



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Industrial Plastic Adhesive 4475

Product Identification Numbers

62-4475-2631-0, 62-4475-2635-1, 62-4475-6530-0, 62-4475-8531-6, 62-4475-9530-7

1.2. Recommended use and restrictions on use

Recommended use

Adhesive, Plastic Adhesive

Restrictions on use

Sale and use severely restricted due to high VOC in CT, DE, ME, MD, NH, NJ, NY, PA, RI, VA, DC, IL, IN, OH, in CA per R-1168.

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

Serious Eye Damage/Irritation: Category 2A.

Flammable Liquid: Category 2.

Skin Sensitizer: Category 1.

Specific Target Organ Toxicity (central nervous system): Category 3.

2.2. Label elements

Signal word

Danger

Symbols

Flame | Exclamation mark |

Pictograms



Hazard Statements

Highly flammable liquid and vapor.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause drowsiness or dizziness.

Precautionary Statements

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves and eye/face protection.

Wear eye/face protection.

Wear protective gloves.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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 or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Specific treatment (see Notes to Physician on this label).

Call a POISON CENTER or doctor/physician if you feel unwell.

In case of fire: Use a fire fighting agent suitable for flammable liquids and solids such as dry chemical or carbon dioxide to extinguish.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Disposal:

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

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Methyl Ethyl Ketone	78-93-3	50 - 60
VMCC polymer	9005-09-8	15 - 25
Polyurethane Polymer	Trade Secret*	15 - 25
Epoxy resin	25068-38-6	< 0.5

*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 and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

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

If Swallowed:

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

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures**5.1. Suitable extinguishing media**

In case of fire: Use a fire fighting agent suitable for flammable liquids and solids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products**Substance**

Aldehydes
Hydrocarbons
Carbon monoxide
Carbon dioxide
Hydrogen Chloride
Ketones
Oxides of Nitrogen

Condition

During Combustion
During Combustion
During Combustion
During Combustion
During Combustion
During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. 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. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. 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 toxic, corrosivity or flammability hazard. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal 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.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

For industrial or professional use only. Do not use in a confined area with minimal air exchange. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Methyl Ethyl Ketone	78-93-3	Amer Conf of Gov. Indust. Hyg.	TWA:200 ppm;STEL:300 ppm	
Methyl Ethyl Ketone	78-93-3	US Dept of	TWA:590 mg/m ³ (200 ppm)	

Labor - OSHA

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists
American Indust. Hygiene Assoc : American Industrial Hygiene Association
Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines
US Dept of Labor - 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

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. Use explosion-proof ventilation equipment. Provide appropriate local exhaust ventilation on open containers.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Wear 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. Wear protective gloves.
Gloves made from the following material(s) are recommended: Butyl Rubber
Polymer laminate

Respiratory protection

Wear respiratory protection if ventilation is inadequate to prevent overexposure. 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

General Physical Form:	Liquid
Odor, Color, Grade:	clear, ketone odor
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Boiling Point	≥ 80 °C [Details: MEK]
Flash Point	16 °F [Test Method: Closed Cup] [Details: MEK]
Evaporation rate	2.70 [Ref Std: WATER=1]
Flammability (solid, gas)	Not Applicable

Flammable Limits(LEL)	1.8 % volume
Flammable Limits(UEL)	10.0 % volume
Vapor Pressure	<=91 mmHg [@ 77 °F]
Vapor Density	2.50 [Ref Std: AIR=1]
Density	0.95 g/ml
Specific Gravity	0.95 [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	404 °C
Decomposition temperature	No Data Available
Viscosity	8,500 centipoise [@ 73.4 °C]
Hazardous Air Pollutants	0 % weight [Test Method: Calculated]
Volatile Organic Compounds	<=554 g/l [Details: EU VOC content]
Percent volatile	55 - 65 % weight
VOC Less H2O & Exempt Solvents	<=554 g/l [Test Method: calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=4.62 lb/gal [Test Method: calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=58.2 % [Test Method: calculated per CARB title 2]
Solids Content	20.4 - 40 % weight

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
Sparks and/or flames

10.5. Incompatible materials

Strong oxidizing agents

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 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.

May cause target organ effects after inhalation.

Skin Contact:

Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

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

Ingestion:

May be harmful if swallowed.

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

May cause target organ effects after ingestion.

