



## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M™ Scotch-Weld™ Hi-Strength 90 Cylinder Spray Adhesive, Large Cylinder  
**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:** 04/09/09  
**Supersedes Date:** 04/23/07

**Document Group:** 07-7527-0

**Product Use:**

**Specific Use:** Cylinder Spray Adhesive  
**Intended Use:** Industrial use

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Dimethyl Ether	115-10-6	30 - 40
Non-Volatile Components - N.J.T.S. Registry No. 04499600-6133P	Trade Secret	10 - 30
Pentane	109-66-0	10 - 30
Acetone	67-64-1	10 - 30
Cyclohexane	110-82-7	10 - 30
Isobutane	75-28-5	7 - 13
Propane	74-98-6	5 - 10

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Odor, Color, Grade:** clear, solvent odor

**General Physical Form:** Gas

**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.

### 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:**

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

**Inhalation:**

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

Intentional concentration and inhalation may be harmful or fatal.

Single exposure, above recommended guidelines, may cause:

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

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.

## 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:** Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

**Inhalation:** Remove person to fresh air. Get immediate 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.

#### 4.2 NOTE TO PHYSICIANS

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

### SECTION 5: FIRE FIGHTING MEASURES

#### 5.1 FLAMMABLE PROPERTIES

Autoignition temperature	No Data Available
Flash Point	-50 °F [Test Method: Closed Cup]
Flammable Limits - LEL	1.2 % volume
Flammable Limits - UEL	27 % 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. Water may be used to blanket the fire. 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

**Accidental Release Measures:** If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available.

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. 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. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam 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. 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. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

**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. Contents may be under pressure, open carefully. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Do not pierce or burn container, even after use. Do not spray near flames or sources of ignition. Avoid breathing of vapors, mists or spray. Avoid skin contact. 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. For industrial or professional use only. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

### 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 oxidizing agents.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 ENGINEERING CONTROLS

Use with functioning spray booth or local exhaust. 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

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: Nitrile Rubber, Polyvinyl Alcohol (PVA), Polyethylene/Ethylene Vinyl Alcohol.

#### 8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with

OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

**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>
Acetone	ACGIH	TWA	500 ppm	Table A4
Acetone	ACGIH	STEL	750 ppm	Table A4
Acetone	OSHA	TWA, Vacated	750 ppm	
Acetone	OSHA	TWA	1000 ppm	Table Z-1
Acetone	OSHA	STEL, Vacated	1000 ppm	
Cyclohexane	ACGIH	TWA	100 ppm	
Cyclohexane	OSHA	TWA	300 ppm	Table Z-1
Dimethyl Ether	AIHA	TWA	1000 ppm	
Dimethyl Ether	CMRG	TWA	1000 ppm	
Isobutane	ACGIH	TWA	1000 ppm	
Pentane	ACGIH	TWA	600 ppm	
Pentane	OSHA	TWA, Vacated	600 ppm	
Pentane	OSHA	STEL, Vacated	750 ppm	
Pentane	OSHA	TWA	1000 ppm	Table Z-1
Propane	ACGIH	TWA	1000 ppm	
Propane	OSHA	TWA	1000 ppm	Table Z-1

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

**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**

<b>Odor, Color, Grade:</b>	clear, solvent odor
<b>General Physical Form:</b>	Gas
<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Flash Point</b>	-50 °F [ <i>Test Method: Closed Cup</i> ]
<b>Flammable Limits - LEL</b>	1.2 % volume
<b>Flammable Limits - UEL</b>	27 % volume
<b>Density</b>	0.69 g/ml
<b>Vapor Density</b>	>=1.0 [ <i>Ref Std: AIR=1</i> ]
<b>Specific Gravity</b>	0.69 [ <i>Ref Std: WATER=1</i> ]
<b>pH</b>	<i>Not Applicable</i>
<b>Melting point</b>	<i>No Data Available</i>
<b>Solubility in Water</b>	Nil
<b>Evaporation rate</b>	<i>No Data Available</i>

<b>Hazardous Air Pollutants</b>	0 % weight [ <i>Test Method:</i> Calculated]
<b>Volatile Organic Compounds</b>	Approximately 4.06 lb/gal [ <i>Test Method:</i> calculated SCAQMD rule 443.1]
<b>Volatile Organic Compounds</b>	487 g/l [ <i>Test Method:</i> calculated SCAQMD rule 443.1]
<b>Volatile Organic Compounds</b>	Approximately 70.3 % [ <i>Test Method:</i> calculated SCAQMD rule 443.1]
<b>Percent volatile</b>	80 - 90 % weight
<b>VOC Less H2O &amp; Exempt Solvents</b>	Approximately 571 g/l [ <i>Test Method:</i> calculated SCAQMD rule 443.1]
<b>Viscosity</b>	<i>Not Applicable</i>

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

**Materials and Conditions to Avoid:** Heat; Sparks and/or flames

**Hazardous Polymerization:** Hazardous polymerization will not occur.

### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Formaldehyde	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ketones	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.  
The facility should be equipped to handle gaseous waste.

