

**SOLITHANE® S 113**

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name: SOLITHANE® S 113

Product Use Description: Polymer

Company: LANXESS Solutions US Inc.  
199 Benson Road  
Middlebury, CT  
06749  
United States of America (USA)

Telephone: (US) +1 866-430-2775

Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300  
:  
: US : 800-292-5898 (Technical inquiries)

For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by Product Safety Department  
(US) +1 866-430-2775

MSDSRequest@chemtura.com

Recommended use of the chemical and restrictions on use

Recommended use : Polymer

Restrictions on use : Reserved for industrial and professional use.

**SECTION 2. HAZARDS IDENTIFICATION**

Form	liquid
Colour	light yellow
Odour	pungent

**GHS Classification**

Acute toxicity (Inhalation) : Category 2  
Respiratory sensitisation : Category 1  
Skin sensitisation : Category 1  
Carcinogenicity : Category 2

**GHS label elements**

**SOLITHANE® S 113**

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

Signal word : **Danger**

Hazard pictograms :



Hazard statements : H317 May cause an allergic skin reaction.  
H330 Fatal if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H351 Suspected of causing cancer.

Other hazards : None

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
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.  
P281 Use personal protective equipment as required.  
P284 Wear respiratory protection.  
**Response:**  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P363 Wash contaminated clothing 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.

**Carcinogenicity:**

**IARC**

Group 2B: Possibly carcinogenic to humans  
m-tolylidene diisocyanate 26471-62-5

## SOLITHANE® S 113

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

### OSHA

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

### NTP

Reasonably anticipated to be a human carcinogen

m-tolylidene diisocyanate 26471-62-5

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Hazardous components

Chemical name	CAS-No.	Concentration (%)
m-tolylidene diisocyanate	26471-62-5	>= 5 - < 10 %

## SECTION 4. FIRST AID MEASURES

- If inhaled : Remove to fresh air.  
Give oxygen or artificial respiration if needed.  
Get medical attention immediately.
- In case of skin contact : Remove contaminated clothing and shoes.  
Wash off with soap and plenty of water.  
Obtain medical attention.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
If symptoms persist, call a physician.
- If swallowed : Get medical attention immediately.
- Most important symptoms and effects, both acute and delayed : Lachrymation  
Breathing difficulties  
sensitising effects
- Notes to physician : Oxygen, if needed.  
For specialist advice physicians should contact the Poisons Information Service.

## SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray  
Dry chemical
- Specific hazards during firefighting : Burning produces irritant fumes.  
Exposure to decomposition products may be a hazard to

**SOLITHANE® S 113**

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

health.

Specific extinguishing methods : Fight fire with normal precautions from a reasonable distance. If water is used, fog nozzles are preferable. Keep away from fire, sparks and heated surfaces. Use water spray to cool unopened containers. Do not discharge extinguishing waters into streams, rivers and lakes.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Body covering protective clothing, full "turn-out" gear.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas. Wear suitable protective equipment.

Environmental precautions : Do not allow contact with soil, surface or ground water. Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up : Prevent further leakage or spillage if safe to do so. Ventilate the area. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labelled containers. Flush with plenty of water. Do not flush into surface water or sanitary sewer system.

**SECTION 7. HANDLING AND STORAGE**

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice. Handle and open container with care. Do not puncture. Slacken off drum bungs before heating to prevent any pressure build up. Use only with adequate ventilation. Avoid inhalation, ingestion and contact with skin and eyes. Wear suitable protective equipment. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Keep container closed when not in use. Allergic reactions may develop after inhalation of low concentrations, also several hours after exposure. Regular medical checks, including lung function, are recommended for long term and repeated use of isocyanates.

## SOLITHANE® S 113

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

Conditions for safe storage : Keep container tightly closed.  
Keep in a dry, cool and well-ventilated place.  
Keep under nitrogen.  
Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