Target Organ Effects:

Single exposure may cause:

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

Toxicological Data

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		Data not available or insufficient for classification; calculated ATE 3,388.2 mg/kg
Methyl Ethyl Ketone	Dermal	Rabbit	LD50 > 8,050 mg/kg
Methyl Ethyl Ketone	Inhalation-Vapor (4 hours)	Rat	LC50 34.5 mg/l
Methyl Ethyl Ketone	Ingestion	Rat	LD50 2,737 mg/kg
Polyurethane Polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
VMCC polymer	Dermal	Rabbit	LD50 > 8,000 mg/kg
VMCC polymer	Ingestion	Rat	LD50 > 8,000 mg/kg
Epoxy resin	Dermal	Rat	LD50 > 1,600 mg/kg
Epoxy resin	Ingestion	Rat	LD50 > 1,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Methyl Ethyl Ketone	Rabbit	Minimal irritation
Polyurethane Polymer		Data not available or insufficient for classification
VMCC polymer		Data not available or insufficient for classification

Epoxy resin	Rabbit	Mild irritant
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Serious Eye Damage/Irritation

Name	Species	Value
Methyl Ethyl Ketone	Rabbit	Severe irritant
Polyurethane Polymer		Data not available or insufficient for classification
VMCC polymer		Data not available or insufficient for classification
Epoxy resin	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
Methyl Ethyl Ketone		Data not available or insufficient for classification
Polyurethane Polymer		Data not available or insufficient for classification
VMCC polymer		Data not available or insufficient for classification
Epoxy resin	Human and animal	Sensitizing

Respiratory Sensitization

Name	Species	Value
Methyl Ethyl Ketone		Data not available or insufficient for classification
Polyurethane Polymer		Data not available or insufficient for classification
VMCC polymer		Data not available or insufficient for classification
Epoxy resin	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Methyl Ethyl Ketone	In Vitro	Not mutagenic
Polyurethane Polymer		Data not available or insufficient for classification
VMCC polymer		Data not available or insufficient for classification
Epoxy resin	In vivo	Not mutagenic
Epoxy resin	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Methyl Ethyl Ketone	Inhalation	Human	Not carcinogenic
Polyurethane Polymer			Data not available or insufficient for classification
VMCC polymer			Data not available or insufficient for classification
Epoxy resin	Dermal	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
Methyl Ethyl Ketone	Inhalation	Not toxic to female reproduction	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	Not toxic to male reproduction	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	LOAEL 8.8 mg/l	during gestation
Polyurethane Polymer		Data not available or insufficient for classification			
VMCC polymer		Data not available or insufficient for classification			
Epoxy resin	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy resin	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy resin	Dermal	Not toxic to development	Rabbit	NOAEL 300	during

				mg/kg/day	organogenesis
Epoxy resin	Ingestion	Not toxic to development	Rat	NOAEL 750 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
Methyl Ethyl Ketone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classification	NOAEL Not available	
Methyl Ethyl Ketone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Methyl Ethyl Ketone	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	not applicable
Methyl Ethyl Ketone	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1,080 mg/kg	not applicable
Polyurethane Polymer			Data not available or insufficient for classification			
VMCC polymer			Data not available or insufficient for classification			

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Methyl Ethyl Ketone	Dermal	nervous system	All data are negative	Guinea pig	NOAEL Not available	31 weeks
Methyl Ethyl Ketone	Inhalation	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	heart endocrine system bone, teeth, nails, and/or hair hematopoietic system immune system muscles	All data are negative	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	7 days
Methyl Ethyl Ketone	Ingestion	nervous system	All data are negative	Rat	NOAEL 173 mg/kg/day	90 days
Polyurethane Polymer			Data not available or insufficient for classification			
VMCC polymer			Data not available or insufficient for classification			
Epoxy resin	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
Epoxy resin	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Epoxy resin	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days

Aspiration Hazard

Name	Value
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Methyl Ethyl Ketone	Not an aspiration hazard
Polyurethane Polymer	Not an aspiration hazard
VMCC polymer	Not an aspiration hazard
Epoxy resin	Not an aspiration hazard

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

SECTION 12: Ecological information

Ecotoxicological information

Not determined.

Chemical fate information

Not determined.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Incinerate in a permitted waste incineration facility. 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.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable), D035 (Methyl ethyl ketone)

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.

311/312 Hazard Categories:

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

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.

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:** 3 **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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