

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

**1.1. Product identifier**

**Product name:** Scar-Guard SYS  
**Description:** Fiberglass cloth impregnated with water activated resin

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**Recommended use:** Intended to repair pipes or for corrosion control.  
**Uses advised against:** No information available

**1.3. Details of the supplier of the safety data sheet**

**Supplier:** NRI  
3875 Fiscal Court Suite #100  
Riviera Beach, FL 33404. USA.  
1- 561 - 683 - 6992  
**E-mail address:** No information available.

**1.4. Emergency telephone number**

**Emergency telephone number:** 1 800-535-5053

**Section 2. Hazards identification**

**2.1. Classification of the substance or mixture**

**2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP)**

Sensitization/respiratory – Category 1  
Acute toxicity/inhalation – Category 4  
Skin corrosion/irritation – Category 2  
Eye damage/eye irritation – Category 2A  
Skin sensitization - Category 1  
Specific target organ toxicity (Single exposure) – Category 3

**2.2 Label elements**

**Hazard pictograms:**



**Signal word:** Danger

**Hazard statements:**

H334 May cause allergy or asthma or breathing difficulties if inhaled

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation

**Precautionary statement:**

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

P262 Do not get in eyes, on skin, or on clothing.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P302+P352 IF ON SKIN: Wash with plenty of water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

P312 Call a Poison Center/doctor if you feel unwell

**2.3. Other information:** N/A

**Section 3. Composition/ Information on Ingredients**

**3.1. Substances:** Not Applicable

**3.2. Mixtures**

Component	EC No	CAS #	Weight %	EU-GHS Substance Classification (CLP)	REACH Number
Fibrous glass (E-type, continuous filament)	266-046-0	65997-17-3	40 – 65	Skin Corr. 2 (H315) Eye Dam. 1 (H320) Skin Sens. 1 (H317)	Not data available
Surface sizing	-	Not Assigned	< 1	Not Determined	Not data available
Textured polyester filament yarn	-	Not assigned	< 4	Not Determined	Not data available
Diphenylmethane diisocyanate (homopolymer)	609-645-8	39310-05-9	3 – 8	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Acute Tox. 4 (H332) Resp. Sens. 1 (H334) STOT SE 3 (H335)	Not data available
Diphenylmethane diisocyanate (MDI), containing Methylene Bisphenyl isocyanate, (CAS 101-68-8)	247-714-0	26447-40-5	10-25	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Acute Tox. 4 (H332) Resp. Sens. 1 (H334) STOT SE 3 (H335)	Not data available

**Section 4. First Aid Measures**

#### 4.1. Description of first-aid measures

##### First aid measures for accidental

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

**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:** Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

**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.

**Protection of first-aiders:** Use personal protective equipment. Avoid contact with skin, eyes and clothing.

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

**Acute Inhalation:** MDI/ vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, and lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g., fever, and chills) has also been reported. These symptoms can be delayed up to several hours after exposure.

**Acute Eye:** Liquid, aerosols or vapor are irritating and can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. Damage, however is usually reversible.

**Acute Skin contact:** Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

**Acute ingestion:** Irritation and corrosive action can occur in the mouth, stomach tissue and digestive tract. Symptoms can include: sore throat, abdominal pain, nausea, vomiting and diarrhea.

**Over-exposure signs/symptoms:** Overexposure to isocyanates has also been reported to cause lung damage, (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent. Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyperactivity), skin allergies, eczema.

**4.3 Indication of immediate medical attention and special treatment needed:** Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision. This compound is a known skin and pulmonary sensitizer. Treat symptomatically for contact dermatitis or thermal burns, if burned treat as a thermal burn.

### Section 5. Fire Fighting Measures

#### 5.1 Extinguishing media

**Suitable extinguishing media:** Use cold water spray to cool fire-exposed containers to minimize the risk rupture. Carbon dioxide, foam, dry chemical.

**Unsuitable extinguishing media:** Do not use direct water stream. May spread fire. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

#### 5.2 Special hazards arising from the substance or mixture

**Hazardous combustion products:** Hazardous combustion products may include but are not limited to: nitrogen oxides, isocyanates, hydrogen cyanide, carbon monoxide, and carbon dioxide.

**5.3 Advice for firefighters:** As in any fire, wear self-contained breathing apparatus and full protective gear. Use water to keep fire exposed containers cool. Do not use high volume water jet on the fire as this may spread the area of the fire.

