Safety Data Sheet

Document group:	09-5003-0	**Version number:**	1.00
Issue Date:	08/11/2018	**Supersedes date:**	Initial issue.

This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

SECTION 1: Identification

1.1. Product identifier
3M™ Windo-Weld™ Super Fast Urethane, PN 08609

1.2. Recommended use and restrictions on use

Recommended use
Adhesive, Adhesive/Sealant for Windshields

1.3. Supplier's details

Address:	3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100
Telephone:	080-39143000, contact Product EHS team
E Mail:	productehs.in@mmm.com
Website:	http://solutions.3mindia.co.in

1.4. Emergency telephone number
080-39143000 (Contact hours: 8:00 AM to 5:00 PM)

SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

2.1. Classification of the substance or mixture
Acute Toxicity (oral): Category 5.
Acute Toxicity (inhalation): Category 5.
Serious Eye Damage/Irritation: Category 2A
Skin Corrosion/Irritation: Category 2.
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1.
Reproductive Toxicity: Category 1B.
Carcinogenicity: Category 2.
Specific Target Organ Toxicity (repeated exposure): Category 1.
Acute Aquatic Toxicity: Category 3.
Chronic Aquatic Toxicity: Category 3.

2.2. Label elements
Signal Word
DANGER!

Symbols
Health Hazard |

Pictograms

HAZARD STATEMENTS:

H303 + H333	May be harmful if swallowed or if inhaled.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure: nervous system sensory organs
H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS
General:

P102	Keep out of reach of children.

Prevention:

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P284A	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.

Response:

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.

Storage:

P405	Store locked up.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Other hazards
Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Urethane Polymer	68130-40-5	30 - 60
Carbon black	1333-86-4	10 - 30
Sulfonic Acids, C10-18-Alkane, Ph Esters	70775-94-9	10 - 30
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	91082-17-6	10 - 30
Kaolin, Calcined	92704-41-1	10 - 20
Hydrotreated Light Petroleum Distillates	64742-47-8	1 - 5
Toluene	108-88-3	1 - 5
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	0.1 - 1
Dibutyltin dichloride	683-18-1	0.04

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1 Information on toxicological effects

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable Extinguishing media
DO NOT USE WATER.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition

Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Vacuum or sweep up. Warning: A motor could be an ignition source and cause flammable gases or vapours or dust in the spill area to burn or explode. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Clean up residue. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial/occupational use only. Not for consumer sale or use. Do not use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard. Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidising agents. Store away from amines.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	ACGIH	TWA:0.005 ppm	
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
Carbon black	1333-86-4	ACGIH	TWA(inhalable fraction):3	A3: Confirmed animal

			mg/m3	carcin.
Kerosine (petroleum)	64742-47-8	ACGIH	TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m3	A3: Confirmed animal carcin., SKIN
TIN, ORGANIC COMPOUNDS	683-18-1	ACGIH	TWA(as Sn):0.1 mg/m3;STEL(as Sn):0.2 mg/m3	SKIN, A4: Not class. as human carcin

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Provide ventilated enclosure for heat curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Indirect vented goggles.

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Nitrile rubber.

f this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Nitrile

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Appearance/Odour	Neutral odor Black color

Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point: NA	*No data available.*
Boiling point/Initial boiling point/Boiling range	110 ºC
Flash point	No flash point
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	1.2 % volume
Flammable Limits(UEL)	7.1 % volume
Vapour pressure	2,900 Pa [*Ref Std:*AIR=1]
Vapour density	3.14 [*Ref Std:*AIR=1]
Density	1.205 g/cm3
Relative density	1.2 [*Ref Std:*WATER=1]
Water solubility	Negligible
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	450 ºC
Decomposition temperature	*No data available.*
Viscosity	*No data available.*
Molecular weight	*No data available.*
Volatile organic compounds (VOC)	70 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Percent volatile	5.8 % weight
VOC less H2O & exempt solvents	70 g/l [*Test Method:*calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1 Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Heat.
High shear and high temperature conditions
Sparks and/or flames.
Temperatures above the boiling point.

10.5 Incompatible materials
Amines.
Alcohols.
Water
Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.
Accelerators
Aluminium or magnesium powder and high/shear temperature conditions.
Alkali and alkaline earth metals.
Reactive metals
Reducing agents.
Strong acids.
Strong bases.

Strong oxidising agents.
Combustibles.
Finely divided active metals
Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).

