Safety Data Sheet

Copyright,2026, 3M Company.
All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document Group:	36-3500-0	**Version Number:**	2.00
Issue Date:	31/08/2026	**Supersedes Date:**	20/08/2021

This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

IDENTIFICATION

1.1. Product identifier
3M™ Scotch-Weld™ Multi-Material Composite Urethane Adhesive DP6310NS

Product Identification Numbers
62-3590-1448-7 62-3590-1450-3 62-3590-3630-8

1.2. Recommended use and restrictions on use

Recommended use
Adhesive

1.3. Supplier's details
ADDRESS: 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor
Telephone: 03-7884 2888
E Mail: 3mmyehsr@mmm.com
Website: www.3M.com.my

1.4. Emergency telephone number
+60 03-7884 2888

This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:

36-3467-2, 36-3464-9

TRANSPORT INFORMATION

This product is a kit that consists of two or more different regulated materials packed in the same outer packaging (ship unit). The transportation classifications of the individual components appear in Section 14 of the attached SDSs.
Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current

regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.
3M Malaysia SDSs are available at www.3M.com.my

Safety Data Sheet

Copyright,2025, 3M Company.
All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document Group:	36-3464-9	**Version Number:**	2.00
Issue Date:	22/01/2025	**Supercedes Date:**	20/08/2021

This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Weld™ Multi-Material Composite Urethane Adhesive DP6310NS, Part A

Product Identification Numbers
62-3690-8530-3 62-3690-9530-2

1.2. Recommended use and restrictions on use

Recommended use
Adhesive, Two part urethane adhesives

For Industrial or Professional use only

1.3. Supplier's details
ADDRESS: 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor
Telephone: 03-7884 2888
E Mail: 3mmyehsr@mmm.com
Website: www.3M.com.my

1.4. Emergency telephone number
+60 03-7884 2888

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Skin Corrosion/Irritation: Category 2.
Serious Eye Damage/Irritation: Category 2.
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1.
Specific Target Organ Toxicity (repeated exposure): Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements
Signal word
Danger

Symbols
Exclamation mark |Health Hazard |

Pictograms

Hazard Statements:

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.
H372	Causes damage to organs through prolonged or repeated exposure: respiratory system.

Precautionary statements

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280E	Wear protective gloves.
P285	In case of inadequate ventilation wear respiratory protection.

Response:

P304 + P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position 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.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

2.3. Other hazards
Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	30 - 50
Urethane Prepolymer	Trade Secret	20 - 40
Fillers	Trade Secret	10 - 30
4,4'-Diisocyanatodiphenylmethane polymer	25686-28-6	1 - 20
Talc	14807-96-6	1 - 10
Treated Silica	68611-44-9	1 - 3

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

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Allergic skin reaction (redness, swelling, blistering, and itching). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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 In case of fire: Use a fire fighting agent suitable for water-reactives such as dry chemical to extinguish.

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
Hydrogen Chloride	During Combustion
Hydrogen Cyanide	During Combustion
Oxides of Nitrogen	During Combustion
Toxic Vapor, Gas, Particulate	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. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. 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. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. 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 with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. 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 breathe dust/fume/gas/mist/vapors/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.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. 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.

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	C.A.S. No.	Agency	Limit type	Additional Comments
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	ACGIH	TWA:0.005 ppm	
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	Malaysia OELs	TWA(8 hours):0.051 mg/m3(0.005 ppm)	
DUST, INERT OR NUISANCE	14807-96-6	Malaysia OELs	TWA (proposed)(respirable particles)(8 hours):3 mg/m3;TWA (proposed)(Inhalable particulate)(8 hours):10 mg/m3	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2 mg/m3	A4: Not class. as human carcin
Talc	14807-96-6	Malaysia OELs	TWA(respirable fraction)(8 hours):2 mg/m3	
Fillers	Trade Secret	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin

ACGIH : American Conference of Governmental Industrial Hygienists
CMRG : Chemical Manufacturer's Recommended Guidelines
Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

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/vapors/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:
Safety Glasses with side shields
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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If 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 - polymer laminate

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 vapors 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	Liquid
Specific Physical Form:	Viscous
Color	White
Odor	Slight Isocyanate
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	*No Data Available*
Flash Point	>=195 ºC [*Test Method:*Tagliabue Closed Cup]
Evaporation rate	<=1 [*Details:*Gels with exposure to humidity.]
Flammability	Not Applicable
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	<=1.3 Pa [@ 25 ºC]
Relative Vapor Density	>=1 [*Ref Std:*AIR=1]
Density	1.288 g/ml
Relative Density	1.288 [*Ref Std:*WATER=1]

