Safety Data Sheet

Document Group:	19-0425-9	**Version Number:**	9.01
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SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Weld™ Epoxy Potting Compound/Adhesive DP270 Black, Part A

1.2. Recommended use and restrictions on use

Recommended use
Structural adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Acute Toxicity (dermal): Category 3.
Acute Toxicity (oral): Category 4.
Serious Eye Damage/Irritation: Category 2A.
Skin Corrosion/Irritation: Category 2.
Reproductive Toxicity: Category 2.

2.2. Label elements
Signal word
Danger

Symbols
Skull and crossbones | Exclamation mark | Health Hazard |

Pictograms

Hazard Statements
Toxic in contact with skin.
Harmful if swallowed.
Causes serious eye irritation.
Causes skin irritation.
Suspected of damaging fertility or the unborn child.

Precautionary Statements

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, and eye/face protection.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/attention.
Take off immediately all contaminated clothing and wash it before reuse.
Rinse mouth.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF exposed or concerned: Get medical advice/attention.

Storage:
Store locked up.

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

10% of the mixture consists of ingredients of unknown acute oral toxicity.
10% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
4-Nonylphenol, branched with isomers	84852-15-3	40 - 60 Trade Secret *
4,4'-Methylenebis(2-methylcyclohexylamine)	6864-37-5	15 - 40 Trade Secret *
2-Nonylphenol, branched	91672-41-2	< 10 Trade Secret *
Benzyl Alcohol	100-51-6	1 - 10 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

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. Get medical attention. Wash clothing before reuse.

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

Toxic in contact with skin.

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
Amine Compounds	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	During Combustion
Toxic Vapor, Gas, Particulate	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. 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. 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 metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. 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. Wash contaminated clothing before reuse. 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 acids. 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
Benzyl Alcohol	100-51-6	AIHA	TWA:44.2 mg/m3(10 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
No engineering controls required.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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

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

Appearance	
Physical state	Liquid
Color	Colorless
Odor	Mild Amine, Pungent Odor
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	*No Data Available*
Boiling Point	401 ºF [*Details:*CONDITIONS: @ 760mm Hg (benzyl alcohol)]
Flash Point	> 240 ºF [*Test Method:*Closed Cup]
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	0.1 mmHg [*Details:*CONDITIONS: @ 86F (30C); 13.3mm Hg @ 212F (100C).]
Vapor Density	3.72 [*Ref Std:*AIR=1]
Density	1.0 g/ml
Specific Gravity	1.0 [*Ref Std:*WATER=1]
Solubility in Water	Slight (less than 10%)
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity	12,000 - 15,000 centipoise [*Details:*CONDITIONS: (@ Room Temperature)]
Hazardous Air Pollutants	>=0 % weight [*Test Method:*Calculated]
Molecular weight	*No Data Available*
VOC Less H2O & Exempt Solvents	<= 10 g/l [*Test Method:*tested per EPA method 24] [*Details:*when used as intended with Part B]
VOC Less H2O & Exempt Solvents	<= 1 % [*Test Method:*tested per EPA method 24] [*Details:*when used as intended with Part B]
VOC Less H2O & Exempt Solvents	<= 90 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*as supplied]

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 is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

10.5. Incompatible materials
Strong acids
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:
Toxic in contact with skin. Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

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

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

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	Dermal		No data available; calculated ATE >200 - =1,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
4-Nonylphenol, branched with isomers	Dermal	Rabbit	LD50 > 2,000 mg/kg
4-Nonylphenol, branched with isomers	Ingestion	Rat	LD50 1,531 mg/kg
4,4'-Methylenebis(2-methylcyclohexylamine)	Dermal	Rabbit	LD50 > 200 mg/kg
4,4'-Methylenebis(2-methylcyclohexylamine)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.42 mg/l
4,4'-Methylenebis(2-methylcyclohexylamine)	Ingestion	Rat	LD50 > 320 mg/kg
Benzyl Alcohol	Inhalation-Dust/Mist (4 hours)	Rat	LC50 8.8 mg/l
Benzyl Alcohol	Ingestion	Rat	LD50 1,230 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	In vitro data	Irritant
4-Nonylphenol, branched with isomers	Rabbit	Corrosive
4,4'-Methylenebis(2-methylcyclohexylamine)	Rabbit	Corrosive
Benzyl Alcohol	Multiple animal species	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	similar health hazards	Severe irritant
4-Nonylphenol, branched with isomers	Rabbit	Corrosive
4,4'-Methylenebis(2-methylcyclohexylamine)	Rabbit	Corrosive
Benzyl Alcohol	Rabbit	Severe irritant

Skin Sensitization

Name	Species	Value
4-Nonylphenol, branched with isomers	Guinea pig	Not classified
4,4'-Methylenebis(2-methylcyclohexylamine)	Guinea pig	Not classified
Benzyl Alcohol	Human and animal	Not classified

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
4-Nonylphenol, branched with isomers	In Vitro	Not mutagenic
4-Nonylphenol, branched with isomers	In vivo	Not mutagenic
4,4'-Methylenebis(2-methylcyclohexylamine)	In Vitro	Not mutagenic

