

**Safety Data Sheet**  
**Syntho-Glass**

Original Release Date: 05/12/2015

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

- 1.1 Product Identifier:** Syntho-Glass  
**1.2 Relevant identified uses:** Intended to repair pipes or for corrosion control.  
**1.3 Supplier details:** NRI  
 3875 Fiscal Court, Ste #100  
 Riviera Beach, FL 33404 U.S.A  
 (561) 683-6992  
 europe@neptuneresearch.com  
**1.4 Emergency Phone Number:** +48 33 488 12 85 (only available during office hours)

**Section 2 Hazards Identification**

**2.1 Classification of the substance or mixture**  
**2.1.1 Regulation (EC) No 1272/2008**

Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

**Classification according to 67/548/EEC**

*Full text of R-phrases: see section 16*

**Hazard Symbols:** Xn - Harmful

**R-code(s):** Carc. cat. 3;R40 - Xn;R48/20 - Xn;R20 - Xi;R36/37/38 - R42/43

**2.2 Label Elements: Labeling according to Regulation (EC) No. 1272/2008 [CLP]**



**Signal Word:** WARNING!

**Hazard Statements:**

- H332 - Harmful if inhaled
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H317 - May cause an allergic skin reaction
- H351 - Suspected of causing cancer
- H335 - May cause respiratory irritation
- H373 - May cause damage to organs through prolonged or repeated exposure

**Precautionary Statement - EU (§28, 1272/2008):**

P260 - Do not breathe the dust/fume/gas/mist/vapors/spray

## Safety Data Sheet Syntho-Glass

P281 - Use personal protective equipment as required  
P308 + P313 - IF exposed or concerned: Get medical advice/attention  
P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing  
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P333 - If skin irritation or rash occurs:  
P201 - Obtain special instructions before use  
P405 - Store locked up

### Section 3 Composition/ Information on Ingredients

#### 3.2 Mixtures

Component	EC No	CAS #	Weight %	Classification according to 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008(CLP)	REACH Registration Number
Glass Wool	Present	65997-17-3	36.2-80.0	-	Not determined	Not determined
4,4- methylenediphenyl diisocyanate (MDI)	Present	101-68-8	5.91-23.65	Xn; R20-48/20 Xi; R36/37/38 Carc.Cat.3; R40 R42/43	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Carc. 2 (H351) STOT SE 3 (H335) STOT RE 2 (H373)	Not determined
Methylenediphenyl diisocyanate	Present	26447-40-5	4.54-18.15	Xn; R20-48/20 Xi; R36/37/38 Carc.Cat.3; R40 R42/43	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Carc. 2 (H351) STOT SE 3 (H335) STOT RE 2 (H373)	Not determined
Methylenediphenyl diisocyanate isomers (Polymeric MDI)	-	9016-87-9	3.62-14.48	-	Not determined	Not determined
Titanium(IV) Oxide	Present	13463-67-7	0.80-3.20	F,R11 (Self-classification)	Not determined	Not determined
Silica, fumed	-	112945-52-5	0.04-0.16	-	Not determined	Not determined
Colloidal silica	Present	7631-86-9	0.03-0.13	-	Not determined	Not determined
Aluminum Hydroxide	Present	21645-51-2	0.04-0.16	-	Not determined	Not determined

Full text of R-phrases: see section 16.

Full text of H- and EUH-phrases: see section 16

**Additional Information:** Substances without a classification are included, because they have established occupational exposure limits

#### Section 4 First Aid Measures

##### 4.1 Description of first aid measures

**Eye Exposure:** Flush with copious amount of water. Preferably lukewarm, for at least 15 minutes, holding eyelids open at all times. Refer individual to a physician or ophthalmologist for immediate follow up.

**Skin Exposure:** Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. Get under safety shower after removing clothing. Seek medical attention if irritation develops after area is washed.

**Inhalation:** Move to an area free from risk of further exposure. Administer oxygen as needed. Obtain medical attention. Asthmatic -type symptoms may develop and may be immediate or delayed up to several hours. Consult physician should this development occur.

**Ingestion:** Do not induce vomiting. Give one to two cups of milk or water to drink. Do not give anything by mouth to an unconscious person, consult a physician.

##### 4.2 Most important symptoms/effects, acute and delayed:

**Symptoms:** Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation..

**Over-exposure signs/symptoms:** Overexposure may aggravate pre-existing disorders of the eyes, skin and respiratory system

##### 4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

**Notes to Physician:** Treat symptomatically.

#### Section 5 Fire Fighting Measures

##### 5.1 Extinguishing Media:

**Suitable extinguishing media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Carbon dioxide (CO2). Dry chemical. Alcohol resistant foam.