Materials to avoid : Alcohols, Strong oxidizing agents, Water

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
m-tolylidene diisocyanate	26471-62-5	C	0.02 ppm 0.14 mg/m <sup>3</sup>	OSHA Z-1
		TWA	0.005 ppm	ACGIH
		STEL	0.02 ppm	ACGIH
		C	0.02 ppm 0.14 mg/m <sup>3</sup>	OSHA Z-1
		TWA	0.005 ppm 0.04 mg/m <sup>3</sup>	OSHA P0
		STEL	0.02 ppm 0.15 mg/m <sup>3</sup>	OSHA P0
		TWA	0.005 ppm 0.04 mg/m <sup>3</sup>	OSHA P0
		STEL	0.02 ppm 0.15 mg/m <sup>3</sup>	OSHA P0
		STEL	0.02 ppm 0.15 mg/m <sup>3</sup>	CAL PEL
		C	0.02 ppm	CAL PEL
		PEL	0.005 ppm 0.04 mg/m <sup>3</sup>	CAL PEL
		TWA (Inhalable fraction and vapor)	0.001 ppm	ACGIH
		STEL (Inhalable fraction and vapor)	0.005 ppm	ACGIH

Engineering measures : Maintain air concentrations below occupational exposure standards.  
Ensure that extracted air cannot be returned to the workplace

**SOLITHANE® S 113**

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

through the ventilation system.  
Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protective equipment**

- |                            |   |  |
|----------------------------|---|--|
| Respiratory protection     | : | In case of insufficient ventilation, wear suitable respiratory equipment.<br>When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.<br>Due to the poor warning properties regarding the chemical(s) of concern, negative pressure air purifying respirators are not recommended at any exposure level in excess of the exposure limit values.        |
| Hand protection<br>Remarks | : | butyl-rubber   |
| Eye protection             | : | Safety glasses with side-shields<br>or<br>Safety goggles   |
| Skin and body protection   | : | Impervious clothing  |
| Hygiene measures           | : | Purge open drums with nitrogen before resealing.<br>Allergic reactions may develop after inhalation of low concentrations, also several hours after exposure. Regular medical checks, including lung function, are recommended for long term and repeated use of isocyanates.<br>Wash hands before breaks and at the end of workday.<br>Handle in accordance with good industrial hygiene and safety practice. |

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- |                             |   |                   |
|-----------------------------|---|-------------------|
| Appearance                  | : | liquid            |
| Color                       | : | light yellow      |
| Odor                        | : | pungent           |
| Odour Threshold             | : | No data available |
| pH                          | : | Not applicable    |
| Melting point/range         | : | Not applicable    |
| Boiling point/boiling range | : | No data available |
| Evaporation rate            | : | No data available |
| Flash point                 | : | 150 - 175 °C      |

**SOLITHANE® S 113**

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

Method: closed cup

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 1.073

Density : No data available

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : soluble  
Solvent: Tetrahydrofuran

soluble  
Solvent: Dimethylformamide

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : No data available

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

**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 : Hazardous polymerisation does not occur.

Conditions to avoid : Exposure to moisture

Incompatible materials : Alcohols  
Strong oxidizing agents  
Water

**SOLITHANE® S 113**

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

Hazardous decomposition products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrocarbons  
Isocyanates

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Product:**

Acute inhalation toxicity : Acute toxicity estimate: 1.11 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

**Components:****m-tolylidene diisocyanate:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
  
Acute inhalation toxicity : LC50 (Rat): 0.1 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
  
Acute dermal toxicity : LD50 (Rabbit): > 9,400 mg/kg

**Skin corrosion/irritation****Components:****m-tolylidene diisocyanate:**

Species: Rabbit  
Result: Severe skin irritation

**Serious eye damage/eye irritation****Components:****m-tolylidene diisocyanate:**

Species: Rabbit  
Result: Risk of serious damage to eyes.

**Respiratory or skin sensitisation****Components:****m-tolylidene diisocyanate:**

Species: Guinea pig  
Assessment: May cause sensitisation by skin contact.  
Result: Causes sensitisation.

**Carcinogenicity**



**SOLITHANE® S 113**

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

**IARC**

Group 2B: Possibly carcinogenic to humans

m-tolylidene diisocyanate

26471-62-5

**OSHA**

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

**NTP**

Reasonably anticipated to be a human carcinogen

m-tolylidene diisocyanate

26471-62-5

**Further information****Product:**

Remarks: The product itself has not been tested.

