SAFETY DATA SHEET
Poly-Strong™ PS-55 - Part A

1 Identification

· **Product identifier**

· **Trade name: Poly-Strong™ PS-55 (Part A)**
· **Product code:** No other identifiers

· **Recommended use and restriction on use**
· **Recommended use:** Component of a Control Joint Polyurea System
· **Restrictions on use:** For Professional Use Only

· **Details of the supplier of the Safety Data Sheet**

· **Supplier:**

KreteTek Industries, Inc.
66 River Rd
Hudson, New Hampshire 03051
Phone: 1-855-573-8383
Email: support@ghostshield.com

2 Hazard(s) identification

· **Classification of the substance or mixture**

Eye Irrit. 2A H319 Causes serious eye irritation.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS07

· **Signal word:** Warning
· **Hazard statements:**
H319 Causes serious eye irritation.
· **Precautionary statements:**

P264	Wash thoroughly after handling.
P280	Wear eye protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**			
29253-36-9	Isopropylnaphthalene	Asp. Tox. 1, H304	35-50%
25214-63-5	Ethylenediamine, propoxylated	Eye Irrit. 2A, H319	25-45%
7631-86-9	precipitated silica (silica - amorphous)		2-6%
13463-67-7	titanium dioxide		1-6%
1333-86-4	carbon black		0.5-2%

· **Additional information:**
Non-classification as a carcinogen is based on non-respirable form of product.
For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
For the wording of the listed Hazard Statements refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:**
Respiration of particulates is unlikely during normal usage.
Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation is experienced, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
· **Most important symptoms and effects, both acute and delayed:**
Causes eye irritation.
Slight irritant effect on skin and mucous membranes.
Gastric or intestinal disorders when ingested.
Nausea in case of ingestion.
· **Indication of any immediate medical attention and special treatment needed:** Treat symptomatically.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray.
· **For safety reasons unsuitable extinguishing agents:** Water stream.

· **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Use personal protective equipment as required.
· **Environmental precautions**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
· **Methods and material for containment and cleaning up**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
· **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.

7 Handling and storage

· **Handling**
· **Precautions for safe handling:**
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizers, strong acids, strong bases.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Keep containers tightly sealed.
· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
7631-86-9 precipitated silica (silica - amorphous)	
NIOSH REL (USA)	Long-term value: 6 mg/m³
OSHA PEL (USA)	Long-term value: 80 mg/m³
13463-67-7 titanium dioxide	
PEL (USA)	Long-term value: 15* mg/m³ *total dust
REL (USA)	See Pocket Guide App. A
TLV (USA)	Long-term value: 10 mg/m³ withdrawn from NIC
EL (Canada)	Long-term value: 10* 3** mg/m³ *total dust;**respirable fraction; IARC 2B
EV (Canada)	Long-term value: 10 mg/m³ total dust
LMPE (Mexico)	Long-term value: 10 mg/m³ A4
1333-86-4 carbon black	
PEL (USA)	Long-term value: 3.5 mg/m³
REL (USA)	Long-term value: 3.5* mg/m³ *0.1 in presence of PAHs;See Pocket Guide Apps.A+C
TLV (USA)	Long-term value: 3* mg/m³ *inhalable fraction
EL (Canada)	Long-term value: 3 mg/m³ IARC 2B
EV (Canada)	Long-term value: 3.5 mg/m³
LMPE (Mexico)	Long-term value: 3* mg/m³ A3, *fracción inhalable

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

· **Engineering controls:** No relevant information available.

· **Breathing equipment:**
Not required under normal conditions of use.
Use suitable respiratory protective device in case of insufficient ventilation.
For spills, respiratory protection may be advisable.

Use respiratory protection when grinding or cutting material.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

PVC gloves
Neoprene gloves
Nitrile rubber, NBR

· **Eye protection:**

Safety glasses

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **Appearance:**	
Form:	Liquid
Color:	According to product specification
· **Odor:**	Slight
· **Odor threshold:**	Not determined.
· **pH-value:**	10 - 12
· **Melting point/Melting range:**	Not determined.
· **Boiling point/Boiling range:**	>177 °C (>351 °F)
· **Flash point:**	>190 °C (>374 °F) (open cup)
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits**	
Lower:	Not determined.
Upper:	Not determined.
· **Oxidizing properties:**	Not determined.
· **Vapor pressure:**	Not determined.
· **Density:**	
Relative density:	1.02 - 1.05 g/cm³ (8.512 - 8.762 lbs/gal)

Vapor density:	Not determined.
Evaporation rate:	Not determined.
· **Solubility in / Miscibility with Water:**	Slightly soluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity**	
Dynamic:	Not determined.
Kinematic at 40 °C (104 °F):	>20.5 mm²/s
· **Other information**	No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.
· **Chemical stability:** Stable under normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions**
Toxic fumes may be released if heated above the decomposition point.
Reacts with catalysts, oxidizing agents and strong alkali.
Reacts with strong acids.
· **Conditions to avoid** Excessive heat.
· **Incompatible materials** Oxidizers, strong bases, strong acids
· **Hazardous decomposition products**
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **LD/LC50 values that are relevant for classification:** None.
· **Primary irritant effect:**
· **On the skin:** Slight irritant effect on skin and mucous membranes.
· **On the eye:** Irritating effect.