Water solubility	Negligible
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
Kinematic Viscosity	1,450 mm2/sec
Volatile Organic Compounds	*No Data Available*
Percent volatile	*No Data Available*
VOC Less H2O & Exempt Solvents	0 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*as supplied]
VOC Less H2O & Exempt Solvents	<=1 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part B]
VOC Less H2O & Exempt Solvents	<=0.1 % [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part B]
Molecular weight	*No Data Available*

Particle Characteristics	*Not Applicable*

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 polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
Water
Strong acids
Strong bases
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 labeling, 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:
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:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

Additional Information:
Persons previously sensitized to isocyanates may develop a cross-sensitization 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	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >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
Urethane Prepolymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Urethane Prepolymer	Ingestion	Rat	LD50 > 5,000 mg/kg
4,4'-Diisocyanatodiphenylmethane polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-Diisocyanatodiphenylmethane polymer	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
4,4'-Diisocyanatodiphenylmethane polymer	Ingestion	Rat	LD50 31,600 mg/kg
Fillers	Dermal	Rabbit	LD50 > 2,000 mg/kg

Fillers	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4.57 mg/l
Fillers	Ingestion	Rat	LD50 > 5,000 mg/kg
Talc	Dermal		LD50 estimated to be > 5,000 mg/kg
Talc	Ingestion		LD50 estimated to be > 5,000 mg/kg
Treated Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Treated Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Treated Silica	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
p,p'-Methylenebis(phenyl isocyanate)	official classification	Irritant
4,4'-Diisocyanatodiphenylmethane polymer	official classification	Irritant
Fillers	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Treated Silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
p,p'-Methylenebis(phenyl isocyanate)	official classification	Severe irritant
4,4'-Diisocyanatodiphenylmethane polymer	official classification	Severe irritant
Fillers	Rabbit	Mild irritant
Talc	Rabbit	No significant irritation
Treated Silica	Rabbit	No significant irritation

Sensitization:

Skin Sensitization

Name	Species	Value
p,p'-Methylenebis(phenyl isocyanate)	Mouse	Sensitizing
4,4'-Diisocyanatodiphenylmethane polymer	Mouse	Sensitizing
Treated Silica	Human and animal	Not classified

Respiratory Sensitization

Name	Species	Value
p,p'-Methylenebis(phenyl isocyanate)	Human	Sensitizing
4,4'-Diisocyanatodiphenylmethane polymer	Human	Sensitizing
Talc	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
p,p'-Methylenebis(phenyl isocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification

4,4'-Diisocyanatodiphenylmethane polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Treated Silica	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
p,p'-Methylenebis(phenyl isocyanate)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
4,4'-Diisocyanatodiphenylmethane polymer	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Treated Silica	Not Specified	Mouse	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
p,p'-Methylenebis(phenyl isocyanate)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
4,4'-Diisocyanatodiphenylmethane polymer	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
Talc	Ingestion	Not classified for development	Rat	NOAEL 1,600 mg/kg	during organogenesis
Treated Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Treated Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Treated Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
p,p'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
4,4'-Diisocyanatodiphenylmethane polymer	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
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
4,4'-Diisocyanatodiphenylmethane polymer	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis | respiratory system	Not classified	Rat	NOAEL 18 mg/m3	113 weeks
Treated Silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

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 labeling, 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:
Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:
Not chronically toxic to aquatic life by GHS criteria.

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	Activated sludge	Analogous Compound	3 hours	EC50	>100 mg/l
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	Green algae	Analogous Compound	72 hours	EC50	>1,640 mg/l
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	Water flea	Analogous Compound	24 hours	EC50	>1,000 mg/l
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	Zebra Fish	Analogous Compound	96 hours	LC50	>1,000 mg/l
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	Green algae	Analogous Compound	72 hours	NOEC	1,640 mg/l
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	Water flea	Analogous Compound	21 days	NOEC	10 mg/l
Urethane Prepolymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Fillers	Trade Secret	African clawed frog	Analogous Compound	96 hours	LC50	1,800 mg/l
Fillers	Trade Secret	Fathead Minnow	Analogous Compound	96 hours	LC50	>680 mg/l
Fillers	Trade Secret	Green algae	Analogous Compound	72 hours	EC50	130 mg/l
Fillers	Trade Secret	Sediment organism	Analogous Compound	22 days	EC50	364.9 mg/l
Fillers	Trade Secret	Water flea	Analogous Compound	48 hours	EC50	>100 mg/l
Fillers	Trade Secret	Fathead Minnow	Analogous Compound	30 days	NOEC	86.7 mg/l
Fillers	Trade Secret	Green algae	Analogous Compound	72 hours	NOEC	18 mg/l
Fillers	Trade Secret	Water flea	Analogous Compound	21 days	NOEC	32 mg/l
Fillers	Trade Secret	Bacteria	Experimental	16 hours	EC50	950 mg/l