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity effects**

## Toxicity to fish

m-tolylidene diisocyanate  
(Component)

: LC50: 147 mg/l  
Exposure time: 48 h

Species: Pimephales promelas (fathead minnow)

LC50: 133 mg/l  
Exposure time: 96 h

Species: Oncorhynchus mykiss (rainbow trout)

## Toxicity to daphnia and other aquatic invertebrates

m-tolylidene diisocyanate  
(Component)

: LC50: > 508 mg/l  
Exposure time: 48 h

Species: Grass shrimp (Palaemonetes pugio)

EC50: 12.5 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)

## Toxicity to algae

m-tolylidene diisocyanate  
(Component)

: EC50: 4,300 mg/l  
Exposure time: 96 h  
Species: Chlorella vulgaris (Fresh water algae)

**SOLITHANE® S 113**

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

**Elimination information (persistence and degradability)**

Bioaccumulation (Product) : Remarks:  
No data available

Mobility (Product) : Remarks:  
No data available

Biodegradability (Product) : Result: No data available

**Ecotoxicology Assessment**

Results of PBT assessment (Product)

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological : There is no data available for this product.

information (Product)  
(Product)

: The product itself has not been tested.  
The following information is applicable to a component of this material:

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Waste must be classified and labelled prior to recycling or disposal.  
In well ventilated area, fill drums with several centimeters of water. Leave drum open and slowly shake and roll to allow water contact. Leave open to air for sufficient time to cure. Dispose of waste product or used containers according to local regulations.  
Do not contaminate ponds, waterways or ditches with chemical or used container.

**SECTION 14. TRANSPORT INFORMATION****International Regulations****IATA-DGR**

UN/ID No. : UN 2206  
Proper shipping name : Isocyanates, toxic, n.o.s.  
(m-tolylidene diisocyanate)  
Class : 6.1  
Packing group : III

## SOLITHANE® S 113

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

Labels : Toxic

### IMDG-Code

UN number : UN 2206  
Proper shipping name : ISOCYANATES, TOXIC, N.O.S.  
(m-tolylidene diisocyanate)

Class : 6.1  
Packing group : III  
Labels : 6.1  
EmS Code : F-A, S-A  
Marine pollutant : no

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

Not applicable for product as supplied.

### National Regulations

#### 49 CFR

UN/ID/NA number : UN 2206  
Proper shipping name : ISOCYANATES, TOXIC, N.O.S.  
(m-tolylidene diisocyanate)  
Class : 6.1  
Packing group : III  
Labels : TOXIC  
ERG Code : 155  
Marine pollutant : no

## SECTION 15. REGULATORY INFORMATION

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
m-tolylidene diisocyanate	26471-62-5	100	1111

#### SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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

## SOLITHANE® S 113

Version: 1.2

Revision Date: 06/28/2017

Print Date: 08/01/2017

m-tolylidene diisocyanate 26471-62-5

### California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

m-tolylidene diisocyanate 26471-62-5

Please note that Section 3 of this document lists only the hazardous components required by the specific country or region hazard communication regulations. The chemical identifiers listed in Section 3 are used globally for hazard communication purposes and may not reflect those used for chemical inventory coverage in a particular country or region. The chemical inventory information given in Section 15 of this document applies to the product as a whole and should be used when evaluating inventory compliance.

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

DSL	All components of this product are on the Canadian DSL
AICS	On the inventory, or in compliance with the inventory
NZIoC	Not 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	Not in compliance with the inventory
IECSC	On the inventory, or in compliance with the inventory
TCSI	On the inventory, or in compliance with the inventory
US.TSCA	On TSCA Inventory

## SECTION 16. OTHER INFORMATION

### Further information

### Other Emergency Phone Number

<u>Latin America:</u>	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
<u>Mexico:</u>		+52 555 004 8763

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**SOLITHANE® C 113 300**

Version: 1.1

Revision Date: 06/28/2017

Print Date: 08/01/2017

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name: SOLITHANE® C 113 300

Product Use Description: Used in polyurethane manufacturing.

Company: LANXESS Solutions US Inc.  
199 Benson Road  
Middlebury, CT  
06749  
United States of America (USA)

Telephone: (US) +1 866-430-2775

Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300  
:  
: US : 800-292-5898 (Technical inquiries)

For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by Product Safety Department  
(US) +1 866-430-2775

MSDSRequest@chemtura.com

Recommended use of the chemical and restrictions on use

Recommended use : Used in polyurethane manufacturing.

Restrictions on use : Reserved for industrial and professional use.

**SECTION 2. HAZARDS IDENTIFICATION**

Form	oily liquid
Colour	light yellow
Odour	slight

**GHS Classification**

Not a hazardous substance or mixture.