· **IARC (International Agency for Research on Cancer):**		
13463-67-7	titanium dioxide	2B
1333-86-4	carbon black	2B

· **NTP (National Toxicology Program):**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

· **Probable route(s) of exposure:**
Ingestion.
Eye contact.
Skin contact.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:**
Contains known or suspect carcinogens when inhaled. Product is in non-inhalable form and is nonclassifiable as a carcinogen.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity**
Toxic to aquatic life with long lasting effects.

29253-36-9 Isopropylnaphthalene	
LC50	0.74 mg/l (fish)
EC50	0.15 mg/l (daphnia)

· **Persistence and degradability** No relevant information available.
· **Bioaccumulative potential:** May be accumulated in organism
· **Mobility in soil:** No relevant information available.
· **Ecotoxical effects:**
· **Remark:** Very toxic for fish
· **Additional ecological information**
· **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**	
· **DOT**	Not regulated.
· **ADR, IMDG, IATA**	UN3082
· **UN proper shipping name**	
· **DOT**	Not regulated.
· **ADR**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isopropylnaphthalene)
· **IMDG**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isopropylnaphthalene), MARINE POLLUTANT
· **IATA**	Environmentally hazardous substance, liquid, n.o.s. (Isopropylnaphthalene)
· **Transport hazard class(es)**	
· **DOT**	
· **Class**	Not regulated.
· **ADR**	
	
· **Class**	9 (M6) Miscellaneous dangerous substances and articles
· **Label**	9
· **IMDG, IATA**	
	
· **Class**	9 Miscellaneous dangerous substances and articles
· **Label**	9
· **Packing group**	
· **DOT**	Not regulated.
· **ADR, IMDG, IATA**	III
· **Environmental hazards**	
· **Marine pollutant:**	Yes Symbol (fish and tree)

· **Special precautions for user**	Warning: Miscellaneous dangerous substances and articles
· **Danger code (Kemler):**	90
· **EMS Number:**	F-A,S-F
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Not regulated when carried in single or combination packaging containing a net quantity of 5 L or less for liquids or 5 kg or less for solids per the following: DOT: 171.4(c)(2) ADR: SP 375 IMDG: 2.10.2.7 IATA: special provision A197
· **DOT**	
· **Remarks:**	Transport labeling is not required for non-bulk single package shipments by motor vehicle, rail car or aircraft. Bulk packaging consists of a maximum capacity of greater than 450L (119 gallons) for a liquid and a maximum net mass greater than 400kg (882 pounds) for a solid.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act)**
All ingredients are listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

Reference to chemical component(s) listed below are based on unbound respirable particles and are not generally applicable to product as supplied.

13463-67-7	titanium dioxide
1333-86-4	carbon black

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**
None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**
Reference to chemical component(s) listed below are based on unbound respirable particles and are not generally applicable to product as supplied.

13463-67-7	titanium dioxide	2B
1333-86-4	carbon black	2B

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**	
13463-67-7	titanium dioxide
1333-86-4	carbon black

· **Canadian Domestic Substances List (DSL):**
All ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**
LDLo: Lowest Lethal Dose Observed
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Asp. Tox. 1: Aspiration hazard – Category 1

· **Sources**
Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

SAFETY DATA SHEET
Poly-Strong™ PS-55 - Part B

1 Identification

· **Product identifier**

· **Trade name: Poly-Strong™ PS-55 (Part B)**
· **Product code:** No other identifiers

· **Recommended use and restriction on use**
· **Recommended use:** Component of a Control Joint Polyurethane System. Caulking and Sealing.
· **Restrictions on use:** For Professional Use Only

· **Details of the supplier of the Safety Data Sheet**

· **Supplier:**
KreteTek Industries, Inc.
66 River Rd
Hudson, New Hampshire 03051
Phone: 1-855-573-8383
Email: support@ghostshield.com

2 Hazard(s) identification

· **Classification of the substance or mixture**

Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335	May cause respiratory irritation.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS07 GHS08

· **Signal word:** Danger
· **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.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements:**

P260	Do not breathe mist/vapors/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P341	If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
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.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**		
101-68-8	4,4'-methylenediphenyl diisocyanate Resp. Sens. 1, H334; STOT RE 2, H373 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	80-95%
108-32-7	propylene carbonate Eye Irrit. 2A, H319	5-20%

· **Additional information:**
For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
For the wording of the listed Hazard Statements refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:**
Supply fresh air and to be sure to call for a doctor.
Provide oxygen treatment if affected person has difficulty breathing.
In case of irregular breathing or respiratory arrest provide artificial respiration.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately remove any clothing soiled by the product.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation or rash occurs: Get medical advice/attention.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
· **Most important symptoms and effects, both acute and delayed:**
Asthma attacks
Breathing difficulty
Coughing
Dizziness
Allergic reactions
May cause respiratory irritation.
Irritating to eyes, respiratory system and skin.
Gastric or intestinal disorders when ingested.
Nausea in case of ingestion.
· **Danger:**
Danger of impaired breathing.
Harmful if inhaled.
May cause damage to organs through prolonged or repeated exposure.
· **Indication of any immediate medical attention and special treatment needed:**
Contains isocyanates. Consult literature for specific antidotes.
Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.
Medical supervision for at least 48 hours.
If necessary oxygen respiration treatment.
Later observation for pneumonia and pulmonary edema.
Treat skin and mucous membrane with antihistamine and corticoid preparations.
In cases of irritation to the lungs, initial treatment with cortical steroid inhalants.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray.
· **For safety reasons unsuitable extinguishing agents:** Water stream.

· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.
· **Additional information:** Cool endangered receptacles with water spray.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Isolate area and prevent access.
· **Environmental precautions**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Methods and material for containment and cleaning up**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
· **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.

7 Handling and storage

· **Handling**
· **Precautions for safe handling:**
Prevent formation of aerosols.
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
· **Information about protection against explosions and fires:**
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizers, strong acids, strong bases.
· **Further information about storage conditions:**
Keep containers tightly sealed.
Protect from humidity and water.

· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
101-68-8 4,4'-methylenediphenyl diisocyanate	
PEL (USA)	Ceiling limit value: 0.2 mg/m³, 0.02 ppm
REL (USA)	Long-term value: 0.05 mg/m³, 0.005 ppm Ceiling limit value: 0.2* mg/m³, 0.02* ppm *10-min
TLV (USA)	Long-term value: 0.051 mg/m³, 0.005 ppm
EL (Canada)	Long-term value: 0.005 ppm Ceiling limit value: 0.01 ppm Skin; S
EV (Canada)	Long-term value: 0.005 ppm Ceiling limit value: 0.02 ppm
LMPE (Mexico)	Long-term value: 0.005 ppm

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
· **Engineering controls:** No relevant information available.
· **Breathing equipment:**

Combined Organic Vapor and Particulate Respirator is recommended for use during all processing activities.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Eye protection:**

Safety glasses

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**
No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **Appearance:**	
Form:	Liquid
Color:	Yellow
· **Odor:**	Aromatic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Melting point/Melting range:**	5-20 °C (41-68 °F)
· **Boiling point/Boiling range:**	>200 °C (>392 °F)
· **Flash point:**	>200 °C (>392 °F) (Pensky-Martens Closed Cup)
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits**	
Lower:	Not determined.
Upper:	Not determined.
· **Oxidizing properties:**	Not determined.
· **Vapor pressure at 25 °C (77 °F):**	<0.0001 mm Hg
· **Density:**	
Relative density at 20 °C (68 °F):	1.2 g/cm³ (10.014 lbs/gal)
Vapor density:	Not determined.
Evaporation rate:	Not determined.
· **Solubility in / Miscibility with**	
Water:	Slowly reacts with water.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Other information**	No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.

· **Chemical stability:** Stable under normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions**
Toxic fumes may be released if heated above the decomposition point.
Reacts with alcohols, amines, aqueous acids and alkalis.
Reacts with strong oxidizing agents.
Exothermic reaction.
· **Conditions to avoid**
Moisture.
Excessive heat.
· **Incompatible materials** Oxidizers, strong bases, strong acids
· **Hazardous decomposition products**
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Hydrogen cyanide (prussic acid)
Isocyanate

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	2200 mg/kg (mouse)

· **Primary irritant effect:**
· **On the skin:** Irritant to skin and mucous membranes.
· **On the eye:** Irritating effect.
· **Sensitization:** May cause sensitisation by inhalation and skin contact.

· **IARC (International Agency for Research on Cancer):**
None of the ingredients are listed.

· **NTP (National Toxicology Program):**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

· **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
· **Acute effects (acute toxicity, irritation and corrosivity):**
Harmful if inhaled.
Irritating to eyes, respiratory system and skin.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** May cause respiratory irritation.
· **STOT-repeated exposure:** May cause damage to organs through prolonged or repeated exposure.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity** No relevant information available.
· **Persistence and degradability** No relevant information available.
· **Bioaccumulative potential:** No relevant information available.
· **Mobility in soil:** No relevant information available.
· **Additional ecological information**
· **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	Not regulated.
· **UN proper shipping name**	
· **DOT, ADR, IMDG, IATA**	Not regulated.

· **Transport hazard class(es)**	
· **DOT, ADR, IMDG, IATA**	
· **Class**	Not regulated.
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	Not regulated.
· **Environmental hazards**	
· **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**	
101-68-8	4,4'-methylenediphenyl diisocyanate

· **TSCA (Toxic Substances Control Act)**
All ingredients are listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**		
101-68-8	4,4'-methylenediphenyl diisocyanate	D, CBD

· **IARC (International Agency for Research on Cancer):**
None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**
None of the ingredients are listed.

· **Canadian Domestic Substances List (DSL):**
All ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
LDLo: Lowest Lethal Dose Observed
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· **Sources**
Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.