Fillers	Trade Secret	Radish	Experimental	23 days	EC50	4,000 mg/kg (Dry Weight)
4,4'-Diisocyanatodiphenylmethane polymer	25686-28-6	Green algae	Estimated	72 hours	EC50	>1,640 mg/l
4,4'-Diisocyanatodiphenylmethane polymer	25686-28-6	Water flea	Estimated	24 hours	EC50	>1,000 mg/l
4,4'-Diisocyanatodiphenylmethane polymer	25686-28-6	Zebra Fish	Estimated	96 hours	LC50	>1,000 mg/l
4,4'-Diisocyanatodiphenylmethane polymer	25686-28-6	Green algae	Estimated	72 hours	NOEL	1,640 mg/l
4,4'-Diisocyanatodiphenylmethane polymer	25686-28-6	Water flea	Estimated	21 days	NOEC	10 mg/l
Talc	14807-96-6	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Treated Silica	68611-44-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Urethane Prepolymer	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Fillers	Trade Secret	Analogous Compound Hydrolysis		Hydrolytic half-life	60 days (t 1/2)	
4,4'-Diisocyanatodiphenylmethane polymer	25686-28-6	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Talc	14807-96-6	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Treated Silica	68611-44-9	Data not availbl-insufficient	N/A	N/A	N/A	N/A

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	Analogous Compound BCF - Fish	28 days	Bioaccumulation Factor	200	OECD305-Bioconcentration
Urethane Prepolymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Fillers	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'-Diisocyanatodiphe	25686-28-6	Estimated BCF - Fish	28 days	Bioaccumulation Factor	200	OECD305-Bioconcentration

nylmethane polymer						
Talc	14807-96-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Treated Silica	68611-44-9	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

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

SECTION 14: Transport Information

Not hazardous for transportation.

Marine Transport (IMDG)

UN Number: None assigned.
Proper Shipping Name: None assigned.
Technical Name: None assigned.
Hazard Class/Division: None assigned.
Subsidiary Risk: None assigned.
Packing Group: None assigned.
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Air Transport (IATA)

UN Number: None assigned.
Proper Shipping Name: None assigned.
Technical Name: None assigned.
Hazard Class/Division: None assigned.
Subsidiary Risk: None assigned.
Packing Group: None assigned.
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying

with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

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 product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

SECTION 16: Other information

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

3M Malaysia SDSs are available at www.3M.com.my

Safety Data Sheet

Copyright,2026, 3M Company.
All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document Group:	36-3467-2	**Version Number:**	2.00
Issue Date:	31/08/2026	**Supersedes Date:**	20/08/2021

This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Weld™ Multi-Material Composite Urethane Adhesive DP6310NS, Part B

Product Identification Numbers
62-3509-1450-3 62-3590-8530-5 62-3590-9530-4

1.2. Recommended use and restrictions on use

Recommended use
Adhesive, Two part urethane adhesives

For Industrial or Professional use only

1.3. Supplier's details
ADDRESS: 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor
Telephone: 03-7884 2888
E Mail: 3mmyehsr@mmm.com
Website: www.3M.com.my

1.4. Emergency telephone number
+60 03-7884 2888

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Not classified as hazardous according to Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

2.2. Label elements
Signal word
Not applicable

Symbols
Not applicable

Pictograms
Not applicable

2.3. Other hazards
None known

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Polyol	Trade Secret	30 - 50
Polyether Polyol	Trade Secret	10 - 30
Talc	14807-96-6	10 - 30
Urethane Prepolymer	Trade Secret	1 - 10
Thickening Agent	Trade Secret	0.1 - 5
Treated Silica	68611-44-9	< 1
Piperazine	110-85-0	< 1
Quartz Silica	14808-60-7	< 1
BHT	128-37-0	< 0.5

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:
Wash with soap and water. If you are concerned, get medical advice.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you are concerned, get medical advice.