**GHS label elements**

**SOLITHANE® C 113 300**

Version: 1.1

Revision Date: 06/28/2017

Print Date: 08/01/2017

Other hazards : None

Not a hazardous substance or mixture.

**Carcinogenicity:****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.

**OSHA**

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

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS****Hazardous components**

No hazardous ingredients

**SECTION 4. FIRST AID MEASURES**

- If inhaled : Remove to fresh air.  
If symptoms persist, call a physician.
- In case of skin contact : Wash off with warm water and soap.
- In case of eye contact : Rinse thoroughly with plenty of water, also under the eyelids.  
If symptoms persist, call a physician.
- If swallowed : Do NOT induce vomiting.  
Rinse mouth with water.  
Obtain medical attention.
- Most important symptoms and effects, both acute and delayed : No information available.  
Notes to physician : No information available.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Extinguishing media - large fires  
Alcohol-resistant foam

**SOLITHANE® C 113 300**

Version: 1.1

Revision Date: 06/28/2017

Print Date: 08/01/2017

(on small fires)  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Water spray

Unsuitable extinguishing media : Water spray jet

Specific hazards during firefighting : Burning produces irritant fumes.  
Exposure to decomposition products may be a hazard to health.

Specific extinguishing methods : Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for firefighters : Body covering protective clothing, full "turn-out" gear.  
Self-contained breathing apparatus (EN 133)

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Wear suitable protective equipment.

Environmental precautions : Do not allow contact with soil, surface or ground water.  
Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up : Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labelled containers. Large spills should be collected mechanically (remove by pumping) for disposal.

**SECTION 7. HANDLING AND STORAGE**

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice.  
Avoid contact with skin, eyes and clothing.  
Use with adequate ventilation.

Conditions for safe storage : Keep in a dry, cool place.

Materials to avoid : Strong oxidizing agents

**SOLITHANE® C 113 300**

Version: 1.1

Revision Date: 06/28/2017

Print Date: 08/01/2017

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

No hazardous ingredients

**Personal protective equipment**

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection  
Remarks : Impervious gloves

Eye protection : Safety glasses with side-shields

Skin and body protection : Preventive skin protection

Hygiene measures : Use with adequate ventilation.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : oily liquid

Color : light yellow

Odor : slight

Odour Threshold : No data available

pH : Not applicable

Melting point/range :  
Not applicable

Boiling point/boiling range : No data available

Evaporation rate : No data available

Flash point : 200 - < 250 °C  
Method: closed cup

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 0.96

Density : No data available

**Solubility(ies)**



**SOLITHANE® C 113 300**

Version: 1.1

Revision Date: 06/28/2017

Print Date: 08/01/2017

Water solubility : insoluble  
Solubility in other solvents : No data available  
  
Partition coefficient: n-octanol/water : No data available  
Auto-ignition temperature : No data available  
Thermal decomposition : No data available  
  
Viscosity  
Viscosity, kinematic : No data available

**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 : Hazardous polymerisation does not occur.  
Conditions to avoid : Extremes of temperature and direct sunlight.  
Incompatible materials : Strong oxidizing agents  
Hazardous decomposition products : Carbon oxides

**SECTION 11. TOXICOLOGICAL INFORMATION****Carcinogenicity****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.

**OSHA**

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

**SOLITHANE® C 113 300**

Version: 1.1

Revision Date: 06/28/2017

Print Date: 08/01/2017

**Aspiration toxicity**

**Product:**

No aspiration toxicity classification

**Further information**

**Product:**

Remarks: There is no data available for this product.

---

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity effects**

Toxicity to fish (Product) : Remarks:  
No data available

**Elimination information (persistence and degradability)**

Bioaccumulation (Product) : Remarks:  
No data available

Mobility (Product) : Remarks:  
No data available

Biodegradability (Product) : Remarks:  
No data available

**Ecotoxicology Assessment**

Results of PBT assessment (Product)

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological information (Product) : There is no data available for this product.

---

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

Waste from residues : Dispose of waste material in compliance with all federal, state, and local regulations.

**SOLITHANE® C 113 300**

Version: 1.1

Revision Date: 06/28/2017

Print Date: 08/01/2017

**SECTION 14. TRANSPORT INFORMATION**

**International Regulations**

**UNRTDG**

Not regulated as a dangerous good

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

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.

