyether polyol:  
Biodegradability : Test Type: aerobic  
Concentration: 100 mg/l  
Result: Inherently biodegradable.  
Biodegradation: 1.9 %  
Exposure time: 28 d  
Method: Inherent Biodegradability: Modified SCAS Test

Test Type: aerobic  
Concentration: 20 mg/l  
Result: Not readily biodegradable.  
Biodegradation: 40 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

Test Type: aerobic  
Inoculum: Mixture  
Result: Inherently biodegradable.  
Biodegradation: 22 %  
Exposure time: 28 d  
Method: ISO 5815

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Glycol:  
Biodegradability : Inoculum: activated sludge  
Result: Readily biodegradable.  
Biodegradation: >= 70 %  
Exposure time: 10 - 29 d

Tertiary amine 3:  
Biodegradability : Inoculum: activated sludge  
Result: Readily biodegradable.  
Biodegradation: > 90 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301A

#### Ingredients:

Polyether polyol:  
Biochemical Oxygen Demand (BOD) : 355 mg/g

#### Ingredients:

Polyether polyol:  
Chemical Oxygen Demand (COD) : 1,600 mg/g  
BOD/COD : No data available  
ThOD : No data available  
BOD/ThOD : No data available  
Dissolved organic carbon (DOC) : No data available  
Physico-chemical removability : No data available  
Stability in water : No data available  
Photodegradation : No data available  
Impact on Sewage Treatment : No data available

#### Bioaccumulative potential

#### Ingredients:

Polyether polyol:  
Bioaccumulation : Remarks: Does not bioaccumulate.

Glycol:  
Bioaccumulation : Species: Leuciscus idus (Golden orfe)  
Bioconcentration factor (BCF): 100  
Exposure time: 3 d  
Test substance: Fresh water  
Method: OECD Test Guideline 305

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Tertiary amine 3:  
Bioaccumulation

: Bioconcentration factor (BCF): 19.84 - 35.66  
Remarks: Does not bioaccumulate.

#### Ingredients:

Polyether polyol:  
Partition coefficient: n-  
octanol/water

: Pow: 0.73 - 1.82 (25 °C)  
pH: > 12

Glycol:  
Partition coefficient: n-  
octanol/water

: log Pow: -1.98  
  
log Pow: -1.98 (25 °C)  
Method: No information available.

Tertiary amine 3:  
Partition coefficient: n-  
octanol/water

: log Pow: 2.31 (25 °C)

#### **Mobility in soil**

Mobility

: No data available

Distribution among  
environmental compartments

: No data available

Stability in soil

: No data available

#### **Other adverse effects**

Environmental fate and  
pathways

: No data available

Results of PBT and vPvB  
assessment

: No data available

Endocrine disrupting  
potential

: No data available

Adsorbed organic bound  
halogens (AOX)

: No data available

#### **Hazardous to the ozone layer**

Ozone-Depletion Potential

: Regulation: 40 CFR Protection of Environment: Part 82  
Protection of Stratospheric Ozone - CAA Section 602 Class I  
Substances

Remarks: This product neither contains, nor was  
manufactured with a Class I or Class II ODS as defined by the  
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App. A +  
B).

Additional ecological  
information - Product

: An environmental hazard cannot be excluded in the event of  
unprofessional handling or disposal.  
Harmful to aquatic life with long lasting effects.

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Global warming potential  
(GWP)

: No data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

##### **Disposal methods**

Waste from residues

: The product should not be allowed to enter drains, water  
courses or the soil.  
Do not contaminate ponds, waterways or ditches with  
chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging

: Empty remaining contents  
Dispose of as unused product.  
Do not re-use empty containers.

#### **SECTION 14. TRANSPORT INFORMATION**

##### **International Regulation**

IATA

: Not regulated as a dangerous good

IMDG

: Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

: Not applicable for product as supplied.

**Domestic regulation**

DOT Classification

: Not regulated as a dangerous good

#### **SECTION 15. REGULATORY INFORMATION**

TSCA - 5(a) Significant New  
Use Rule List of Chemicals

: Not relevant

**EPCRA - Emergency Planning and Community Right-to-Know**

SARA 311/312 Hazards

: Acute Health Hazard

SARA 313

: This material does not contain any chemical components with  
known CAS numbers that exceed the threshold (De Minimis)  
reporting levels established by SARA Title III, Section 313.

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### Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Diethylene glycol      111-46-6      24.041 %  
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

### California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

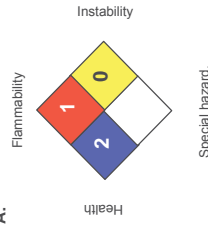
### The ingredients of this product are reported in the following inventories:

- CHINV : The mixture contains substances listed on the Swiss Inventory
- TSCA : On TSCA Inventory
- DSL : All components of this product are on the Canadian DSL.
- AICS : Not in compliance with the inventory
- NZIoC : Not in compliance with the inventory
- ENCS : Not in compliance with the inventory
- ISHL : Not in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PICCS : Not in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA:



#### HMIS III:

HEALTH	2*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

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