## Section 6. Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### 6.1.1 For non-emergency personnel

**Protective equipment:** Use personal protective equipment (See Section 8) to prevent any contamination of skin, eyes and personal clothing. Wear appropriate respirator when ventilation is inadequate.

**Emergency procedures:** No action shall be taken involving any personal risk or without suitable training. Keep people at a distance and stay upwind. Evacuate surrounding areas. Do not touch or walk through spilled material. Provide adequate ventilation

**6.1.2 For emergency responders:** Use appropriate personal protective clothing. Use gloves and safety glasses.

**6.2 Environmental precautions:** Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Avoid release to the environment.

### 6.3. Methods and materials for containment and cleaning up

**6.3.1 For containment:** Cover drains.

**6.3.2 For cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust)

**6.3.3 Other Information:** Clear spills immediately.

**6.4 Reference to other sections:** See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## Section 7. Handling and Storage

### 7.1 Precautions for safe handling

**Handling:** Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Ensure good ventilation/exhaustion at the workplace

**Hygiene measures:** When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing. Wash thoroughly after handling.

**7.2 Conditions for safe storage including any incompatibilities:** Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep away from humidity and water. Keep container tightly closed and sealed until ready for use.

### 7.3 Specific end use(s)

**Exposure scenario:** No information available.

**Other guidelines:** No information available

**Section 8. Exposure Controls / Personal Protection**

**8.1 Control parameters**

Component	Exposure limits		
	ACGIH	NIOSH	OSHA-PELs
4,4'-methylenediphenyl diisocyanate (101-68-8)	0.005 ppm (TWA)	ND	0.02 ppm Ceiling (STEL) 0.2 mg/m <sup>3</sup> Ceiling(STEL)
Fibrous glass	5 mg/m <sup>3</sup> TWA (inhalable) 1 fiber/cm <sup>3</sup> (respirable fraction)	ND	5 mg/m <sup>3</sup> TWA (respirable dust)

Derived no effect level: No information available.

Predicted No Effect Concentration (PNEC): No information available.

**8.2 Exposure controls**

**8.2.1 Appropriate engineering controls:** Ensure adequate ventilation, especially in confined areas.

**8.2.2 Personal protective equipment**

**8.2.2.1 Eye and face protection:** Safety glasses with side-shields. Risk of contact: Tightly fitting safety goggles.

**8.2.2.2 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.

**8.2.2.3 Respiratory protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

**8.3 Environmental exposure controls:** Do not allow material to contaminate ground water system.

**Section 9. Physical and Chemical Properties**

**9.1 Information on basic physical and chemical properties**

Physical State:	Solid
Appearance:	Fiberglass cloth coated with white viscous resin.
Odour:	Pungent
Odour threshold:	No data available

<u>Property</u>	<u>Values</u>	<u>Remarks-Method</u>
pH:	No data available	None known
Melting point range:	No data available	None known
Boiling point/boiling range:	No data available	None known
Flash Point:	370°F (188°C)	None known
Evaporation rate:	No data available	None known
Flammability (solid, gas):	No data available	None known
Upper/lower flammability or explosive limits:	No data available	None known
Vapour pressure:	No data available	None known
Vapour density:	No data available	None known
Relative density:	No data available	None known
Solubilities:	Reacts with water to liberate CO <sub>2</sub> gases	None known
Partition coefficient (n-octanol/water):	No data available	None known

**Safety Data Sheet**  
**Scar-Guard® SYS**

<b>Auto-ignition temperature:</b>	Product is not selfigniting	None known
<b>Decomposition temperature:</b>	No data available	None known
<b>Viscosity:</b>	No data available	None known
<b>Explosive properties:</b>	No data available	None known
<b>Oxidizing properties:</b>	No data available	None known

**9.2 Other information:** No data available

**Section 10. Stability and Reactivity**

**10.1 Reactivity:** No data available

**10.2 Chemical stability:** Stable under normal conditions.

**10.3 Possibility of hazardous reactions:** No dangerous reactions known. Hazardous polymerization can occur. Polymerization can be catalyzed by water and strong bases.

**10.4 Conditions to avoid:** Product can decompose at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems. Pressure build up can be rapid. Avoid moisture. Material reacts with water, releasing carbon dioxide, which can cause pressure build up and rupture of closed containers. Elevated temperatures accelerate this reaction.

