



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Super 77 Classic Spray Adhesive

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: Adhesive aerosol

SECTION 2: INGREDIENTS

| <u>Ingredient</u> | <u>C.A.S. No.</u> | <u>% by Wt</u> |
|---------------------------------|-------------------|----------------|
| N.J.T.S. Reg No. 04499600-5776P | Trade Secret | 15 - 40 |
| 2,3-Dimethylbutane | 79-29-8 | 10 - 20 |
| 3-Methylpentane | 96-14-0 | 10 - 20 |
| 2-Methylpentane | 107-83-5 | 10 - 20 |
| Pentane | 109-66-0 | 1 - 5 |
| Cyclohexane | 110-82-7 | 10 - 30 |
| Isobutane | 75-28-5 | 7 - 13 |
| Propane | 74-98-6 | 7 - 13 |
| Dimethyl ether | 115-10-6 | 7 - 13 |
| Hexane | 110-54-3 | < 1.5 |

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: light cream colored, sweet/fruity 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. Aerosol container contains flammable material under pressure. 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:

Prolonged or repeated exposure may cause:

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.

Prolonged or repeated exposure may cause:

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.

3.3 POTENTIAL ENVIRONMENTAL EFFECTS

HALOGEN ANALYSIS: The dry ingredients of 3M Super 77 Spray Adhesive were subjected to combustion in a Parr oxygen bomb. The decomposition products were analyzed by Ion Chromatographic analysis for halogen and sulfur content. Chlorine 0.05%; Fluorine <0.001%, Bromine <0.001%; Sulfur <0.035%.

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 | <i>No Data Available</i> |
| Flash Point | -42.00 °F [<i>Test Method:</i> Tagliabue Closed Cup] |
| Flammable Limits - LEL | Approximately 1.5 % volume |
| Flammable Limits - UEL | Approximately 8.6 % volume |
| OSHA Flammability Classification: | Class IA Flammable Liquid |

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: 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. Aerosol container contains gas under pressure. Aerosol container contains flammable material under pressure.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions

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.

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.

Environmental procedures

Collect the resulting residue containing solution. 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. 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. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Do not pierce or burn container, even after use. No smoking while handling this material. Avoid breathing of vapors, mists or spray. 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. Avoid contact with oxidizing agents. 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. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use in an enclosed process area is recommended. Use with functioning spray booth or

local exhaust. Do not use in a confined area or areas with little or no air movement. Do not remain in area where available oxygen may be reduced. 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. Do not use in a confined area or areas with little or no air movement. If exhaust ventilation is not adequate, use appropriate respiratory protection. Provide ventilation adequate to control vapor concentrations below recommended exposure limits and/or control spray or mist.

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

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

8.2.3 Respiratory Protection

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. Organic vapor cartridges may have short service life.

8.2.4 Prevention of Swallowing

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

8.3 EXPOSURE GUIDELINES

| <u>Ingredient</u> | <u>Authority</u> | <u>Type</u> | <u>Limit</u> | <u>Additional Information</u> |
|-------------------|------------------|-------------|--------------|-------------------------------|
| Cyclohexane | ACGIH | TWA | 100 ppm | |
| Cyclohexane | OSHA | TWA | 1050 mg/m3 | |
| Dimethyl ether | AIHA | TWA | 1880 mg/m3 | |
| Dimethyl ether | CMRG | TWA | 1000 ppm | |
| Hexane | ACGIH | TWA | 50 ppm | Skin Notation* |
| Hexane | OSHA | TWA | 1800 mg/m3 | |
| Pentane | ACGIH | TWA | 600 ppm | |
| Pentane | OSHA | TWA | 2950 mg/m3 | |
| Propane | OSHA | TWA | 1800 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: | light cream colored, sweet/fruity odor. |
| General Physical Form: | Gas |
| Autoignition temperature | <i>No Data Available</i> |
| Flash Point | -42.00 °F [<i>Test Method:</i> Tagliabue Closed Cup] |
| Flammable Limits - LEL | Approximately 1.5 % volume |
| Flammable Limits - UEL | Approximately 8.6 % volume |
| Density | 0.697 g/ml |
| Vapor Density | 2.97 [<i>Ref Std:</i> AIR=1] |
| Specific Gravity | 0.697 [<i>Ref Std:</i> WATER=1] |
| pH | Approximately 6.7 Units not avail. or not appl. |
| Melting point | <i>No Data Available</i> |
| Solubility in Water | Nil |
| Evaporation rate | 1.90 [<i>Ref Std:</i> ETHER=1] |
| Hazardous Air Pollutants | <=1.4 % weight [<i>Test Method:</i> Calculated] |
| Volatile Organic Compounds | 527 g/l [<i>Details:</i> EU VOC content] |
| Kow - Oct/Water partition coef | <i>No Data Available</i> |
| Percent volatile | 75 % weight |
| VOC Less H2O & Exempt Solvents | 527 g/l [<i>Test Method:</i> tested per SCAQMD method 305] |
| VOC Less H2O & Exempt Solvents | 4.4 lb/gal [<i>Test Method:</i> tested per SCAQMD method 305] |
| VOC Less H2O & Exempt Solvents | 84 % [<i>Test Method:</i> tested per SCAQMD method 305] |
| Viscosity | <i>Not Applicable</i> |
| Solids Content | 13.5 - 17.8 % |

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Heat

10.2 Materials to avoid

Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

| <u>Substance</u> | <u>Condition</u> |
|-------------------------------|-------------------|
| Aldehydes | During Combustion |
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |
| Toxic Vapor, Gas, Particulate | 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: Vent cylinder or pressurized container in an operating exhaust hood or remote area. A qualified person should adjust the release rate so gas concentration in ducts is less than 20% of the lower explosive limit (LEL). The LEL is the lowest concentration that can propagate (spread) a flame. A qualified person should adjust the release rate so gas concentration in ducts is less than 20% of the lower explosive limit (LEL). The LEL is the lowest concentration that can propagate (spread) a flame. Incinerate in a permitted hazardous waste incinerator. For quantities <10 lbs. (5 kg): As a disposal alternative, dispose of waste product in a permitted hazardous waste facility. The facility should be equipped to handle gaseous waste. Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.
RECYCLE EMPTY AEROSOL CONTAINERS WHERE AVAILABLE.

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

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

SECTION 14: TRANSPORT INFORMATION

| ID Number | UPC | ID Number | UPC |
|----------------|------------------|----------------|-----|
| 62-4437-4920-5 | | 62-4437-4921-3 | |
| 62-4437-4930-4 | 00-21200-96315-5 | 62-4437-4935-3 | |
| 62-4437-4950-2 | | 62-4437-4955-1 | |

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 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes 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> |
|-------------------|------------------|----------------|
| 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 (Pentane) | 109-66-0 | Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals | Applicable |
| 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.

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.

Additional Information: Synthetic polymer, resin and antioxidant. Not hazardous according to Canadian WHMIS criteria. Non-WHMIS controlled.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

WHMIS: Hazardous

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
Aerosol Storage Code: 3

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.

HMIS Hazard Classification

Health: 2 Flammability: 4 Reactivity: 0 Protection: X - See PPE section.

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:

- Section 14: Transportation legal text was modified.
- Section 9: Property description for optional properties was modified.
- Section 9: Density information was added.
- Section 9: Property description for required properties was added.

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