

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version 1.0 Revision Date: 02/11/2016 SDS Number: 400001016383 Date of last issue: -
Date of first issue: 02/11/2016

SECTION 1. IDENTIFICATION

Product name : SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Manufacturer or supplier's details

Company name of supplier : Huntsman Polyurethanes
Address : P.O. Box 4980
The Woodlands,
TX 77387
United States of America
Telephone : Tech Info:(800) 257-5547
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 (Inhalation) : Category 4
Skin irritation : Category 2
Eye irritation : Category 2B
Respiratory sensitization : Category 1
Skin sensitization : Category 1
Specific target organ systemic toxicity - single exposure : Category 3 (Respiratory system)

GHS Label element

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H315 + H320 Causes skin and eye irritation.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

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 must not be allowed out of the workplace.

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

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 or doctor/ physician 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 or doctor/ physician.

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
Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]	39420-98-9	30 - 60
4,4'-methylenediphenyl diisocyanate	101-68-8	13 - 30
Diphenylmethane-2,4'- diisocyanate	5873-54-1	13 - 30
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	7 - 13

SECTION 4. FIRST AID MEASURES

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

- 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 : Move to fresh air in case of accidental inhalation of vapors.
If breathing is irregular or stopped, administer artificial respiration.
If unconscious place in recovery position and seek medical advice.
Consult a physician after significant exposure.
- In case of skin contact : Wash off with soap and plenty of water.
Take off contaminated clothing and shoes immediately.
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Cool skin rapidly with cold water after contact with molten polymer.
If symptoms persist, call a physician.
Wash contaminated clothing before reuse.
An MDI study has demonstrated that a polyglycol-based skin cleanser (such as D-Tam™, PEG-400) or corn oil may be more effective than soap and water.
- 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 : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Keep respiratory tract clear.
Keep at rest.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If a person vomits when lying on his back, place him in the recovery position.
Obtain medical attention.
- Most important symptoms and effects, both acute and delayed : None known.
- 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 : Keep under medical supervision for at least 48 hours.

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

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

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Foam
Carbon dioxide (CO₂)
Dry powder
- 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 (NO_x)
- 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 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 : Use personal protective equipment.
Ensure adequate ventilation.
Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Only qualified personnel equipped with suitable protective equipment may intervene.
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.

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

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
- Dilute with plenty of water.
- 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 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 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.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Dispose of rinse water in accordance with local and national regulations.

SAFETY DATA SHEET



SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version 1.0 Revision Date: 02/11/2016 SDS Number: 400001016383 Date of last issue: -
Date of first issue: 02/11/2016

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

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

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
Material : Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Polyvinyl alcohol or nitrile- butyl-rubber gloves
The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.
Before removing gloves clean them with soap and water.

Eye protection : Safety glasses with side-shields
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.
Eye wash bottle with pure water
Tightly fitting safety goggles.

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

- Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Protective measures : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
- Hygiene measures : It is good practice in industrial hygiene to avoid contact with solvents by using appropriate protective measures whenever possible.
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.
Avoid prolonged contact with eyes, skin and clothing.
When using do not eat or drink.
When using do not smoke.
Wash hands and face 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
- Color : amber
- 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 : > 121.11 °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.

SAFETY DATA SHEET



SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version 1.0 Revision Date: 02/11/2016 SDS Number: 400001016383 Date of last issue: -
Date of first issue: 02/11/2016

Relative density : 1.19

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-octanol/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 : Stable under recommended storage conditions.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reactions : No decomposition if stored and applied as directed.

Conditions to avoid : Extremes of temperature and direct sunlight.
Avoid temperatures above 140 °F, direct sunlight and contact with sources of heat.

Incompatible materials : Incompatible with acids and bases.
Amines

Hazardous decomposition products : Carbon oxides
Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.
Hydrogen cyanide (hydrocyanic acid)
Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

Ingredients:

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

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

4,4'-methylenediphenyl diisocyanate:

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

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

Isocyanic acid, polymethylenepolyphenylene ester:
Acute oral toxicityIngredients : LD50 (Rat, male): > 10,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity - : Acute toxicity estimate: 1.51 mg/l
Product Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Ingredients:

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

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

4,4'-methylenediphenyl diisocyanate:
Acute dermal toxicity : LD50 (Rabbit, male and female): > 9,400 mg/kg
Method: OECD Test Guideline 402

Diphenylmethane-2,4'- diisocyanate:
Acute dermal toxicity : LD50 (Rabbit, male and female): > 9,400 mg/kg
Method: OECD Test Guideline 402

Isocyanic acid, polymethylenepolyphenylene ester:
Acute dermal toxicity : LD50 (Rabbit, male and female): > 9,400 mg/kg
Method: OECD Test Guideline 402

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

Skin corrosion/irritation**Product:**

Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation**Product:**

Remarks: Vapors may cause irritation to the eyes, respiratory system and the skin.