**National Regulations**

**49 CFR**

Not regulated as a dangerous good

**SECTION 15. REGULATORY INFORMATION**

**WHMIS Classification** : : Not Rated

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

**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA304 Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**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.

**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.

## SOLITHANE® C 113 300

Version: 1.1

Revision Date: 06/28/2017

Print Date: 08/01/2017

Please note that Section 3 of this document lists only the hazardous components required by the specific country or region hazard communication regulations. The chemical identifiers listed in Section 3 are used globally for hazard communication purposes and may not reflect those used for chemical inventory coverage in a particular country or region. The chemical inventory information given in Section 15 of this document applies to the product as a whole and should be used when evaluating inventory compliance.

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

<b>DSL</b>	All components of this product are on the Canadian DSL
<b>AICS</b>	On the inventory, or in compliance with the inventory
<b>NZIoC</b>	Not in compliance with the inventory
<b>ENCS</b>	On the inventory, or in compliance with the inventory
<b>KECI</b>	On the inventory, or in compliance with the inventory
<b>PICCS</b>	On the inventory, or in compliance with the inventory
<b>IECSC</b>	On the inventory, or in compliance with the inventory
<b>TCSI</b>	On the inventory, or in compliance with the inventory
<b>US.TSCA</b>	On TSCA Inventory

### SECTION 16. OTHER INFORMATION

#### Further information

#### Other Emergency Phone Number

<u>Latin America:</u>	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
<u>Mexico:</u>		+52 555 004 8763

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET  
SOLITHANE® S 113



Version 2.0  
Revision Date: 07/09/2020  
Date of last issue: 09/04/2018  
Date of first issue: 12/05/2014

SECTION 1. IDENTIFICATION

Product name: SOLITHANE® S 113

**Synonyms:** Polyurethane prepolymer  
**Company:** LANXESS Solutions US Inc.  
2 Armstrong Road  
Shelton, CT  
06484  
United States of America (USA)  
Telephone: (US) +1 888-430-2775

**Emergency telephone num-ber:** CHEMTREC  
(24 hours) 800-424-9300  
US: 800-292-5898 (Technical Inquiries)  
For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

**Prepared by** Product Safety Department  
(US) +1 888-430-2775  
MSDSRequests@lanxess.com

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

**Restrictions on use** : Polymer  
: Reserved for industrial and professional use.

SECTION 2. HAZARDS IDENTIFICATION

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

**Acute toxicity (inhalation)** : Category 2

**Respiratory sensitisation** : Category 1

**Skin sensitisation** : Category 1

**Carcinogenicity** : Category 2

**GHS label elements**  
Hazard pictograms



SAFETY DATA SHEET  
SOLITHANE® S 113



Version 2.0  
Revision Date: 07/09/2020  
Date of last issue: 09/04/2018  
Date of first issue: 12/05/2014

**Signal word** : Danger  
**Hazard statements** : H317 May cause an allergic skin reaction.  
H330 Fatal if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H351 Suspected of causing cancer.

**Precautionary statements**

**Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
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/ protective clothing/ eye protection/ face protection.  
P284 Wear respiratory protection.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P363 Wash contaminated clothing 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

**Substance / Mixture** : Substance  
**Substance name** : Polyurethane prepolymer

**Hazardous components**

Chemical name	CAS-No.	Concentration (% w/w)
m-tolylidene diisocyanate	26471-62-5	>= 5 - < 10

SAFETY DATA SHEET  
SOLITHANE® S 113



Version 2.0      Revision Date: 07/09/2020      SDS Number: 400000002/31      Date of last issue: 09/04/2018      Date of first issue: 12/05/2014

SECTION 4. FIRST AID MEASURES

- If inhaled
  - Remove to fresh air.
  - Give oxygen or artificial respiration if needed.
  - Get medical attention immediately
- In case of skin contact
  - Remove contaminated clothing and shoes.
  - Wash off with soap and plenty of water.
  - Obtain medical attention.
- In case of eye contact
  - Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
  - If symptoms persist, call a physician.
- If swallowed
  - Get medical attention immediately
- Most important symptoms and effects, both acute and delayed
  - Lachrymation
  - Breathing difficulties
  - sensitising effects
- Protection of first-aiders
  - First Aid responders should pay attention to self-protection and use the recommended protective clothing
  - If potential for exposure exists refer to Section 8 for specific personal protective equipment
- Notes to physician
  - Oxygen, if needed.
  - For specialist advice physicians should contact the Poisons Information Service.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media
  - Water spray
  - Dry chemical
- Specific hazards during fire-fighting
  - Burning produces irritant fumes
  - Exposure to decomposition products may be a hazard to health.
- Further information
  - Fight fire with normal precautions from a reasonable distance. Keep away from fire, sparks and heated surfaces.
  - Use water spray to cool unopened containers.
  - Do not allow uncontrolled discharge of product into the environment.
- Special protective equipment for firefighters
  - Wear full protective clothing and self contained breathing apparatus

