



Safety Data Sheet

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M™ Polyurethane Sealant 540 (Various Colors)

Product Identification Numbers

DS-2729-9107-8 DS-2729-9151-6 DS-2729-9152-4

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

Identified uses

Adhesive

1.3. Details of the supplier of the safety data sheet

ADDRESS: 3M Israel, 91 Medinat Ha'Yehudim Street, Herzeliya 46120
Telephone: 09-961 5000
E Mail: innovation.il@mmm.com
Website: www.3M.com/il

1.4. Emergency telephone number

09-961 5000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

A similar mixture has been tested for eye damage/irritation and the test results do not meet the criteria for classification.

CLASSIFICATION:

Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008**SIGNAL WORD**

Danger

Symbols:

GHS08 (Health Hazard) |

Pictograms**Ingredients:**

Ingredient	C.A.S. No.	EC No.	% by Wt
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	202-966-0	< 1
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate		915-687-0	< 0.1

HAZARD STATEMENTS:

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

PRECAUTIONARY STATEMENTS**Prevention:**

P261A Avoid breathing vapors.

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.**Information required per Regulation (EU) 2020/1149 as regards diisocyanates:**As from 24 August 2023 adequate training is required before industrial or professional use. Further information can be found at feica.eu/Puinfo**2.3. Other hazards**

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.
This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Polyurethane Polymer	Trade Secret	25 - 60	Substance not classified as hazardous

Poly(Vinyl Chloride)	(CAS-No.) 9002-86-2	20 - 40	Substance with a national occupational exposure limit
Plasticizer Mixture	Trade Secret	20 - 40	Substance not classified as hazardous
Reaction mass of ethylbenzene and xylene	(EC-No.) 905-588-0	3 - 7	Acute Tox. 4, H332 Acute Tox. 4, H312 Aquatic Chronic 3, H412 Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373
CALCIUM OXIDE	(CAS-No.) 1305-78-8 (EC-No.) 215-138-9	< 5	EUH071 Skin Corr. 1C, H314 Eye Dam. 1, H318
Titanium Dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5	< 5	Substance with a national occupational exposure limit
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	(EC-No.) 926-141-6	< 3	Asp. Tox. 1, H304 EUH066
P,P'-Methylenebis(phenyl isocyanate)	(CAS-No.) 101-68-8 (EC-No.) 202-966-0	< 1	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 Nota 2,C
Carbon Black	(CAS-No.) 1333-86-4 (EC-No.) 215-609-9	< 0.5	Substance with a national occupational exposure limit

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance.

Please see section 16 for the full text of any H statements referred to in this section

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
CALCIUM OXIDE	(CAS-No.) 1305-78-8 (EC-No.) 215-138-9	(C >= 50%) EUH071 (C >= 50%) Skin Corr. 1C, H314 (10% <= C < 50%) Skin Irrit. 2, H315 (C >= 3%) Eye Dam. 1, H318 (1% <= C < 3%) Eye Irrit. 2, H319 (20% <= C < 50%) STOT SE 3, H335
P,P'-Methylenebis(phenyl isocyanate)	(CAS-No.) 101-68-8 (EC-No.) 202-966-0	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319 (C >= 0.1%) Resp. Sens. 1, H334 (C >= 5%) STOT SE 3, H335

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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 for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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

The most important symptoms and effects based on the CLP classification include:
Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest).

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Hydrogen Cyanide	During Combustion
Oxides of Nitrogen	During Combustion
Oxides of Sulfur	During Combustion

5.3. Advice 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

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 a 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. 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.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not handle until all safety precautions have been read and understood. 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. Use personal protective equipment (gloves, respirators, etc.) 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 amines.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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
CALCIUM OXIDE	1305-78-8	ACGIH	TWA:2 mg/m ³	
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m ³	A3: Confirmed animal carcin.
Titanium Dioxide	13463-67-7	ACGIH	TWA(Respirable nanoscale particles):0.2 mg/m ³ ;TWA(Respirable finescale particles):2.5 mg/m ³	A3: Confirmed animal carcin.
Poly(Vinyl Chloride)	9002-86-2	ACGIH	TWA(respirable fraction):1 mg/m ³	A4: Not class. as human carcin

ACGIH : American Conference of Governmental Industrial Hygienists

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

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. 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 (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

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	Solid
Specific Physical Form:	Paste
Color	Black, Gray, White
Odor	Mild Xylene
Odor threshold	<i>No Data Available</i>
Melting point/freezing point	<i>No Data Available</i>
Boiling point/boiling range	>=136 °C
Flammability	Not Applicable
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Flash Point	No flash point
Autoignition temperature	>=200 °C
Decomposition temperature	<i>No Data Available</i>
pH	substance/mixture is non-soluble (in water)
Kinematic Viscosity	256,410 mm ² /sec

Water solubility	Nil
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Vapor Pressure	<i>Not Applicable</i>
Density	1.17 g/ml
Relative Density	1.17 [Ref Std:WATER=1]
Relative Vapor Density	<i>Not Applicable</i>
Particle Characteristics	<i>Not Applicable</i>

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	<i>No Data Available</i>
Evaporation rate	<i>No Data Available</i>
Molecular weight	<i>No Data Available</i>

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

Amines
Alcohols
Water

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

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

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Prolonged or repeated exposure may cause target organ effects:

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

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	Dermal		No data available; calculated ATE >5,000 mg/kg
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
Plasticizer Mixture	Dermal	Rat	LD50 > 1,000 mg/kg
Plasticizer Mixture	Ingestion	Rat	LD50 > 5,000 mg/kg
Poly(Vinyl Chloride)	Dermal		LD50 estimated to be > 5,000 mg/kg
Poly(Vinyl Chloride)	Ingestion		LD50 estimated to be > 5,000 mg/kg
Reaction mass of ethylbenzene and xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
Reaction mass of ethylbenzene and xylene	Inhalation-Vapor (4	Rat	LC50 29 mg/l

		hours)		
Reaction mass of ethylbenzene and xylene	Ingestion	Rat	LD50 3,523 mg/kg	
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg	
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l	
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg	
CALCIUM OXIDE	Ingestion	Rat	LD50 > 2,500 mg/kg	
CALCIUM OXIDE	Dermal	similar compounds	LD50 > 2,500 mg/kg	
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Ingestion	Rat	LD50 > 15,000 mg/kg	
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Dermal	similar compounds	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	
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg	
Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg	
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg	
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Rat	LD50 3,125 mg/kg	

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Poly(Vinyl Chloride)	Professional judgement	No significant irritation
Reaction mass of ethylbenzene and xylene	Rabbit	Mild irritant
Titanium Dioxide	Rabbit	No significant irritation
CALCIUM OXIDE	Human	Corrosive
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	similar compounds	Mild irritant
P,P'-Methylenebis(phenyl isocyanate)	official classification	Irritant
Carbon Black	Rabbit	No significant irritation
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	Rabbit	Mild irritant
Reaction mass of ethylbenzene and xylene	Rabbit	Mild irritant
Titanium Dioxide	Rabbit	No significant irritation
CALCIUM OXIDE	Rabbit	Corrosive
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	similar compounds	No significant irritation
P,P'-Methylenebis(phenyl isocyanate)	official classification	Severe irritant
Carbon Black	Rabbit	No significant irritation

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Rabbit	Mild irritant
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Skin Sensitization

Name	Species	Value
Titanium Dioxide	Human and animal	Not classified
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	similar compounds	Not classified
P,P'-Methylenebis(phenyl isocyanate)	Mouse	Sensitizing
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Guinea pig	Sensitizing

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
Poly(Vinyl Chloride)	In Vitro	Not mutagenic
Reaction mass of ethylbenzene and xylene	In Vitro	Not mutagenic
Reaction mass of ethylbenzene and xylene	In vivo	Not mutagenic
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
CALCIUM OXIDE	In Vitro	Not mutagenic
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	In Vitro	Not mutagenic
P,P'-Methylenebis(phenyl isocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	Some positive data exist, but the data are not sufficient for classification
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	In vivo	Not mutagenic
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Poly(Vinyl Chloride)	Not Specified	Rat	Some positive data exist, but the data are not sufficient for classification
Reaction mass of ethylbenzene and xylene	Dermal	Rat	Not carcinogenic
Reaction mass of ethylbenzene and xylene	Ingestion	Multiple animal species	Not carcinogenic
Reaction mass of ethylbenzene and xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic
Carbon Black	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Poly(Vinyl Chloride)	Not Specified	Not classified for development	Mouse	NOAEL Not available	during gestation
Reaction mass of ethylbenzene and xylene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Reaction mass of ethylbenzene and xylene	Ingestion	Not classified for development	Mouse	NOAEL Not available	during organogenesis
Reaction mass of ethylbenzene and xylene	Inhalation	Not classified for development	Multiple animal species	NOAEL Not available	during gestation
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,493 mg/kg/day	29 days
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Not classified for development	Rat	NOAEL 209 mg/kg/day	premating into lactation
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Toxic to female reproduction	Rat	NOAEL 804 mg/kg/day	premating into lactation

Lactation

Name	Route	Species	Value
Reaction mass of ethylbenzene and xylene	Ingestion	Mouse	Not classified for effects on or via lactation

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Reaction mass of ethylbenzene and xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
Reaction mass of ethylbenzene and xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Reaction mass of ethylbenzene and xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Reaction mass of ethylbenzene and xylene	Inhalation	eyes	Not classified	Rat	NOAEL 3.5 mg/l	not available
Reaction mass of ethylbenzene and xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Reaction mass of ethylbenzene and xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
Reaction mass of ethylbenzene and xylene	Ingestion	eyes	Not classified	Rat	NOAEL 250 mg/kg	not applicable
CALCIUM OXIDE	Inhalation	respiratory irritation	May cause respiratory irritation	Not available	NOAEL Not available	occupational exposure
Hydrocarbons, C11-C14, n-alkanes, isooalkanes, cyclics, <2% aromatics	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	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
Poly(Vinyl Chloride)	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 0.013 mg/l	22 months
Reaction mass of ethylbenzene and xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
Reaction mass of ethylbenzene and xylene	Inhalation	auditory system	May cause damage to organs through prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
Reaction mass of ethylbenzene and xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Reaction mass of ethylbenzene and xylene	Inhalation	heart endocrine system gastrointestinal tract hematopoietic system muscles kidney and/or bladder respiratory system	Not classified	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
Reaction mass of ethylbenzene and xylene	Ingestion	auditory system	Not classified	Rat	NOAEL 900 mg/kg/day	2 weeks
Reaction mass of ethylbenzene and xylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days
Reaction mass of ethylbenzene and xylene	Ingestion	liver	Not classified	Multiple animal species	NOAEL Not available	
Reaction mass of ethylbenzene and xylene	Ingestion	heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system immune system nervous system respiratory system	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Inhalation	liver	Not classified	Rat	NOAEL 6 mg/l	13 weeks
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Inhalation	kidney and/or bladder	Not classified	Rat	LOAEL 1.5 mg/l	13 weeks
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 6 mg/l	13 weeks
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 100 mg/kg/day	13 weeks
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Ingestion	hematopoietic system eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 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
Carbon Black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	28 days

Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate						
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	gastrointestinal tract liver immune system heart endocrine system hematopoietic system nervous system kidney and/or bladder	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days

Aspiration Hazard

Name	Value
Reaction mass of ethylbenzene and xylene	Aspiration hazard
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	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.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available

Material	CAS #	Organism	Type	Exposure	Test Endpoint	Test Result
Polyurethane Polymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	NA
Plasticizer Mixture	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Poly(Vinyl Chloride)	9002-86-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Reaction mass of ethylbenzene and xylene	905-588-0	Green algae	Analogous Compound	73 hours	ErC50	4.36 mg/l
Reaction mass of ethylbenzene and xylene	905-588-0	Rainbow Trout	Analogous Compound	96 hours	LC50	2.6 mg/l
Reaction mass of ethylbenzene and xylene	905-588-0	Water flea	Analogous Compound	48 hours	EC50	3.82 mg/l
Reaction mass of ethylbenzene and xylene	905-588-0	Green algae	Analogous Compound	73 hours	NOEC	0.44 mg/l
Reaction mass of ethylbenzene and xylene	905-588-0	Rainbow Trout	Analogous Compound	56 days	NOEC	1.3 mg/l
Reaction mass of ethylbenzene and xylene	905-588-0	Water flea	Analogous Compound	7 days	NOEC	0.96 mg/l

3M™ Polyurethane Sealant 540 (Various Colors)

xylene						
Reaction mass of ethylbenzene and xylene	905-588-0	Activated sludge	Analogous Compound	30 minutes	EC50	>198 mg/l
Reaction mass of ethylbenzene and xylene	905-588-0	Redworm	Analogous Compound	56 days	NOEC	42.6 mg/kg (Dry Weight)
Reaction mass of ethylbenzene and xylene	905-588-0	Soil microbes	Analogous Compound	28 days	EC50	>1,000 mg/kg (Dry Weight)
CALCIUM OXIDE	1305-78-8	Common Carp	Experimental	96 hours	LC50	1,070 mg/l
Titanium Dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium Dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium Dioxide	13463-67-7	Fathead Minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium Dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium Dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Green algae	Experimental	72 hours	EL50	>1,000 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Rainbow Trout	Experimental	96 hours	LL50	>1,000 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Water flea	Experimental	48 hours	EL50	>1,000 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Green algae	Experimental	72 hours	NOEL	1,000 mg/l
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Activated sludge	Estimated	3 hours	EC50	>100 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
Carbon Black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Carbon Black	1333-86-4	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Carbon Black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
Carbon Black	1333-86-4	Activated sludge	Experimental	3 hours	NOEC	>800 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-	915-687-0	Green algae	Experimental	72 hours	ErC50	1.68 mg/l

piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate						
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Zebra Fish	Experimental	96 hours	LC50	0.9 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Green algae	Experimental	72 hours	ErC10	0.34 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Water flea	Experimental	21 days	NOEC	1 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Activated sludge	Experimental	3 hours	IC50	>=100 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Polyurethane Polymer	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Plasticizer Mixture	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Poly(Vinyl Chloride)	9002-86-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Reaction mass of ethylbenzene and xylene	905-588-0	Analogous Compound Biodegradation	28 days	Biological Oxygen Demand	94 %BOD/ThOD	OECD 301F - Manometric Respiro
CALCIUM OXIDE	1305-78-8	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Experimental Biodegradation	28 days	Biological Oxygen Demand	69 %BOD/ThOD	OECD 301F - Manometric Respiro
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Estimated Hydrolysis		Hydrolytic half-life	20 hours (t 1/2)	
Carbon Black	1333-86-4	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	38 %removal of DOC	OECD 301E - Modif. OECD Screen
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl	915-687-0	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	68 days (t 1/2)	OECD 111 Hydrolysis func of pH

sebacate						
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12.3. Bioaccumulative potential

Material	Cas No.	Test Type	Duration	Study Type	Test Result	Protocol
Polyurethane Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Plasticizer Mixture	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Poly(Vinyl Chloride)	9002-86-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Reaction mass of ethylbenzene and xylene	905-588-0	Analogous Compound BCF - Fish	56 days	Bioaccumulation Factor	<=25.9	
Reaction mass of ethylbenzene and xylene	905-588-0	Analogous Compound Bioconcentration		Log of Octanol/H ₂ O part. coeff	3.2	
CALCIUM OXIDE	1305-78-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation Factor	9.6	
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Experimental BCF - Fish	28 days	Bioaccumulation Factor	200	OECD305-Bioconcentration
Carbon Black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Analogous Compound BCF - Fish	56 days	Bioaccumulation Factor	<31.4	
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Experimental Bioconcentration		Log of Octanol/H ₂ O part. coeff	2.77	OECD 107 log Kow shke flsk mtd

12.4. Mobility in soil

Material	Cas No.	Test Type	Study Type	Test Result	Protocol
Reaction mass of ethylbenzene and xylene	905-588-0	Analogous Compound Mobility in Soil	Koc	537 l/kg	
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Estimated Mobility in Soil	Koc	34,000 l/kg	Episuite™
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Modeled Mobility in Soil	Koc	7 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Dispose of waste product 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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/CE and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor

EU waste code (product as sold)

080409*	Waste adhesives and sealants containing organic solvents or other dangerous substances
200127*	Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

Not hazardous for transportation.

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	No Data Available	No Data Available	No Data Available
14.2 UN proper shipping name	No Data Available	No Data Available	No Data Available
14.3 Transport hazard class(es)	No Data Available	No Data Available	No Data Available
14.4 Packing group	No Data Available	No Data Available	No Data Available
14.5 Environmental hazards	No Data Available	No Data Available	No Data Available

14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Marine Transport in bulk according to IMO instruments	No Data Available	No Data Available	No Data Available
Control Temperature	No Data Available	No Data Available	No Data Available
Emergency Temperature	No Data Available	No Data Available	No Data Available
ADR Classification Code	No Data Available	No Data Available	No Data Available
IMDG Segregation Code	No Data Available	No Data Available	No Data Available

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

SECTION 15: Regulatory information

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

Carcinogenicity

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>	<u>Regulation</u>
Carbon Black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Carc. 2	Regulation (EC) No. 1272/2008, Table 3.1
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Gr. 3: Not classifiable	International Agency for Research on Cancer
Poly(Vinyl Chloride)	9002-86-2	Gr. 3: Not classifiable	International Agency for Research on Cancer
Titanium Dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Global inventory status

Contact manufacturer 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 material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. 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. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

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Seveso hazard categories, Annex 1, Part 1

None

Seveso named dangerous substances, Annex 1, Part 2

None

Regulation (EU) No 649/2012

No chemicals listed

SECTION 16: Other information

List of relevant H statements

EUH066	Repeated exposure may cause skin dryness or cracking.
EUH071	Corrosive to the respiratory tract.
H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:

Section 02: Label Elements: CLP Supplemental Hazard Statements information was deleted.

Section 03: Composition/ Information of ingredients table information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Mobility in soil information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12: Biocumulative potential information information was modified.

Section 15: Restrictions on manufacture ingredients information information was deleted.

Section 16: Two-column table displaying the unique list of H Codes and statements (std phrses) for all components of the given material. information was modified.

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 Israel SDSs are available at www.3M.com/il