Skin contact
Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact
Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion
May be harmful if swallowed.
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Ocular effects: Signs/symptoms may include blurred or significantly impaired vision. Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Olfactory effects: Signs/symptoms may include decreased ability to detect odours and complete loss of smell. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Additional information:
Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Urethane Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Urethane Polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Sulfonic Acids, C10-18-Alkane, Ph Esters	Dermal	Rat	LD50 > 1,000 mg/kg
Sulfonic Acids, C10-18-Alkane, Ph Esters	Ingestion	Rat	LD50 > 5,000 mg/kg
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	Dermal	Rat	LD50 > 1,055 mg/kg
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	Ingestion	Rat	LD50 > 15,825 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg
Kaolin, Calcined	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Kaolin, Calcined	Ingestion	Rat	LD50 > 2,000 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Hydrotreated Light Petroleum Distillates	Dermal	Rabbit	LD50 > 3,160 mg/kg
Hydrotreated Light Petroleum Distillates	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 3 mg/l
Hydrotreated Light Petroleum Distillates	Ingestion	Rat	LD50 > 5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
P,P'-Methylenebis(phenyl isocyanate)	Ingestion	Rat	LD50 31,600 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	Human and animal	No significant irritation
Carbon black	Rabbit	No significant irritation
Toluene	Rabbit	Irritant
Hydrotreated Light Petroleum Distillates	Rabbit	Mild irritant
P,P'-Methylenebis(phenyl isocyanate)	official classification	Irritant

Serious Eye Damage/Irritation

Name	Species	Value

Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation
Toluene	Rabbit	Moderate irritant
Hydrotreated Light Petroleum Distillates	Rabbit	Mild irritant
P,P'-Methylenebis(phenyl isocyanate)	official classification	Severe irritant

Skin Sensitisation

Name	Species	Value
Toluene	Guinea pig	Not classified
Hydrotreated Light Petroleum Distillates	Guinea pig	Not classified
P,P'-Methylenebis(phenyl isocyanate)	official classification	Sensitising

Respiratory Sensitisation

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	In Vitro	Not mutagenic
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Hydrotreated Light Petroleum Distillates	In Vitro	Not mutagenic
P,P'-Methylenebis(phenyl isocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Hydrotreated Light Petroleum Distillates	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	Ingestion	Not classified for female reproduction	Rat	NOAEL 530 mg/kg/day	1 generation
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	Ingestion	Not classified for development	Rat	NOAEL 530 mg/kg/day	1 generation

Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Hydrotreated Light Petroleum Distillates	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Hydrotreated Light Petroleum Distillates	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Hydrotreated Light Petroleum Distillates	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	Ingestion	liver | kidney and/or bladder	Not classified	Rat	NOAEL 1,490 mg/kg/day	90 days
Carbon black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	auditory system | nervous system | eyes | olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart | liver | kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system | vascular system	Not classified	Human	NOAEL Not available	occupational exposure

Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver | kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks

Aspiration Hazard

Name	Value
Toluene	Aspiration hazard
Hydrotreated Light Petroleum Distillates	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:
GHS Acute 3: Harmful to aquatic life.

Chronic aquatic hazard:
GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Urethane Polymer	68130-40-5		Data not available or insufficient for classification			
Carbon black	1333-86-4		Data not available or insufficient for classification			
Sulfonic Acids, C10-18-Alkane, Ph	70775-94-9	Water flea	Estimated	48 hours	EC50	>100 mg/l

Esters						
Sulfonic Acids, C10-18-Alkane, Ph Esters	70775-94-9	Zebra Fish	Estimated	96 hours	LC50	>100 mg/l
Sulfonic Acids, C10-18-Alkane, Ph Esters	70775-94-9	Green algae	Estimated	72 hours	Effect Concentration 0%	>100 mg/l
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	91082-17-6	Green algae	Experimental	72 hours	EC50	>100 mg/l
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	91082-17-6	Water flea	Experimental	48 hours	EC50	>100 mg/l
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	91082-17-6	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	91082-17-6	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Kaolin, Calcined	92704-41-1	Green algae	Estimated	72 hours	EC50	2,500 mg/l
Kaolin, Calcined	92704-41-1	Water flea	Estimated	48 hours	EC50	>100 mg/l
Kaolin, Calcined	92704-41-1	Zebra Fish	Estimated	96 hours	LC50	>100 mg/l
Kaolin, Calcined	92704-41-1	Green algae	Estimated	72 hours	Effect Concentration 10%	41 mg/l
Kaolin, Calcined	92704-41-1	Rainbow trout	Estimated	30 days	NOEC	>100 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Green Algae	Estimated	72 hours	EC50	1 mg/l
Hydrotreated Light Petroleum	64742-47-8	Rainbow trout	Estimated	96 hours	Lethal Level 50%	2 mg/l