**Unsuitable Extinguishing Media:** Product reacts with water.

##### 5.2 Special Hazard Arising from the Substance or Mixture:

**Hazardous combustion products:** At temperatures greater than 400°F polymeric MDI can polymerize and decompose which can cause pressure buildup in closed containers. Explosive rupture is possible.

**Hazardous Decomposition Materials (Under Fire Conditions):** Carbon monoxide. Nitrogen oxides (NOx). HCN. Other toxic gases.

**5.3 Advice for Fire-fighters:** Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required. Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Cool containers exposed to fire with water.

#### Section 6 Accidental Release Measures

##### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training.

## Safety Data Sheet Syntho-Glass

**For emergency responders** Keep people at a distance and stay upwind. Evacuate surrounding areas. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**6.2 Environmental Precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12 for Ecological Information

**6.3 Methods and material for containment and cleaning up**

**For containment:** Prevent further leakage or spillage if safe to do so.

**For cleaning up:** Pick up and transfer to properly labeled containers. Clean up in accordance with all applicable regulations. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

**6.4. Reference to other sections:** See Section 13 for Disposal Considerations.

### Section 7 Handling and Storage

**7.1 Precautions for safe handling:**

**Protective measures:** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Wash face, hands, and any exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not breathe dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wash face, hands and any exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

**7.2 Conditions for safe storage including any incompatibilities:** Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up. Store away from incompatible materials. Keep away from food, drink and animal feeding stuffs. Keep away from water. Keep/store only in original container. Keep in properly labeled containers.

### Section 8 Exposure Controls / Personal Protection

**8.1 Control Parameters**

Component	Exposure limits				
	European Union	United Kingdom	France	Spain	Germany
4,4'-methylenediphenyl diisocyanate (101-68-8)		TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.01 ppm TWA: 0.1 mg/m <sup>3</sup> STEL: 0.02 ppm STEL: 0.2 mg/m <sup>3</sup>	TWA: 0.005 ppm TWA: 0.052 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> Ceiling / Peak: 0.05 mg/m <sup>3</sup> Skin

**Safety Data Sheet**  
**Syntho-Glass**

Methylenediphenyl diisocyanate isomers (Polymeric MDI) 9016-87-9				S*	TWA: 0.05 mg/m <sup>3</sup> Ceiling / Peak: 0.05 mg/m <sup>3</sup> Skin
Titanium(IV) Oxide 13463-67-7		STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	Skin
Colloidal silica 7631-86-9		STEL: 18 mg/m <sup>3</sup> STEL: 7.2 mg/m <sup>3</sup> TWA: 6 mg/m <sup>3</sup> TWA: 2.4 mg/m <sup>3</sup>			TWA: 4 mg/m <sup>3</sup>
Aluminum Hydroxide 21645-51-2		TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>			TWA: 4 mg/m <sup>3</sup> TWA: 1.5 mg/m <sup>3</sup>
<b>Component</b>	<b>Italy</b>	<b>Portugal</b>	<b>Netherlands</b>	<b>Finland</b>	<b>Denmark</b>
Glass Wool 65997-17-3 (36.2-80.0)		TWA: 1 fiber/cm <sup>3</sup> TWA: 5 mg/m <sup>3</sup>		TWA: 5 mg/m <sup>3</sup> TWA: 1 fiber/cm <sup>3</sup>	
4,4- methylenediphenyl diisocyanate (MDI) 101-68-8 ( 5.91-23.65 )		TWA: 0.005 ppm		STEL: 0.035 mg/m <sup>3</sup>	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup>
Titanium(IV) Oxide 13463-67-7(0.80-3.20 )		TWA: 10 mg/m <sup>3</sup>			TWA: 6 mg/m <sup>3</sup>
Colloidal silica 7631-86-9 ( 0.03-0.13 )				TWA: 5 mg/m <sup>3</sup>	
<b>Component</b>	<b>Switzerland</b>	<b>Austria</b>	<b>Poland</b>	<b>Norway</b>	<b>Ireland</b>