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures
  - Evacuate personnel to safe areas.
  - Wear suitable protective equipment

3 / 13

SAFETY DATA SHEET  
SOLITHANE® S 113



Version 2.0      Revision Date: 07/09/2020      SDS Number: 400000002/31      Date of last issue: 09/04/2018      Date of first issue: 12/05/2014

- Environmental precautions
  - Do not allow contact with soil, surface or ground water.
  - Do not flush into surface water or sanitary sewer system.
- Methods and materials for containment and cleaning up
  - Prevent further leakage or spillage if safe to do so.
  - Ventilate the area.
  - Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
  - Pick up and transfer to properly labelled containers.
  - Flush with plenty of water.
  - Do not flush into surface water or sanitary sewer system.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling
  - Handle in accordance with good industrial hygiene and safety practice.
  - Avoid contact with skin, eyes and clothing
  - Use only with adequate ventilation.
  - In case of insufficient ventilation, wear suitable respiratory equipment.
  - Open drum carefully as content may be under pressure.
  - Allergic reactions may develop after inhalation of low concentrations, also several hours after exposure. Regular medical checks, including lung function, are recommended for long term and repeated use of isocyanates.
- Conditions for safe storage
  - Keep container tightly closed.
  - Keep in a dry, cool and well-ventilated place.
  - Keep under nitrogen.
  - Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.
- 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
m-tolylidene diisocyanate	26471-62-5	C	0.02 ppm 0.14 mg/m <sup>3</sup>	OSHA Z-1
		TWA	0.005 ppm	ACGIH
		STEL	0.02 ppm	ACGIH
		C	0.14 mg/m <sup>3</sup>	OSHA Z-1
		TWA	0.005 ppm	OSHA P0
		STEL	0.02 ppm	OSHA P0
		TWA	0.005 ppm	OSHA P0
			0.04 mg/m <sup>3</sup>	

4 / 13

# SAFETY DATA SHEET

## SOLITHANE® S 113



Version: 2.0  
Revision Date: 07/09/2020  
SDS Number: 400000002731  
Date of last issue: 09/04/2018  
Date of first issue: 12/05/2014

STEL	0.02 ppm 0.15 mg/m <sup>3</sup>	OSHA P0
TWA (inhalable fraction and vapor)	0.001 ppm	ACGIH
STEL (inhalable fraction and vapor)	0.005 ppm	ACGIH

### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
m-tolylidene diisocyanate	26471-62-5	toluene diamine	Urine	End of shift	5 µg/g creatinine	ACGIH BEI

### Engineering measures

- Maintain air concentrations below occupational exposure standards.
- Ensure that extracted air cannot be returned to the workplace through the ventilation system.
- Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protective equipment

- Respiratory protection** : In the case of vapour formation use a respirator with an approved filter.

Respirator with combination filter for vapour/particulate

- Filter type** : Filter type AB-P
- Combined particulates, inorganic gas/vapour and organic vapour type

### Hand protection

- Material** : Nitrile rubber
- Break through time** : > 480 min
- Glove thickness** : 0.4 - 0.6 mm

### Remarks

- Before removing gloves clean them with soap and water. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

### Eye protection

- Safety glasses with side-shields or Safety goggles

### Skin and body protection

- Impervious clothing

### Hygiene measures

- Purge open drums with nitrogen before resealing. Allergic reactions may develop after inhalation of low concentrations.