**10.5 Incompatible materials:** Avoid contact with acids, water, alcohols, amines, ammonia, bases, moist air, and strong oxidizers. Avoid contact with metals such as aluminum, brass, copper, galvanized metals, tin, zinc. Avoid contact with moist organic absorbants. Reaction with water will generate carbon dioxide and heat. Avoid contact with polyols and other Isocyanates.

**10.6 Hazardous decomposition products:** Hazardous combustion products may include but are not limited to: nitrogen oxides, isocyanates, hydrogen cyanide, carbon monoxide, and carbon dioxide.

**Section 11. Toxicological Information**

**11.1 Information on toxicological effects:**

**Acute toxicity:**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diphenylmethane diisocyanate (MDI) (26447-40-5)	>1,000 mg/kg (rat)	>2,000 mg/kg (rabbits)	-

**Skin corrosion/irritation:** Irritant to skin and mucous membranes.

**Serious eye damage/irritation:** Irritating effect.

**Inhalation:** No known effect.

**Ingestion:** May be harmful if swallowed.

**Respiratory or skin sensitization:** Sensitization possible through inhalation. Sensitization possible through skin contact.

**Germ cell mutagenicity:** Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in-vitro studies; other in-vitro studies were negative. Animal genetic toxicity studies were predominantly negative.

**Other information (about experimental toxicology):**

**Cancer Information:** Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/Polymeric MDI (6mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

**Teratology (Birth Defects):** In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

**Reproductive Effects:** Contains component(s) which have been shown to interfere with reproduction in animal studies. The component(s) is/are triethyl phosphate. The dose required to produce such effects are highly unlikely with the use of this product.

**STOT- single exposure:** No information available.

**STOT- repeated exposure:** No information available.

**Aspiration hazard:** No information available.

**Numerical measures of toxicity:** No specific data

**Delayed and immediate effects and also chronic effects from short and long term exposure:**

Short term exposure: No specific data.

Long term exposure: No specific data

## Section 12. Ecological Information

**12.1 Toxicity:** Based largely or completely on information for MDI and polymeric MDI: the measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50 or EC50 >100 mg/l in the most sensitive species tested). The LC50 in earthworm *Eisenia foetida* is >1000 mg/kg.

**12.2 Persistence and degradability:** Based largely or completely on information for MDI and polymeric MDI: in the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

**12.3 Bioaccumulative potential:** No information available.

**12.4 Mobility in soil:** No information available

**12.5 Results of PBT and vPvB Assessment:** Not Applicable.

**12.6 Other adverse effects:** No further relevant information available

**12.7 Additional information:** Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## Section 13. Disposal Considerations

**13.1 Waste treatment methods:**

**13.1.1 Product / Packaging disposal:** Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**13.1.2 Waste treatment-relevant information:** Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of authorities with jurisdiction.

**13.1.3 Sewage disposal-relevant information:** This product should not be allowed to enter drains, water courses or the soil.

**13.1.4 Other disposal recommendations:** Dispose of waste and residues in accordance with local authority requirements.

## Section 14. Transport Information

**IMDG:** Not Regulated

**ADR:** Not Regulated

**DOT:** Not Regulated

IATA: Not Regulated

## Section 15. Regulatory Information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Inventories

##### SARA Regulations:

**Section 355 (extremely hazardous substance):** None of the ingredients is listed

**TSCA (Toxic Substance Control Act):** All components of this product are on US Inventory. Glass fiber does not meet the classification for a "dangerous substance" according to 67/548/EEC. Glass fiber is considered to be an article as defined in section 710.2 (F) of the U.S. TSCA and, as such, is exempt from section 8(a), 710.2 (f) and 704.5 (a).

##### Proposition 65:

**Chemicals known to cause cancer:** None of the ingredients is listed

**Chemicals known to cause reproductive toxicity to females:** None of the ingredients is listed

**Chemicals known to cause reproductive toxicity to males:** None of the ingredients is listed

**Chemicals known to cause development toxicity:** None of the ingredients is listed

**EPA (Environmental Protection Agency):** None of the ingredients is listed

**OSHA Hazards:** None of the ingredients is listed

**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 H-Statements referred to under sections 2 and 3

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H317 - May cause an allergic skin reaction

H411 - Toxic to aquatic life with long lasting effects

#### Key Legend Information:

N/A – Not Applicable

ND – Not Determined

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.

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