**Safety Data Sheet**  
**Syntho-Glass**

4,4- methylenediphenyl diisocyanate (MDI) 101-68-8	Skin STEL: 0.02 mg/m <sup>3</sup> TWA: 0.02 mg/m <sup>3</sup>	STEL 0.01 ppm STEL 0.1 mg/m <sup>3</sup> TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup>	STEL: 0.09 mg/m <sup>3</sup> TWA: 0.03 mg/m <sup>3</sup>	TWA: 0.005 ppm STEL: 0.01 ppm	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.07 mg/m <sup>3</sup>
Methylenediphenyl diisocyanate 26447-40-5		STEL 0.01 ppm STEL 0.1 mg/m <sup>3</sup>	STEL: 0.09 mg/m <sup>3</sup> TWA: 0.03 mg/m <sup>3</sup>	TWA: 0.005 ppm STEL: 0.01 ppm	
Titanium(IV) Oxide 13463-67-7	TWA: 3 mg/m <sup>3</sup>	STEL 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	STEL: 30 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>
Silica, fumed 112945-52-5	TWA: 4 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup>			
Colloidal silica 7631-86-9	TWA: 4 mg/m <sup>3</sup> TWA: 0.3 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup>		TWA: 1.5 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	TWA: 6 mg/m <sup>3</sup> TWA: 2.4 mg/m <sup>3</sup> STEL: 18 mg/m <sup>3</sup> STEL: 7.2 mg/m <sup>3</sup>
Aluminum Hydroxide 21645-51-2	TWA: 3 mg/m <sup>3</sup>	STEL 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup> TWA: 1.2 mg/m <sup>3</sup>		TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>

**8.2 Exposure Controls**

**Appropriate Engineering Controls:** Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.

**8.2.2 Personal Protective Equipment:**

**Eye and Face Protection:** Wear appropriate safety glasses with side shields or chemical goggles as described by OSHA's eye and face protection regulations in 29CFR 1910.133 or European Standard EN166.

**Skin Protection:** The glove material has to be impermeable and resistant to the product. Cover as much of the exposed area as possible, with protective clothing.

**Respiratory Protection:** In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure it is recommended to use a half face piece respirator fitted with organic vapor cartridges.

**Section 9 Physical and Chemical Properties**

- |  |   |
|--|---|
| a) <b>Appearance:</b>                              | Fiberglass cloth coated with viscous water activated resin. |
| b) <b>Odor:</b>                                    | None  |
| c) <b>Odor Threshold:</b>                          | ND  |
| d) <b>pH:</b>                                      | ND  |
| e) <b>Melting Point/freezing point:</b>            | NA  |
| f) <b>Initial boiling point and boiling range:</b> | ND  |
| g) <b>Flash Point:</b>                             | 370°F (187°C)   |
| h) <b>Evaporation rate:</b>                        | ND  |
| i) <b>Flammability (solid, gas);</b>               | ND  |

## Safety Data Sheet Syntho-Glass

j) Upper/lower flammability or explosive Limits:	Lower: N/A	Upper: N/A
k) Vapor Pressure:	0.0003 mmHg	
l) Vapor Density:	ND	
m) Relative Density:	1.22	
n) Solubility:	Insoluble in water	
o) Partition coefficient (n-octanol/water):	ND	
p) Auto-ignition Temperature:	ND	
q) Decomposition Temperature:	ND	
r) Viscosity:	ND	
s) Explosive Properties:	ND	
t) Oxidizing Properties:	ND	

### Section 10 Stability and Reactivity

**10.1 Reactivity:** No reactive under normal conditions.

**10.2 Chemical Stability:** Stable under standard use and storage conditions.

**Hazardous Polymerization:** Contact with moisture, incompatible materials, or temperatures above 400F may cause polymerization.

**10.3 Possibility of Hazardous reactions:** None under normal processing.

**10.4 Conditions to Avoid:** Contamination with water.

**10.5 Incompatible Materials / Chemicals:** Water. Amines. Alcohols. Copper alloys. Aluminum. Bases. Other isocyanates.

**10.6 Hazardous Decomposition Products:** Carbon monoxide. Nitrogen oxides (NOx). Other toxic gases. HCN.

### Section 11 Toxicological Information

#### 11.1 Information on Toxicological Effects

##### Acute Toxicity

**Eye Contact:** Causes serious eye irritation.

**Skin Contact:** Causes skin irritation.

**Inhalation:** Harmful if inhaled.

**Ingestion:** Do not ingest.

The following values are calculated based on chapter 3.1 of the GHS document:

**Oral LD50:** 7,148.00 mg/kg

**Dermal LD50:** 4,909.00 mg/kg

##### Inhalation

**Gas:** 846.00 mg/L

**Mist:** 0.03 mg/L

**Vapor:** 0.45 mg/L

#### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
<b>4,4-methylenediphenyl diisocyanate (MDI)</b>	= 31600 mg/kg ( Rat ) = 9200 mg/kg ( Rat )		= 369 mg/m <sup>3</sup> ( Rat ) 4 h
<b>Methylenediphenyl diisocyanate</b>	> 7400 mg/kg ( Rat )	> 6200 mg/kg ( Rabbit )	= 0.369 mg/L ( Rat ) 4 h
<b>Methylenediphenyl diisocyanate isomers (Polymeric MDI)</b>	= 49 g/kg ( Rat )	> 9400 mg/kg ( Rabbit )	= 490 mg/m <sup>3</sup> ( Rat ) 4 h