# SAFETY DATA SHEET

## SOLITHANE® S 113



Version: 2.0  
Revision Date: 07/09/2020  
SDS Number: 400000002731  
Date of last issue: 09/04/2018  
Date of first issue: 12/05/2014

trations, also several hours after exposure. Regular medical checks, including lung function, are recommended for long term and repeated use of isocyanates.  
Wash hands before breaks and at the end of workday.  
Handle in accordance with good industrial hygiene and safety practice.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: light yellow
Odour	: pungent
Odour Threshold	: No data available
pH	: Not applicable
Melting point/range	: Not applicable
Boiling point/boiling range	: No data available
Flash point	: 302 - 347 °F / 150 - 175 °C
Evaporation rate	: Method: closed cup
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: 1.073
Density	: No data available
Solubility(ies)	: No data available
Water solubility	: No data available
Solubility in other solvents	: soluble
Solvent: Tetrahydrofuran	: soluble
Solvent: Dimethylformamide	: No data available
Partition coefficient: n-octanol/water	: No data available

**SAFETY DATA SHEET**  
**SOLITHANE® S 113**

Version 2.0      Revision Date: 07/09/2020      Date of last issue: 09/04/2018  
SDS Number: 40000002731      Date of first issue: 12/05/2014

- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Self-Accelerating decomposition temperature (SADT) : Method: No information available.
- Viscosity : No data available
- Viscosity, dynamic : No data available
- Viscosity, kinematic : No data available
- Oxidizing potential : No information available.
- Molecular weight : No data available

**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 : Hazardous polymerisation does not occur.
- Conditions to avoid : Exposure to moisture
- Incompatible materials : Alcohols  
Strong oxidizing agents  
Water
- Hazardous decomposition products : Carbon oxides  
Nitrogen oxides (NOx)  
Hydrocarbons  
Isocyanates

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

- Inhalation
- Eye contact
- Skin contact
- Skin Absorption

**Acute toxicity**

**Product:**

- Acute inhalation toxicity : Acute toxicity estimate: 1.11 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

**SAFETY DATA SHEET**  
**SOLITHANE® S 113**

Version 2.0      Revision Date: 07/09/2020      Date of last issue: 09/04/2018  
SDS Number: 40000002731      Date of first issue: 12/05/2014

**Components:**

- m-tolylidene diisocyanate:**
  - Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
  - Acute inhalation toxicity : LC50 (Rat): 0.1 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour
  - Acute dermal toxicity : LD50 (Rabbit): > 9.400 mg/kg

**Skin corrosion/irritation**

**Components:**

- m-tolylidene diisocyanate:**
  - Species : Rabbit
  - Result : Severe skin irritation

**Serious eye damage/eye irritation**

**Components:**

- m-tolylidene diisocyanate:**
  - Species : Rabbit
  - Result : Risk of serious damage to eyes.

**Respiratory or skin sensitisation**

**Components:**

- m-tolylidene diisocyanate:**
  - Species : Guinea pig
  - Assessment : May cause sensitisation by skin contact.
  - Result : Causes sensitisation.

**Carcinogenicity**

**IARC**

- Group 2B: Possibly carcinogenic to humans
- m-tolylidene diisocyanate (Toluene diisocyanates) 26471-62-5

**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**

- Reasonably anticipated to be a human carcinogen
- m-tolylidene diisocyanate (Toluene Diisocyanates) 26471-62-5

**Further information**

**Product:**

- Remarks : The product itself has not been tested



SAFETY DATA SHEET  
SOLITHANE® S 113



Version: 2.0  
Revision Date: 07/09/2020  
SDS Number: 40000002731  
Date of last issue: 09/04/2018  
Date of first issue: 12/05/2014

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

m-tolylidene diisocyanate:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 147 mg/l  
Exposure time: 48 h  
LC50 (Oncorhynchus mykiss (rainbow trout)): 133 mg/l  
Exposure time: 96 h  
Toxicity to daphnia and other aquatic invertebrates : LC50 (Palaeomonetes vulgaris (Grass shrimp)): > 508 mg/l  
Exposure time: 48 h  
EC50 (Daphnia magna (Water flea)): 12.5 mg/l  
Exposure time: 48 h

Toxicity to algae

EC50 (Chlorella vulgaris (Fresh water algae)): 4,300 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

NOEC (Daphnia magna (Water flea)): 1.1 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211  
Remarks: Possible decomposition products in case of hydrolysis are:  
Diaminotoluene (TDA)

Persistence and degradability

Product:

Biodegradability : Result: No data available

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Mobility in soil

Product:

Mobility : Remarks: No data available

Other adverse effects

Product:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological information

: There is no data available for this product.