Distillates						
Hydrotreated Light Petroleum Distillates	64742-47-8	Water flea	Estimated	48 hours	Effect Level 50%	1.4 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Green Algae	Estimated	72 hours	No obs Effect Level	1 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Water flea	Estimated	21 days	No obs Effect Level	0.48 mg/l
Toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
Toluene	108-88-3	Fish other	Experimental	96 hours	LC50	6.41 mg/l
Toluene	108-88-3	Green Algae	Experimental	72 hours	EC50	12.5 mg/l
Toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
Toluene	108-88-3	Coho salmon	Experimental	40 days	NOEC	1.39 mg/l
Toluene	108-88-3	Water flea	Experimental	7 days	NOEC	0.74 mg/l
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Green algae	Estimated	72 hours	EC50	>1,640 mg/l
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Water flea	Estimated	24 hours	EC50	>1,000 mg/l
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Zebra Fish	Estimated	96 hours	LC50	>1,000 mg/l
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Green algae	Estimated	72 hours	NOEC	1,640 mg/l
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Water flea	Estimated	21 days	NOEC	10 mg/l
Dibutyltin dichloride	683-18-1	Algae	Experimental	96 hours	EC50	0.043 mg/l
Dibutyltin dichloride	683-18-1	Water flea	Experimental	48 hours	EC50	0.84 mg/l
Dibutyltin dichloride	683-18-1	Ricefish	Experimental	28 days	NOEC	1.8 mg/l
Dibutyltin dichloride	683-18-1	Water flea	Experimental	21 days	NOEC	0.015 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Urethane Polymer	68130-40-5	Data not available-insufficient			N/A	

Carbon black	1333-86-4	Data not available-insufficient			N/A	
Sulfonic Acids, C10-18-Alkane, Ph Esters	70775-94-9	Experimental Biodegradation	28 days	BOD	49 % weight	
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS ONLY	91082-17-6	Experimental Biodegradation	28 days	BOD	49 % weight	
Kaolin, Calcined	92704-41-1	Data not available-insufficient			N/A	
Hydrotreated Light Petroleum Distillates	64742-47-8	Data not available-insufficient			N/A	
Toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	Other methods
Toluene	108-88-3	Experimental Biodegradation	20 days	BOD	80 % weight	
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Estimated Hydrolysis		Hydrolytic half-life	20 hours (t 1/2)	Other methods
Dibutyltin dichloride	683-18-1	Modeled Photolysis		Photolytic half-life (in air)	12.7 hours (t 1/2)	Other methods
Dibutyltin dichloride	683-18-1	Experimental Biodegradation	28 days	CO2 evolution	5.5 % weight	OECD 301B - Modified sturm or CO2

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Urethane Polymer	68130-40-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Sulfonic Acids, C10-18-Alkane, Ph Esters	70775-94-9	Experimental BCF-Carp	36 days	Bioaccumulation factor	212	
Sulfonic Acids, C10-21-Alkane, Ph Esters - DISCLOSE ON EU SDS	91082-17-6	Experimental BCF-Carp	36 days	Bioaccumulation factor	56-212	

ONLY						
Kaolin, Calcined	92704-41-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrotreated Light Petroleum Distillates	64742-47-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	Other methods
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Experimental BCF-Carp	28 days	Bioaccumulation factor	200	OECD 305E - Bioaccumulation flow-through fish test
Dibutyltin dichloride	683-18-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other Adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerised) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

Not hazardous for transportation.

Air Transport (IATA)Regulations
UN No Not applicable
Proper Shipping Name Not applicable
Hazard Classs/Division Not applicable
Subsidiary Risk Not applicable
Packing Group: Not applicable

Marine Transport (IMDG)
UN No Not applicable

Proper Shipping Name Not applicable
Hazard Classs/Division Not applicable
Subsidiary Risk Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

SECTION 15: Regulatory information

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

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the chemical notification requirements of TSCA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

Applicable Environmental, Health and Safety Regulations
Not applicable

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules
Benzene, 1,1'-methylenebis[4-isocyanato-
P,P'-Methylenebis(phenyl isocyanate)
Toluene

SECTION 16: Other information

NFPA Hazard Classification
Health: 2 **Flammability:** 1 **Instability:** 1 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision information:
No revision information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

3M India SDSs are available at http://solutions.3mindia.co.in