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

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

## SECTION 14: TRANSPORT INFORMATION

### ID Number(s):

62-4683-0026-4, 62-4683-0047-0, 62-4683-0926-5, 62-4683-0930-7, 62-4683-0931-5, 62-4683-4925-3, 62-4683-4928-7, 62-4683-4930-3, 62-4683-4935-2, 62-4683-4936-0, 62-4683-4938-6, 62-4683-7830-2, 62-4683-7835-1, 62-4683-8830-1, 62-4683-8835-0, CS-0406-6994-0, CS-0406-7021-1

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

## SECTION 15: REGULATORY INFORMATION

### US FEDERAL REGULATIONS

Contact 3M for more information.

### 311/312 Hazard Categories:

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

### 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>
Cyclohexane	110-82-7	10 - 30

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

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
Pentane	109-66-0	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

### STATE REGULATIONS

Contact 3M for more information.

### CHEMICAL INVENTORIES

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

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: 4 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 name was modified.  
Section 1: Product use information was modified.  
Section 16: NFPA hazard classification for reactivity was modified.  
Copyright was modified.  
Section 3: Immediate physical hazard(s) was modified.  
Section 3: Potential effects from skin contact information was modified.  
Section 3: Potential effects from inhalation information was modified.  
Section 3: Potential effects from ingestion information was modified.  
Section 5: Fire fighting procedures information was modified.  
Section 5: Unusual fire and explosion hazard information was modified.  
Section 6: Release measures information was modified.  
Section 7: Handling information was modified.  
Section 7: Storage information was modified.  
Section 8: Engineering controls information was modified.  
Section 10: Hazardous decomposition or by-products table was modified.  
Section 4: First aid for inhalation - medical assistance - was modified.  
Section 4: First aid for ingestion (swallowing) - decontamination - was modified.  
Section 4: First aid for ingestion (swallowing) - medical assistance - was modified.  
Section 10: Materials and conditions to avoid physical property was modified.  
Section 3: Other health effects information was modified.  
Page Heading: Product name was modified.  
Section 15: 311/312 Delayed Hazard score was modified.  
Section 9: Vapor density value was modified.  
Section 5: Flammable limits (UE) information was modified.  
Section 5: Flammable limits (LEL) information was modified.



Section 5: Flash point information was modified.  
Sections 3 and 9: Odor, color, grade information was modified.  
Section 9: Property description for optional properties was modified.  
Section 9: Specific gravity information was modified.  
Section 9: Flash point information was modified.  
Section 9: Flammable limits (LEL) information was modified.  
Section 9: Flammable limits (UEL) information was modified.  
Section 4: Note to physicians heading was added.  
Section 8: Respiratory protection information was added.  
Section 4: Note to physicians was added.  
Section 9: Density information was added.  
Section 14: ID Number Heading Template 1 was added.  
Section 14: ID Number(s) Template 1 was added.  
Section 2: Ingredient table was added.  
Section 15: TSCA section 12[b] text was added.  
Section 15: EPCRA 313 information was added.  
Section 15: EPCRA 313 text was added.  
Section 8: Exposure guidelines ingredient information was added.  
Section 8: Exposure guidelines legend was added.  
Section 15: TSCA section 12[b] information was added.  
Section 8: Exposure guidelines data source legend was added.  
Section 15: Ingredient comment heading was deleted.  
Section 16: NFPA hazard classification for aerosol storage was deleted.  
Section 15: Inventories comment was deleted.

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## Transport Information Document

**Date:** January 19, 2011

**3M ID Number:** 62-4994-8030-9

**Product Description:** 3M(TM) Scotch-Weld(TM) Hi-Strength 90 Cylinder Spray Adhesive Clear, Large Cylinder (Net Wt. 28.8 lb), 1 per case - NOT FOR CONSUMER/RETAIL SALE OR USE

**Transport Protective Service:** PROTECTIVE SERVICE NOT REQUIRED

**NMFC Item:** 004620

**NMFC Sub:** 03

**NMFC Class:** 065.0

**Flash Point (Closed-cup):** No Flash Point

**UNITED STATES DEPARTMENT OF TRANSPORTATION - GROUND (U.S. DOT, 49 CFR)**

UN3161, LIQUEFIED GAS, FLAMMABLE, N.O.S., (DIMETHYL ETHER AND PROPANE), 2.1

**UNITED STATES DEPARTMENT OF TRANSPORTATION - VESSEL (U.S. DOT, 49 CFR)**

UN3161, LIQUEFIED GAS, FLAMMABLE, N.O.S., (DIMETHYL ETHER AND PROPANE), 2.1

**INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)**

UN3161, LIQUEFIED GAS, FLAMMABLE, N.O.S., (DIMETHYL ETHER AND PROPANE), 2.1

**INTERNATIONAL MARITIME ORGANIZATION (IMO)**

UN3161, LIQUEFIED GAS, FLAMMABLE, N.O.S., (DIMETHYL ETHER AND PROPANE), 2.1

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