Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Scotch-Weld™ Rubber and Gasket Adhesive 4799
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)

Issue Date: 07/12/13
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Product Use:

Limitations on Use:	Sale and use severely restricted due to high VOC in containers >16 oz in CT, DE, ME, MD, NH, NJ, NY, PA, RI, VA, DC, IN, OH, in CA per R-1168.
Specific Use:	Adhesive for rubber to metal.
Intended Use:	Industrial use

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
Naphtha (Petroleum), Solvent-refined light	64741-84-0	30 - 60
n Hexane	110-54-3	10 - 30
Talc	14807-96-6	5 - 10
Hydrocarbon Resin	68478-07-9	3 - 7
Toluene	108-88-3	3 - 7
Polyisoprene	9003-31-0	3 - 7
Styrene-Butadiene Polymer	9003-55-8	3 - 7
Magnesium Resinate	68611-24-5	1 - 5
Zinc Resinate	68188-23-8	1 - 5
Cyclohexane	110-82-7	1 - 5
Ethyl alcohol	64-17-5	0.1 - 1
Zinc oxide	1314-13-2	0.1 - 1
Carbon black	1333-86-4	0.1 - 0.5
Polystyrene	9003-53-6	< 0.5
Xylene	1330-20-7	< 0.2

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: black, mild odor
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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.

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

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:
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:
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.

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Olfactory Effects: Signs/symptoms may include decreased ability to detect odors and/or complete loss of smell.

Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.
NOTE: This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified as human carcinogens by the International Agency for Research on Cancer, the U.S. National Toxicology Program, and the California

Environmental Protection Agency (for purposes of Proposition 65). Exposure to ethanol during the foreseeable use of this product is not expected to cause 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	*No Data Available*
Flash Point	-14 ºF [*Test Method:* Closed Cup]
Flammable Limits(LEL)	1 % volume
Flammable Limits(UEL)	7 % volume

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: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

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. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. 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. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

6.2. Environmental precautions

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods
Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Cover spill area with a fire-extinguishing foam. An 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. Collect as much of the spilled material as possible using non-sparking tools. 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 MSDS. Seal the container.

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
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Avoid breathing of vapors, mists or spray. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc. Do not breathe vapors. Avoid contact with oxidizing agents.

7.2 STORAGE
Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from areas where product may come into contact with food or pharmaceuticals. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Provide appropriate local exhaust ventilation on open containers. Use in an enclosed process area is recommended. 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 with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields
Indirect Vented Goggles
.

8.2.2 Skin Protection
Not applicable. 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: Polyvinyl Alcohol (PVA)
.

8.2.3 Respiratory Protection
Avoid breathing of vapors, mists or spray. Do not breathe 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

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

Ingredient	Authority	Type	Limit	Additional Information
Carbon black	ACGIH	TWA, inhalable fraction	3 mg/m3	
Carbon black	CMRG	TWA	0.5 mg/m3	
Carbon black	OSHA	TWA	3.5 mg/m3	
Cyclohexane	ACGIH	TWA	100 ppm	
Cyclohexane	OSHA	TWA	1050 mg/m3	
Ethyl alcohol	ACGIH	STEL	1000 ppm	
Ethyl alcohol	OSHA	TWA	1900 mg/m3	
n Hexane	ACGIH	TWA	50 ppm	Skin Notation*
n Hexane	OSHA	TWA	1800 mg/m3	
Talc	ACGIH	TWA, respirable fraction	2 mg/m3	
Talc	CMRG	TWA, as respirable dust	0.5 mg/m3	
Talc	OSHA	TWA concentration, respirable	0.1 mg/m3	
Talc	OSHA	TWA concentration, as total dust	0.3 mg/m3	
Talc	OSHA	TWA	20 millions of particles/cu. ft.	
Toluene	ACGIH	TWA	20 ppm	
Toluene	CMRG	STEL	75 ppm	Skin Notation*
Toluene	OSHA	TWA	200 ppm	
Toluene	OSHA	CEIL	300 ppm	
Zinc oxide	ACGIH	TWA, respirable fraction	2 mg/m3	
Zinc oxide	ACGIH	STEL, respirable fraction	10 mg/m3	
Zinc oxide	OSHA	TWA, as fume	5 mg/m3	
Zinc oxide	OSHA	TWA, respirable fraction	5 mg/m3	
Zinc oxide	OSHA	TWA, as total dust	15 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

Odor, Color, Grade:	black, mild odor
General Physical Form:	Liquid
Autoignition temperature	*No Data Available*
Flash Point	-14 ºF [*Test Method:* Closed Cup]
Flammable Limits(LEL)	1 % volume
Flammable Limits(UEL)	7 % volume
Boiling Point	140 ºF
Density	0.82 g/ml
Vapor Density	3 [*Ref Std:* AIR=1]
Vapor Pressure	120 mmHg [*Details:* CONDITIONS: @ 68F]
Specific Gravity	0.82 [*Ref Std:* WATER=1]
pH	*No Data Available*
Melting point	*No Data Available*
Solubility in Water	Slight (less than 10%)
Evaporation rate	2.50 [*Ref Std:* ETHER=1]
Hazardous Air Pollutants	Approximately 22 % weight [*Test Method:* Calculated]
Volatile Organic Compounds	<=628 g/l [*Details:* EU VOC content]
Kow - Oct/Water partition coef	*No Data Available*
Percent volatile	Approximately 65 % weight
VOC Less H2O & Exempt Solvents	<=628 g/l [*Test Method:* calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=5.24 lb/gal [*Test Method:* calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=76.5 % [*Test Method:* tested per CARB 310]
Viscosity	7500 - 18000 centipoise
Solids Content	>=23.5 % weight

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
Heat
Sparks and/or flames

10.2 Materials to avoid
Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion

Carbon dioxide	During Combustion
Ketones	During Combustion
Oxides of Zinc	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: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

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

SECTION 14:TRANSPORT INFORMATION

ID Number(s):
62-4799-2631-3, 62-4799-2635-4, 62-4799-5530-4, 62-4799-6530-3, 62-4799-7530-2, 62-4799-8530-1, 62-4799-9530-0, 62-4799-9531-8, XS-0414-1121-5

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 3M for more information.

311/312 Hazard Categories:
Fire Hazard - Yes 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):

Ingredient	C.A.S. No	% by Wt
Toluene	108-88-3	3 - 7
Cyclohexane	110-82-7	1 - 5

n Hexane	110-54-3	10 - 30

STATE REGULATIONS
Contact 3M for more information.

CALIFORNIA PROPOSITION 65

Ingredient	C.A.S. No.	Classification
Toluene	108-88-3	*Female reproductive toxin
Toluene	108-88-3	*Developmental Toxin

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M 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:** 3 **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 1: Product use information was modified.
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Section 2: Ingredient table was modified.

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