**Safety Data Sheet**  
**Syntho-Glass**

<b>Titanium(IV) Oxide</b>	> 10000 mg/kg ( Rat )		
<b>Triethyl phosphate</b>	= 1100 - 1600 mg/kg (Rat) = 1165 mg/kg ( Rat )		
<b>Aluminum Hydroxide</b>	> 5000 mg/kg ( Rat )		
<b>Silica, fumed</b>	= 3160 mg/kg ( Rat )		
<b>Colloidal silica</b>	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 2.2 mg/L ( Rat ) 1 h

**Skin corrosion:** Causes skin irritation.  
**Serious eye damage:** Causes serious eye irritation.  
**Sensitization:** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.  
**Mutagenicity:** Not classified.  
**Carcinogenicity:** Suspected of causing cancer.

Chemical Name	European Union
4,4- methylenediphenyl diisocyanate (MDI)	Carc. 2
Methylenediphenyl diisocyanate	Carc. 2

**Reproductive toxicity:** Not classified.  
**STOT single exposure:** May cause respiratory irritation  
**STOT repeated exposure:** May cause damage to organs through prolonged or repeated exposure.  
**Aspiration hazard:** Not classified  
**Symptoms:** Please see section 4 of this SDS for symptoms.

**Section 12 Ecological Information**

**12.1 Toxicity**

**Ecotoxicity:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Methylenediphenyl diisocyanate	3230: 96 h Skeletonema costatum mg/L EC50		1000: 24 h Daphnia magna mg/L EC50
Colloidal silica	440: 72 h Pseudokirchneriella subcapitata mg/L EC50	5000: 96 h Brachydanio rerio mg/L LC50 static	7600: 48 h Ceriodaphnia dubia mg/L EC50

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability:** Not determined  
**12.3 Bioaccumulative potential:** For Methylenediphenyl diisocyanate: Partition coefficient: 4.5  
**12.4 Mobility in soil:** Not determined  
**12.5 Results of PBT and vPvB Assessment:** Not determined  
**12.6 Other adverse effects:** No further relevant information available.

**Section 13 Disposal Considerations**

**13.1 Waste treatment methods:** Disposal should be in accordance with applicable regional, national and local laws and regulations.  
**Uncleaned or contaminated packaging:** Improper disposal or reuse of this container may be dangerous and illegal.



**Section 14 Transport Information**

**UN Proper Shipping Name (IMDG, RID, ADR, ICAO, IATA):** Not Regulated

**Section 15 Regulatory Information**

**15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture**

**National Regulations:**

**Occupational Illnesses (R-463-3, France)**

Chemical Name	French RG number	Title
Glass Wool 65997-17-3	RG 42	-
4,4- methylenediphenyl diisocyanate (MDI) 101-68-8	RG 62	-
Methylenediphenyl diisocyanate 26447-40-5	RG 62	-
Methylenediphenyl diisocyanate isomers (Polymeric MDI) 9016-87-9	RG 62	-
Colloidal silica 7631-86-9	RG 25	-

**European Union:** Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**International Inventories:** Not determined

**15.2 Chemical Safety Assessment:** No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier

**Section 16 Other Information**

**Full text of R-phrases referred to under sections 2 and 3**

R40 - Limited evidence of a carcinogenic effect

R20 - Harmful by inhalation

R11 - Highly flammable

R42/43 - May cause sensitization by inhalation and skin contact

R36/37/38 - Irritating to eyes, respiratory system and skin

R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation

**Full text of H-Statements referred to under sections 2 and 3**

H332 - Harmful if inhaled

H315 - Causes skin irritation

H319 - Causes serious eye irritation

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

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H335 - May cause respiratory irritation

H373 - May cause damage to organs through prolonged or repeated exposure

**Classification Procedure:** Calculation method

**Key Legend Information:**



## Safety Data Sheet Syntho-Glass

N/A – Not Applicable

ND – Not Determined

ACGIH – American Conference of Governmental Industrial Hygienists

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

NIOSH – National Institute for Occupational Safety and Health

**The information contained herein is based on the data available to us and is believed to be accurate. The data is offered in good faith as typical values and not as product specification. The information in this data sheet was compiled from information supplied by the vendors of the components of this compound. NRI makes no warranty either expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. The recommended industrial hygiene and safe handling procedures are believed to be genuinely applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. NRI assumes no responsibility for injury from the use of the product described herein. The information is intended only to assist in the safe handling of this material.**

### **Revision History:**

Rev03 Revision Date 09/15/2017 Aligned Section Headings and Sub headings to match regulatory requirement. Added Original Release Date.