Respiratory or skin sensitization**Product:**

Remarks: Causes sensitization.

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version 1.0 Revision Date: 02/11/2016 SDS Number: 400001016383 Date of last issue: -
Date of first issue: 02/11/2016

Ingredients:

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

Assessment: Mild eye irritation

4,4'-methylenediphenyl diisocyanate:

Assessment: May cause sensitization by inhalation and skin contact.

Diphenylmethane-2,4'- diisocyanate:

Assessment: Mild eye irritation

Isocyanic acid, polymethylenepolyphenylene ester:

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

Germ cell mutagenicity**Ingredients:**

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

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

4,4'-methylenediphenyl diisocyanate:

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

Diphenylmethane-2,4'- diisocyanate:

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Isocyanic acid, polymethylenepolyphenylene ester:

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

Ingredients:

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

Genotoxicity in vivo : Application Route: Inhalation
Exposure time: 3 Weeks
Dose: 118 mg/m³
Method: OECD Test Guideline 474
Result: negative

4,4'-methylenediphenyl diisocyanate:

Genotoxicity in vivo : Application Route: Inhalation
Exposure time: 3 Weeks
Dose: 118 mg/m³

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

Method: OECD Test Guideline 474
Result: negative

Diphenylmethane-2,4'- diisocyanate:

Genotoxicity in vivo : Application Route: Inhalation
Exposure time: 3 Weeks
Dose: 118 mg/m³
Method: OECD Test Guideline 474
Result: negative

Isocyanic acid, polymethylenepolyphenylene ester:

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

Application Route: Inhalation
Exposure time: 3 Weeks
Dose: 113 mg/m³
Method: OECD Test Guideline 474
Result: negative

Ingredients:**Isocyanic acid, polymethylenepolyphenylene ester:**

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

Germ cell mutagenicity- : No data available
Assessment

Carcinogenicity**Ingredients:**

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-
methylenebis[isocyanatobenzene]:

Species: Rat, (male and female)
Application Route: Inhalation
Exposure time: 24 month(s)
Dose: 1 mg/m³
Frequency of Treatment: 5 daily
Method: OECD Test Guideline 453
Result: positive
Target Organs: Lungs

4,4'-methylenediphenyl diisocyanate:

Species: Rat, (male and female)
Application Route: Inhalation
Exposure time: 24 month(s)
Dose: 1 mg/m³
Frequency of Treatment: 5 daily
Method: OECD Test Guideline 453
Result: positive
Target Organs: Lungs

Diphenylmethane-2,4'- diisocyanate:

Species: Rat, (male and female)

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version 1.0 Revision Date: 02/11/2016 SDS Number: 400001016383 Date of last issue: -
Date of first issue: 02/11/2016

Application Route: Inhalation
Exposure time: 24 month(s)
Dose: 1 mg/m³
Frequency of Treatment: 5 daily
Method: OECD Test Guideline 453
Result: positive
Target Organs: Lungs

Isocyanic acid, polymethylenepolyphenylene ester:
Species: Rat, (male and female)
Application Route: Inhalation
Exposure time: 24 month(s)
Dose: 1 mg/m³
Frequency of Treatment: 5 daily
Method: OECD Test Guideline 453
Result: positive

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 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**Ingredients:**

4,4'-methylenediphenyl diisocyanate:
Effects on fertility : Method: OECD Test Guideline 414

Diphenylmethane-2,4'- diisocyanate:
Species: Rat, female
Application Route: Inhalation
Method: OECD Test Guideline 414
Result: Animal testing did not show any effects on fertility.

Species: Rat, male and female
Application Route: Inhalation
Method: OECD Test Guideline 414
Result: Animal testing did not show any effects on fertility.

Isocyanic acid, polymethylenepolyphenylene ester:
Species: Rat, male and female
Application Route: Inhalation
Method: OECD Test Guideline 414
Remarks: No significant adverse effects were reported

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

Ingredients:

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

Effects on fetal development : Species: Rat, male and female
Application Route: Inhalation
Method: OECD Test Guideline 414
Result: No teratogenic effects.

4,4'-methylenediphenyl diisocyanate:

Species: Rat, female
Application Route: Inhalation
General Toxicity Maternal: NOAEL (No observed adverse effect level): 4 mg/m³
Method: OECD Test Guideline 414
Result: No teratogenic effects.

Diphenylmethane-2,4'- diisocyanate:

Species: Rat, male and female
Application Route: Inhalation
General Toxicity Maternal: NOAEL (No observed adverse effect level): 4 mg/m³
Method: OECD Test Guideline 414
Result: No teratogenic effects.

Isocyanic acid, polymethylenepolyphenylene ester:

Species: Rat, male and female
Application Route: Inhalation
General Toxicity Maternal: 4 mg/m³
Method: OECD Test Guideline 414
Result: No teratogenic effects.

Ingredients:

Isocyanic acid, polymethylenepolyphenylene ester:

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

STOT-single exposure**Ingredients:**

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

Routes of exposure: inhalation (dust/mist/fume)

Target Organs: Respiratory Tract

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

4,4'-methylenediphenyl diisocyanate:

Routes of exposure: Inhalation

Target Organs: Respiratory Tract

Assessment: May cause respiratory irritation.

Diphenylmethane-2,4'- diisocyanate:

SAFETY DATA SHEET



SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

Routes of exposure: Inhalation
Target Organs: Respiratory system
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Isocyanic acid, polymethylenepolyphenylene ester:
Routes of exposure: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

STOT-repeated exposure

No data available

Repeated dose toxicity

Ingredients:

Poly[oxy(methyl-1,2-ethanediy)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

Species: Rat, male and female
NOEC: 0.2 mg/m³
Exposure time: 2 yr
Number of exposures: 5 d
Method: OECD Test Guideline 453

4,4'-methylenediphenyl diisocyanate:

Species: Rat, male and female
NOEC: 0.2 mg/m³
Exposure time: 2 yr
Number of exposures: 5 d
Method: OECD Test Guideline 453

Diphenylmethane-2,4'- diisocyanate:

Species: Rat, male and female
NOEC: 0.2 mg/m³
Exposure time: 2 yr
Number of exposures: 5 d
Method: OECD Test Guideline 453

Isocyanic acid, polymethylenepolyphenylene ester:

Species: Rat, male and female
NOEC: 0.2 mg/m³
Test atmosphere: dust/mist
Exposure time: 2 yr
Number of exposures: 5 d
Method: OECD Test Guideline 453

Ingredients:

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

Repeated dose toxicity - : Mild eye irritation
Assessment

Diphenylmethane-2,4'- diisocyanate:

Repeated dose toxicity - : Mild eye irritation
Assessment

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

Further information**Product:**

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Ingredients:**

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 1,000 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

4,4'-methylenediphenyl diisocyanate:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 1,000 mg/l
Exposure time: 96 h
Test Type: static test

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version 1.0 Revision Date: 02/11/2016 SDS Number: 400001016383 Date of last issue: -
Date of first issue: 02/11/2016

Method: OECD Test Guideline 203

Diphenylmethane-2,4'- diisocyanate:

Toxicity to fish : 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

Isocyanic acid, polymethylenepolyphenylene ester:

Toxicity to fish : 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

Ingredients:

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

Toxicity to daphnia and other aquatic invertebrates : 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

4,4'-methylenediphenyl diisocyanate:

Toxicity to daphnia and other aquatic invertebrates : 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

Diphenylmethane-2,4'- diisocyanate:

Toxicity to daphnia and other aquatic invertebrates : 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

Isocyanic acid, polymethylenepolyphenylene ester:

Toxicity to daphnia and other aquatic invertebrates : 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

Ingredients:

Isocyanic acid, polymethylenepolyphenylene ester:

Toxicity to algae : EC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 1,640 mg/l
Exposure time: 72 h
Test Type: static test

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

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

Ingredients:

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

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

4,4'-methylenediphenyl diisocyanate:

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

Diphenylmethane-2,4'- diisocyanate:

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

Isocyanic acid, polymethylenepolyphenylene ester:

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

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

Ingredients:

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

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

Diphenylmethane-2,4'- diisocyanate:

Toxicity to bacteria : EC50 (activated sludge): > 100 mg/l
Exposure time: 3 h

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

Test Type: static test
 Test substance: Fresh water
 Method: OECD Test Guideline 209

Isocyanic acid, polymethylenepolyphenylene ester:
 Toxicity to bacteria : EC50 (activated sludge): > 100 mg/l
 Exposure time: 3 h
 Test Type: static test
 Test substance: Fresh water
 Method: OECD Test Guideline 209

Ingredients:

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

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

4,4'-methylenediphenyl diisocyanate:

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

Diphenylmethane-2,4'- diisocyanate:

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

Isocyanic acid, polymethylenepolyphenylene ester:

Toxicity to soil dwelling organisms : 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

Further information:
 No data available

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version 1.0 Revision Date: 02/11/2016 SDS Number: 400001016383 Date of last issue: -
Date of first issue: 02/11/2016

Persistence and degradability**Ingredients:**

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

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

4,4'-methylenediphenyl diisocyanate:

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

Diphenylmethane-2,4'- diisocyanate:

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

Isocyanic acid, polymethylenepolyphenylene ester:

Biodegradability : 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

Physico-chemical : No data available

SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

removability

Stability in water : No data available

Photodegradation : No data available

Impact on Sewage Treatment : No data available

Bioaccumulative potential**Ingredients:**

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

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

4,4'-methylenediphenyl diisocyanate:

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

Diphenylmethane-2,4'- diisocyanate:

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

Isocyanic acid, polymethylenepolyphenylene ester:

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

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene]:

Partition coefficient: n-octanol/water : log Pow: 4.51 (20 °C)
pH: 7
Method: OECD Test Guideline 117
GLP: no

4,4'-methylenediphenyl diisocyanate:

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

Diphenylmethane-2,4'- diisocyanate:

Partition coefficient: n-octanol/water : log Pow: 4.51 (20 °C)
pH: 7
Method: OECD Test Guideline 117**Mobility in soil**

Mobility : No data available

SAFETY DATA SHEET



SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version 1.0 Revision Date: 02/11/2016 SDS Number: 400001016383 Date of last issue: -
Date of first issue: 02/11/2016

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 : 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 Regulation

IATA

SAFETY DATA SHEET



SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version 1.0 Revision Date: 02/11/2016 SDS Number: 400001016383 Date of last issue: -
Date of first issue: 02/11/2016

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

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
ERG Code : 171
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

TSCA - 5(a) Significant New Use Rule List of Chemicals : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
4,4'-METHYLENEDIPHENYL DIISOCYANATE (4,4'-MDI)	101-68-8	5000	21404
PROPYLENE OXIDE (PO)	75-56-9	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Acute Health Hazard

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

4,4'-methylenediphenyl diisocyanate	101-68-8	23.36 %
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	7.5 %

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

SAFETY DATA SHEET



SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version 1.0 Revision Date: 02/11/2016 SDS Number: 400001016383 Date of last issue: -
Date of first issue: 02/11/2016

61):
4,4'-methylenediphenyl diisocyanate 101-68-8 23.36 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

California Prop 65 WARNING! This product contains a chemical known in the State of California to cause cancer.
methyloxirane 75-56-9

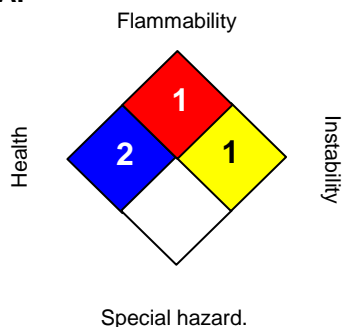
The ingredients of this product are reported in the following inventories:

CH INV : 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 : On the inventory, or in compliance with the inventory
NZIoC : On the inventory, or 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	1

0 = not significant, 1 =Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

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.)

SAFETY DATA SHEET



SUPRASEC® 9631 (STI 03-0.15-S HYPERFLEX)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/11/2016	400001016383	Date of first issue: 02/11/2016

Revision Date : 02/11/2016

While 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.

The trademarks above are the property of Huntsman Corporation or an affiliate thereof.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.