4.2. Most important symptoms and effects, both acute and delayed
No critical symptoms or effects. 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
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

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

Hazardous Decomposition or By-Products

Substance	Condition
Aldehydes	During Combustion

Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. 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 handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/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. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from oxidizing agents.

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	C.A.S. No.	Agency	Limit type	Additional Comments
Piperazine and salts, inhalable fraction and vapor, as piperazine	110-85-0	ACGIH	TWA(as piperazine, inhalable fraction & vapor):0.03 ppm	A4: Not class. as human carcin, Dermal/Respiratory Sensitizer
BHT	128-37-0	ACGIH	TWA(inhalable fraction and vapor):2 mg/m3	A4: Not class. as human carcin
BHT	128-37-0	Malaysia OELs	TWA(8 hours):10 mg/m3	
Particulates not Otherwise Classified (PNOC), Inhalable particulate	14807-96-6	Malaysia OELs	TWA (proposed)(respirable particles)(8 hours):3 mg/m3;TWA (proposed)(Inhalable particulate)(8 hours):10 mg/m3	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2 mg/m3	A4: Not class. as human carcin
Talc	14807-96-6	Malaysia OELs	TWA(respirable fraction)(8 hours):2 mg/m3	
Quartz Silica	14808-60-7	Malaysia OELs	TWA(respirable fraction)(8 hours):0.1 mg/m3	
Silica, crystalline, respirable fraction	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.

ACGIH : American Conference of Governmental Industrial Hygienists
CMRG : Chemical Manufacturer's Recommended Guidelines
Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
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/vapors/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:
Safety Glasses with side shields

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.

For prolonged or repeated contact, gloves made from the following material(s) are recommended (breakthrough times are >4 hours): Natural Rubber, Neoprene, Nitrile Rubber

Any glove recommended for prolonged/repeated contact is also suitable for short-term/splash contact.

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 vapors 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	Liquid
Specific Physical Form:	Paste
Color	Dark Green
Odor	Slight Ammoniacal
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point/Freezing point	*Not Applicable*
Boiling point/Initial boiling point/Boiling range	*No Data Available*
Flash Point	>=171.1 ºC [*Test Method:*Closed Cup]
Evaporation rate	*Not Applicable*
Flammability	Not Applicable
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	<= 0.000004 mmHg [@ 68 ºF]
Relative Vapor Density	*Not Applicable*
Density	1.2 g/ml
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	*No Data Available*
Decomposition temperature	*No Data Available*
Kinematic Viscosity	1,910 mm2/sec
Volatile Organic Compounds	*No Data Available*
Percent volatile	*No Data Available*
VOC Less H2O & Exempt Solvents	< 1 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part A]
VOC Less H2O & Exempt Solvents	<=0.1 % [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part A]
VOC Less H2O & Exempt Solvents	< 2 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*as supplied]
Molecular weight	*No Data Available*

Particle Characteristics	*Not Applicable*

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 polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
Strong oxidizing agents

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 labeling, 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:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:
May cause additional health effects (see below).

Additional Health Effects:

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

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	Ingestion		No data available; calculated ATE >5,000 mg/kg

Polyol	Dermal	Rat	LD50 > 2,000 mg/kg
Polyol	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 50 mg/l
Polyol	Ingestion	Rat	LD50 4,600 mg/kg
Talc	Dermal		LD50 estimated to be > 5,000 mg/kg
Talc	Ingestion		LD50 estimated to be > 5,000 mg/kg
Polyether Polyol	Dermal	similar compounds	LD50 > 2,000 mg/kg
Polyether Polyol	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 3.2 mg/l
Polyether Polyol	Ingestion	similar compounds	LD50 > 5,000 mg/kg
Urethane Prepolymer	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Urethane Prepolymer	Ingestion	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Thickening Agent	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.2 mg/l
Thickening Agent	Ingestion	similar compounds	LD50 > 5,000 mg/kg
Thickening Agent	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
Treated Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Treated Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Treated Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Piperazine	Ingestion	Rat	LD50 2,300 mg/kg
BHT	Dermal	Rat	LD50 > 2,000 mg/kg
BHT	Ingestion	Rat	LD50 > 2,930 mg/kg
Quartz Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz Silica	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polyol	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Polyether Polyol	similar compounds	Minimal irritation
Urethane Prepolymer	Professional judgement	No significant irritation
Thickening Agent	similar compounds	No significant irritation
Treated Silica	Rabbit	No significant irritation
Piperazine	Rabbit	Corrosive
BHT	Human and animal	Minimal irritation

Quartz Silica	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Polyol	Rabbit	Mild irritant
Talc	Rabbit	No significant irritation
Polyether Polyol	similar compounds	Mild irritant
Urethane Prepolymer	Professional judgement	No significant irritation
Thickening Agent	similar compounds	Mild irritant
Treated Silica	Rabbit	No significant irritation
Piperazine	similar health hazards	Corrosive
BHT	Rabbit	Mild irritant

Sensitization:

Skin Sensitization

Name	Species	Value
Polyether Polyol	similar compounds	Not classified
Urethane Prepolymer	Professional judgement	Not classified
Thickening Agent	Guinea pig	Not classified
Treated Silica	Human and animal	Not classified
Piperazine	Human and animal	Sensitizing
BHT	Human	Not classified

Respiratory Sensitization

Name	Species	Value
Talc	Human	Not classified
Piperazine	Human	Sensitizing

Germ Cell Mutagenicity

Name	Route	Value
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Polyether Polyol	In Vitro	Not mutagenic
Thickening Agent	In Vitro	Not mutagenic
Thickening Agent	In vivo	Not mutagenic
Treated Silica	In Vitro	Not mutagenic

Piperazine	In vivo	Not mutagenic
Piperazine	In Vitro	Some positive data exist, but the data are not sufficient for classification
BHT	In Vitro	Not mutagenic
BHT	In vivo	Not mutagenic
Quartz Silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Talc	Dermal	Human	Some positive data exist, but the data are not sufficient for classification
Talc	Inhalation	Rat	Carcinogenic
Treated Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
BHT	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	Inhalation	Human and animal	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Talc	Ingestion	Not classified for development	Rat	NOAEL 1,600 mg/kg	during organogenesis
Treated Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Treated Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Treated Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Piperazine	Ingestion	Toxic to female reproduction	Rat	NOAEL 125 mg/kg/day	2 generation
Piperazine	Ingestion	Toxic to male reproduction	Rat	NOAEL 125 mg/kg/day	2 generation
Piperazine	Ingestion	Toxic to development	Rabbit	NOAEL 94 mg/kg/day	during organogenesis
BHT	Ingestion	Not classified for female reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
BHT	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
BHT	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Piperazine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
Piperazine	Ingestion	nervous system	Causes damage to organs	Human and animal	NOAEL not available	therapeutic use

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis	Not classified	Rat	NOAEL 18 mg/m3	113 weeks
Talc	Inhalation	respiratory system	Not classified	Rat	NOAEL 18 mg/m3	113 weeks
Thickening Agent	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Thickening Agent	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Treated Silica	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Treated Silica	Inhalation	silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Piperazine	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,250 mg/kg/day	90 days
Piperazine	Ingestion	eyes	Not classified	Rat	NOAEL 1,250 mg/kg/day	90 days
Piperazine	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,250 mg/kg/day	90 days
BHT	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	28 days
BHT	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 500 mg/kg/day	2 generation
BHT	Ingestion	blood	Not classified	Rat	LOAEL 420 mg/kg/day	40 days
BHT	Ingestion	endocrine system	Not classified	Rat	NOAEL 25 mg/kg/day	2 generation
BHT	Ingestion	heart	Not classified	Mouse	NOAEL 3,480 mg/kg/day	10 weeks
Quartz Silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

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 labeling, 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:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
Polyol	Trade Secret	Golden Orfe	Experimental	96 hours	LC50	>1,000 mg/l
Polyol	Trade Secret	Green algae	Experimental	72 hours	ErC50	>100 mg/l
Polyol	Trade Secret	Water flea	Experimental	48 hours	EC50	>100 mg/l
Polyol	Trade Secret	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Polyether Polyol	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Talc	14807-96-6	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Urethane Prepolymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Thickening Agent	Trade Secret	Green algae	Analogous Compound	72 hours	ErC50	>100 mg/l
Thickening Agent	Trade Secret	Water flea	Analogous Compound	48 hours	EC50	>100 mg/l
Thickening Agent	Trade Secret	Zebra Fish	Analogous Compound	96 hours	LC50	>100 mg/l
Thickening Agent	Trade Secret	Green algae	Analogous Compound	72 hours	NOEC	100 mg/l
Thickening Agent	Trade Secret	Activated sludge	Analogous Compound	3 hours	EC50	>300 mg/l
Piperazine	110-85-0	Activated sludge	Experimental	30 minutes	NOEC	540 mg/l
Piperazine	110-85-0	Bacteria	Experimental	18 hours	NOEC	>1,000 mg/l
Piperazine	110-85-0	Green algae	Experimental	72 hours	EC50	130 mg/l
Piperazine	110-85-0	Medaka	Experimental	96 hours	LC50	>100 mg/l
Piperazine	110-85-0	Water flea	Experimental	48 hours	EC50	21 mg/l
Piperazine	110-85-0	Green algae	Experimental	72 hours	NOEC	34 mg/l
Piperazine	110-85-0	Water flea	Experimental	21 days	NOEC	12.5 mg/l
Quartz Silica	14808-60-7	Green algae	Estimated	72 hours	EC50	440 mg/l
Quartz Silica	14808-60-7	Water flea	Estimated	48 hours	EC50	7,600 mg/l
Quartz Silica	14808-60-7	Zebra Fish	Estimated	96 hours	LC50	5,000 mg/l
Quartz Silica	14808-60-7	Green algae	Estimated	72 hours	NOEC	60 mg/l
Treated Silica	68611-44-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
BHT	128-37-0	Activated sludge	Experimental	3 hours	EC50	>10,000 mg/l
BHT	128-37-0	Green algae	Experimental	72 hours	EC50	>0.4 mg/l
BHT	128-37-0	Water flea	Experimental	48 hours	EC50	0.48 mg/l
BHT	128-37-0	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
BHT	128-37-0	Green algae	Experimental	72 hours	EC10	0.4 mg/l
BHT	128-37-0	Medaka	Experimental	42 days	NOEC	0.053 mg/l
BHT	128-37-0	Water flea	Experimental	21 days	NOEC	0.023 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Polyol	Trade Secret	Experimental Biodegradation	28 days	Carbon dioxide evolution	38 %CO2 evolution/THCO2 evolution	OECD 301B - Mod. Sturm or CO2
Polyether Polyol	Trade Secret	Modeled Biodegradation	28 days	Biological Oxygen Demand	20 %BOD/ThOD	Catalogic™
Talc	14807-96-6	Data not availbl-insufficient	N/A	N/A	N/A	N/A

Urethane Prepolymer	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Thickening Agent	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Piperazine	110-85-0	Experimental Biodegradation	28 days	Biological Oxygen Demand	65 %BOD/ThOD	OECD 301F - Manometric Respiro
Quartz Silica	14808-60-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Treated Silica	68611-44-9	Data not availbl-insufficient	N/A	N/A	N/A	N/A
BHT	128-37-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Polyol	Trade Secret	Experimental BCF - Fish	42 days	Bioaccumulation Factor	≤7	
Polyether Polyol	Trade Secret	Modeled Bioconcentration		Bioaccumulation Factor	2	Catalogic™
Polyether Polyol	Trade Secret	Modeled Bioconcentration		Log of Octanol/H2O part. coeff	-2.6	Episuite™
Talc	14807-96-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Urethane Prepolymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Thickening Agent	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Piperazine	110-85-0	Experimental BCF - Fish	42 days	Bioaccumulation Factor	<=3.9	OECD305-Bioconcentration
Piperazine	110-85-0	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	-1.24	OECD 107 log Kow shke flsk mtd
Quartz Silica	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Treated Silica	68611-44-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
BHT	128-37-0	Experimental BCF - Fish	56 days	Bioaccumulation Factor	1277	OECD305-Bioconcentration

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

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

SECTION 14: Transport Information

Not hazardous for transportation.

Marine Transport (IMDG)

UN Number: None assigned.
Proper Shipping Name: None assigned.
Technical Name: None assigned.
Hazard Class/Division: None assigned.
Subsidiary Risk: None assigned.
Packing Group: None assigned.
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Air Transport (IATA)

UN Number: None assigned.
Proper Shipping Name: None assigned.
Technical Name: None assigned.
Hazard Class/Division: None assigned.
Subsidiary Risk: None assigned.
Packing Group: None assigned.
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

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 new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

SECTION 16: Other information

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to

convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

3M Malaysia SDSs are available at www.3M.com.my