Benzyl Alcohol	In vivo	Not mutagenic
Benzyl Alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Benzyl Alcohol	Ingestion	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
4-Nonylphenol, branched with isomers	Ingestion	Not classified for male reproduction	Rat	NOAEL 400 mg/kg/day	28 days
4-Nonylphenol, branched with isomers	Ingestion	Toxic to female reproduction	official classification	NOAEL Not available	
4-Nonylphenol, branched with isomers	Ingestion	Toxic to development	official classification	NOAEL Not available	
4,4'-Methylenebis(2-methylcyclohexylamine)	Ingestion	Not classified for female reproduction	Rat	NOAEL 1.5 mg/kg/day	1 generation
4,4'-Methylenebis(2-methylcyclohexylamine)	Ingestion	Not classified for male reproduction	Rat	NOAEL 1.5 mg/kg/day	1 generation
4,4'-Methylenebis(2-methylcyclohexylamine)	Ingestion	Not classified for development	Rat	NOAEL 45 mg/kg/day	during gestation
Benzyl Alcohol	Ingestion	Not classified for development	Mouse	NOAEL 550 mg/kg/day	during organogenesis

Lactation

Name	Route	Species	Value
4-Nonylphenol, branched with isomers	Ingestion	Rat	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
4,4'-Methylenebis(2-methylcyclohexylamine)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	
Benzyl Alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Benzyl Alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Benzyl Alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4-Nonylphenol, branched with isomers	Ingestion	endocrine system | hematopoietic system | liver	Not classified	Rat	NOAEL 400 mg/kg/day	28 days
4-Nonylphenol, branched with isomers	Ingestion	kidney and/or bladder | heart | bone, teeth, nails,	Not classified	Rat	NOAEL 150 mg/kg/day	90 days

		and/or hair | immune system | muscles | nervous system | respiratory system				
4,4'-Methylenebis(2-methylcyclohexylamine)	Inhalation	endocrine system | hematopoietic system | liver | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 0.048 mg/l	3 months
4,4'-Methylenebis(2-methylcyclohexylamine)	Inhalation	skin	Not classified	Human	NOAEL Not available	occupational exposure
4,4'-Methylenebis(2-methylcyclohexylamine)	Inhalation	heart | gastrointestinal tract | bone, teeth, nails, and/or hair | immune system | muscles | nervous system | eyes | vascular system	Not classified	Rat	NOAEL 0.048 mg/l	3 months
4,4'-Methylenebis(2-methylcyclohexylamine)	Ingestion	muscles	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 5 mg/kg/day	3 months
4,4'-Methylenebis(2-methylcyclohexylamine)	Ingestion	heart | kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 2.5 mg/kg/day	3 months
4,4'-Methylenebis(2-methylcyclohexylamine)	Ingestion	endocrine system | hematopoietic system | liver	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 12 mg/kg/day	3 months
4,4'-Methylenebis(2-methylcyclohexylamine)	Ingestion	gastrointestinal tract | immune system | nervous system | eyes | respiratory system	Not classified	Rat	NOAEL 5 mg/kg/day	3 months
Benzyl Alcohol	Ingestion	endocrine system | muscles | kidney and/or bladder	Not classified	Rat	NOAEL 400 mg/kg/day	13 weeks
Benzyl Alcohol	Ingestion	nervous system | respiratory system	Not classified	Mouse	NOAEL 645 mg/kg/day	8 days

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

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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.

EPA Hazardous Waste Number (RCRA): D002 (Corrosive)

SECTION 14: Transport Information

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

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Not applicable

Health Hazards
Acute toxicity
Reproductive toxicity
Serious eye damage or eye irritation
Skin Corrosion or Irritation

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

Ingredient	C.A.S. No	% by Wt
4-Nonylphenol, branched with isomers	84852-15-3	Trade Secret 40 - 60
4-Nonylphenol, branched with isomers (NONYLPHENOL AND ITS ETHOXYLATES (NPE))	84852-15-3	Trade Secret 40 - 60
4-Nonylphenol, branched with isomers (Phenol, 4-nonyl-, branched)	84852-15-3	Trade Secret 40 - 60
2-Nonylphenol, branched (NONYLPHENOL AND ITS ETHOXYLATES (NPE))	91672-41-2	Trade Secret < 10

This material contains a chemical which requires export notification under TSCA Section 12[b]:

Ingredient (Category if applicable)	C.A.S. No	Regulation	Status
4-Nonylphenol, branched with isomers (Phenol, 4-nonyl-, branched)	84852-15-3	Toxic Substances Control Act (TSCA) 5 SNUR or Consent Order Chemicals	Proposed
4-Nonylphenol, branched with isomers	84852-15-3	Toxic Substances Control Act (TSCA) 5 SNUR or Consent Order Chemicals	Proposed
2-Nonylphenol, branched (Phenol, nonyl-)	91672-41-2	Toxic Substances Control Act (TSCA) 5 SNUR or Consent Order Chemicals	Proposed
2-Nonylphenol, branched	91672-41-2	Toxic Substances Control Act (TSCA) 5 SNUR or Consent Order Chemicals	Proposed

This material contains a chemical subject to a proposed EPA Significant New Use Rule (TSCA Section 5)

Ingredient (Category if applicable)	C.A.S. No	Reference
4-Nonylphenol, branched with isomers	84852-15-3	79 FR 59186
2-Nonylphenol, branched	91672-41-2	79 FR 59186

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

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.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS 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 **Instability:** 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.

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