SAFETY DATA SHEET  
SOLITHANE® S 113



Version: 2.0  
Revision Date: 07/09/2020  
SDS Number: 40000002731  
Date of last issue: 09/04/2018  
Date of first issue: 12/05/2014

Information

The product itself has not been tested.  
The following information is applicable to a component of this material.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with local and national regulations.  
Waste must be classified and labelled prior to recycling or disposal.  
Do not contaminate ponds, waterways or ditches with chemical or used container.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UNID No. : UN 2078  
Proper shipping name : Toluene diisocyanate  
Class : 6.1  
Packing group : II  
Labels : Toxic

IMDG-Code

UN number : UN 2078  
Proper shipping name : TOLUENE DIISOCYANATE

Class

Packing group : 6.1  
Labels : II  
EmS Code : F-A, S-A  
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not applicable for product as supplied.

National Regulations

49 CFR

UN/IDNA number : UN 2078  
Proper shipping name : Toluene diisocyanate

Class

Packing group : 6.1  
Labels : II  
ERG Code : TOXIC  
Marine pollutant : 156  
no

## SAFETY DATA SHEET

SOLITHANE® S 113

Version 2.0 Revision Date: 07/03/2020 SDS Number: 400000002731 Date of last issue: 09/04/2018 Date of first issue: 12/05/2014

### 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

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

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
m-tolylidene diisocyanate	26471-62-5	100	1111

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Components	CAS-No.	Component TPQ (lbs)
------------	---------	---------------------

SARA 311/312 Hazards

Acute toxicity (any route of exposure)  
Respiratory or skin sensitisation  
Carcinogenicity

#### SARA 313

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

m-tolylidene diisocyanate 26471-62-5 9 %

#### California Prop. 65

WARNING: This product can expose you to chemicals including m-tolylidene diisocyanate, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### California List of Hazardous Substances

m-tolylidene diisocyanate 26471-62-5

#### California Permissible Exposure Limits for Chemical Contaminants

m-tolylidene diisocyanate 26471-62-5

Please note that Section 3 of this document lists only the hazardous components required by the specific country or region hazard communication regulations. The chemical identifiers listed in Section 3 are used globally for hazard communication purposes and may not reflect those used for chemical inventory coverage in a particular country or region. The chemical inventory information given in Section 15 of this document applies to the product as a whole and should be used when evaluating inventory compliance.

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

DSL : All components of this product are on the Canadian DSL  
AICS : On the inventory, or in compliance with the inventory  
NZIsC : Not in compliance with the inventory

## SAFETY DATA SHEET

SOLITHANE® S 113

Version 2.0 Revision Date: 07/09/2020 SDS Number: 400000002731 Date of last issue: 09/04/2018 Date of first issue: 12/05/2014

### ENCS

: On the inventory, or in compliance with the inventory

: On the inventory, or in compliance with the inventory

: Not in compliance with the inventory

: On the inventory, or in compliance with the inventory

: On the inventory, or in compliance with the inventory

: All substances listed as active on the TSCA inventory

### US TSCA

#### TSCA list

No substances are subject to a Significant New Use Rule.

The following substance(s) is/are subject to TSCA 12(b) export notification requirements: m-tolylidene diisocyanate 26471-62-5

### SECTION 16. OTHER INFORMATION

#### Further information

#### Other Emergency Phone Number

Latin America:	Brazil	+55 11 3197 5891
	All other countries	+44 (0) 1235 239 670
Mexico:		+52 55 5004 8763

#### Full text of other abbreviations

ACGIH : USA, ACGIH Threshold Limit Values (TLV)  
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)  
OSHA P0 : USA, OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000  
OSHA Z-1 : USA, Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants  
ACGIH / STEL : short-term exposure limit  
ACGIH / TWA : 8-hour, time-weighted average  
ACGIH / STEL : Short-term exposure limit  
OSHA P0 / TWA : 8-hour time weighted average  
OSHA P0 / STEL : Short-term exposure limit  
OSHA Z-1 / C : Ceiling

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EMS - Emergency

SAFETY DATA SHEET  
SOLITHANE® S 113



Version	Revision Date:	SDS Number:	Date of last issue:
2.0	07/09/2020	40000002731	09/04/2018
			Date of first issue: 12/05/2014

Schedule; ENCS - Existing and New Chemical Substances (Japan); ERX - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNPDTG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 07/09/2020

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN