



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Polyurethane Sealant 540 (Various Colors)

MANUFACTURER: 3M

DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

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Product Use:

Intended Use: Sealant

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Urethane Polymer*	Trade Secret	15 - 40
Poly(Vinyl Chloride) Polymer	9002-86-2	20 - 35
Plasticizer Mixture**	Trade Secret	10 - 30
Titanium Dioxide	13463-67-7	< 5
Xylene	1330-20-7	< 5
Calcium Oxide	1305-78-8	1 - 5
Ethylbenzene	100-41-4	< 2
Petroleum Distillate	64742-47-8	< 2
Iron Oxide (Fe ₃ O ₄)	1317-61-9	< 2
Iron Oxide (Fe ₂ O ₃)	1309-37-1	< 2
Carbon Black	1333-86-4	< 0.3

*N.J.T.S. Reg. No. 04499600-6720

**N.J.T.S. Reg. No. 04499600-6866

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: Mild xylene odor

General Physical Form: Solid

Immediate health, physical, and environmental hazards: May cause target organ effects. Contains a chemical or chemicals which can cause cancer.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:

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

May be absorbed following inhalation and cause target organ effects.

Ingestion:

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

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

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

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

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.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
Ethylbenzene	100-41-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical

attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	≥ 200 °C
Flash Point	No flash point
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

6.2. Environmental precautions

Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Collect as much of the spilled material as possible. Clean up residue.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Avoid skin contact. Avoid breathing of vapors. Keep out of the reach of children. For industrial or professional use only.

7.2 STORAGE

Store away from heat. Store out of direct sunlight. Keep container tightly closed. Store away from areas where product may come into contact with food or pharmaceuticals. Store in a cool, dry place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Polyethylene

Polyvinyl Alcohol (PVA)

8.2.3 Respiratory Protection

Avoid breathing of vapors.

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.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
Calcium Oxide	ACGIH	TWA	2 mg/m ³	
Calcium Oxide	OSHA	TWA	5 mg/m ³	
Carbon Black	ACGIH	TWA, inhalable fraction	3 mg/m ³	
Carbon Black	CMRG	TWA	0.5 mg/m ³	
Carbon Black	OSHA	TWA	3.5 mg/m ³	
Ethylbenzene	ACGIH	TWA	20 ppm	
Ethylbenzene	CMRG	TWA	25 ppm	
Ethylbenzene	CMRG	STEL	75 ppm	
Ethylbenzene	OSHA	TWA	435 mg/m ³	
Petroleum Distillate	CMRG	TWA	165 ppm	
Iron Oxide (Fe ₂ O ₃)	ACGIH	TWA, respirable	5 mg/m ³	

Iron Oxide (Fe2O3)	OSHA	fraction TWA, as fume	10 mg/m3	
Kerosine (petroleum)	ACGIH	TWA, as total hydrocarbon vapor, non-aerosol	200 mg/m3	Skin Notation*
Poly(Vinyl Chloride) Polymer	ACGIH	TWA, respirable fraction	1 mg/m3	
Poly(Vinyl Chloride) Polymer	OSHA	TWA, as vinyl chloride monomer	1 ppm	Skin Notation*; 29 CFR 1910.1017
Poly(Vinyl Chloride) Polymer	OSHA	STEL, as vinyl chloride monomer	5 ppm	Skin Notation*; 29 CFR 1910.1017
Titanium Dioxide	ACGIH	TWA	10 mg/m3	
Titanium Dioxide	CMRG	TWA, as respirable dust	5 mg/m3	
Titanium Dioxide	OSHA	TWA, as total dust	15 mg/m3	
Xylene	ACGIH	TWA	100 ppm	
Xylene	ACGIH	STEL	150 ppm	
Xylene	CMRG	TWA	50 ppm	
Xylene	CMRG	STEL	75 ppm	
Xylene	OSHA	TWA	435 mg/m3	

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	Mild xylene odor
General Physical Form:	Solid
Autoignition temperature	>=200 °C
Flash Point	No flash point
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Boiling Point	>=136 °C
Density	1.17 g/ml
Vapor Density	<i>Not Applicable</i>
Vapor Pressure	<i>Not Applicable</i>
Specific Gravity	1.17 [Ref Std: WATER=1]
pH	<i>Not Applicable</i>
Melting point	<i>No Data Available</i>
Solubility in Water	Nil
Evaporation rate	<i>No Data Available</i>
Hazardous Air Pollutants	<=7.1 % weight [Test Method: Calculated]
Kow - Oct/Water partition coef	<i>No Data Available</i>
VOC Less H2O & Exempt Solvents	54 g/l [Test Method: tested per EPA method 24]
VOC Less H2O & Exempt Solvents	4.6 % [Test Method: tested per EPA method 24]
VOC Less H2O & Exempt Solvents	0.45 lb/gal [Test Method: tested per EPA method 24]

Viscosity

>=300000 centipoise [@ 73.4 °F]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Heat

10.2 Materials to avoid

Amines

Alcohols

Water

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

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

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill.

As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material.

Combustion products will include HCl. Facility must be capable of handling halogenated materials.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number	UPC	ID Number	UPC
62-5261-5230-1		62-5261-5231-9	
62-5261-5235-0		62-5261-5236-8	
62-5263-5230-7		62-5263-5231-5	
62-5263-5235-6		62-5263-5236-4	
62-5484-3530-4	000-21200-96278-3	62-5484-3531-2	
62-5484-3930-6	000-21200-56561-8	62-5484-3931-4	
62-5484-3936-3		62-5484-5230-9	00-21200-49054-5
62-5484-5231-7		62-5484-5235-8	00-00000-00000-0
62-5484-5236-6		62-5484-5238-2	00-00000-00000-0
62-5484-8530-9	00-21200-49058-3	62-5484-8531-7	
62-5484-9531-6		62-5485-3530-1	000-21200-96277-6
62-5485-3531-9		62-5485-3535-0	000-00000-00000-0
62-5485-3536-8		62-5485-3930-3	000-21200-56562-5
62-5485-3931-1		62-5485-3935-2	
62-5485-3936-0		62-5485-5230-6	00-21200-41594-4
62-5485-5231-4		62-5485-5235-5	00-00000-00000-0
62-5485-5236-3		62-5485-8530-6	000-21200-49062-0
62-5485-8531-4		62-5485-9530-5	00-21200-45112-6
62-5485-9531-3		62-5486-3530-9	000-21200-96276-9
62-5486-3531-7		62-5486-3930-1	000-21200-96272-1
62-5486-3931-9		62-5486-3936-8	
62-5486-5230-4	00-21200-41595-1	62-5486-5231-2	
62-5486-5235-3	00-00000-00000-0	62-5486-5236-1	
62-5486-8530-4	000-21200-49060-6	62-5486-8531-2	
62-5486-9530-3	00-21200-45190-4	62-5486-9531-1	

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact manufacturer for more information

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Xylene	1330-20-7	< 5
Xylene (Benzene, 1,2-dimethyl-)	1330-20-7	< 5
Xylene (Benzene, 1,3-dimethyl-)	1330-20-7	< 5
Xylene (Benzene, 1,4-dimethyl-)	1330-20-7	< 5

Xylene (Benzene, dimethyl-)	1330-20-7	< 5
Ethylbenzene	100-41-4	< 2

STATE REGULATIONS

Contact manufacturer for more information
CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Ethylbenzene	100-41-4	**Carcinogen

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact manufacturer for more information

INTERNATIONAL REGULATIONS

Contact manufacturer for more information

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 1 Reactivity: 0 Special Hazards: None

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

Revision Changes:

Section 3 and Section 9: General physical form information was modified.

Section 2: Ingredient table was modified.

Section 8: Exposure guidelines ingredient information was modified.

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