

MATERIAL SAFETY 3M
 DATA SHEET 3M Center
 St. Paul, Minnesota
 55144-1000
 1-800-364-3577 or (651) 737-6501 (24 hours)

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DIVISION: ENGINEERED ADHESIVES
 TRADE NAME:
 3M(TM) Super 77(TM) Spray Adhesive

ID NUMBER/U.P.C.:

| | | | | | |
|----------------|------------------|---|---|----------------|------------------|
| 62-4437-0921-7 | - | - | - | 62-4437-0922-5 | 00-21200-25463-5 |
| 62-4437-0925-8 | 00-21200-30091-2 | | | 62-4437-0926-6 | - - - |
| 62-4437-0927-4 | 00-21200-25463-5 | | | 62-4437-0928-2 | 00-21200-25463-5 |
| 62-4437-0929-0 | 00-21200-25463-5 | | | 62-4437-0930-8 | - - - |
| 62-4437-0931-6 | - | - | - | 62-4437-0933-2 | 00-21200-25463-5 |
| 62-4437-0934-0 | 00-21200-25463-5 | | | 62-4437-4026-1 | 00-21200-76098-3 |
| 62-4437-4030-3 | 00-21200-76098-3 | | | 62-4437-4830-6 | 00-21200-85853-6 |
| 62-4437-4835-5 | 00-21200-45142-3 | | | 62-4437-4840-5 | 00-21200-85853-6 |
| 62-4437-4925-4 | 00-21200-21210-9 | | | 62-4437-4926-2 | 00-21200-45160-7 |
| 62-4437-4930-4 | 00-21200-21210-9 | | | 62-4437-4931-2 | 00-21200-39245-0 |
| 62-4437-4933-8 | 00-21200-85846-8 | | | 62-4437-4935-3 | - - - |
| 62-4437-4936-1 | 00-21200-21210-8 | | | 62-4437-4937-9 | 00-21200-89541-8 |
| 62-4437-4938-7 | 00-21200-39240-5 | | | 62-4437-4939-5 | 00-21200-21210-9 |
| 62-4437-9999-4 | - | - | - | CS-0406-2131-3 | - - - |
| CS-0406-6984-1 | - | - | - | CS-0406-7003-9 | - - - |

ISSUED: June 28, 2001
 SUPERSEDES: May 30, 2001
 DOCUMENT: 11-4257-9

| 1. INGREDIENT | C.A.S. NO. | PERCENT |
|--|-------------|-------------|
| NON-VOLATILE COMPONENTS - N.J. TRADE | | |
| SECRET (T.S.) REGISTRY NO. 04499600-5776P++..... | TradeSecret | 20.0 - 30.0 |
| CYCLOHEXANE..... | 110-82-7 | 10.0 - 20.0 |
| 2-METHYLPENTANE..... | 107-83-5 | 5.0 - 15.0 |
| ISOBUTANE..... | 75-28-5 | 7 - 13 |
| PROPANE..... | 74-98-6 | 7 - 13 |
| DIMETHYL ETHER..... | 115-10-6 | 7 - 13 |
| 3-METHYLPENTANE..... | 96-14-0 | 3 - 7 |
| 2,3-DIMETHYLBUTANE..... | 79-29-8 | 3 - 7 |
| 2,2-DIMETHYLBUTANE..... | 75-83-2 | 1 - 5 |
| HEXANE..... | 110-54-3 | .1 - 1 |

IN CASE OF EMERGENCY: THE NUMBERS AT THE TOP OF THIS PAGE PROVIDE 24
 HOUR RESPONSE FROM ANY PHONE FOR ALL EMERGENCIES WITH THIS PRODUCT.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

| 1. INGREDIENT | C.A.S. NO. | PERCENT |
|---------------|------------|---------|
|---------------|------------|---------|

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

++ rosin, synthetic polymer, resin and antioxidant. Not hazardous according to Canadian WHMIS criteria. Non-WHMIS controlled.

This product contains the following toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR Part 372:

CYCLOHEXANE
HEXANE

2. PHYSICAL DATA

BOILING POINT:..... Compressed gas
VAPOR PRESSURE:..... Compressed gas
VAPOR DENSITY:..... 2.97 Air=1
EVAPORATION RATE:..... 1.90 Ether=1
SOLUBILITY IN WATER:..... nil
SPECIFIC GRAVITY:..... 0.697 Water=1
PERCENT VOLATILE:..... 75 % by wt
pH:..... ca. 6.7
VISCOSITY:..... N/A
MELTING POINT:..... N/D

APPEARANCE AND ODOR:
liquid in aerosol, light cream colored, sweet/fruity odor.

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... -42.00 F TCC
FLAMMABLE LIMITS - LEL:..... ca. 1.5 % by vol
FLAMMABLE LIMITS - UEL:..... ca. 8.6 % by vol
AUTOIGNITION TEMPERATURE:..... N/D

EXTINGUISHING MEDIA:
Carbon dioxide, Dry chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES:
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.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

3. FIRE AND EXPLOSION HAZARD DATA (continued)

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

NFPA HAZARD CODES: HEALTH: 2 FIRE: 4 REACTIVITY: 0 AEROSOL STORAGE: 3
UNUSUAL REACTION HAZARD: none

OSHA FIRE HAZARD CLASS: Class IA Flammable Liquid

4. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID:
Heat.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide and Carbon Dioxide, Toxic Vapors, Gases or
Particulates.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Ventilate area. Extinguish all ignition sources. Cover with absorbent material. Collect using non-sparking tools. Place in a U.S. DOT-approved container.

RECOMMENDED DISPOSAL:

Incinerate in a permitted hazardous waste incinerator in the presence of a combustible material. Facility must be capable of handling aerosol cans. Dispose of empty cans in a sanitary landfill. Dispose of waste product in a facility permitted to accept chemical waste.

RECYCLE EMPTY AEROSOL CONTAINERS WHERE AVAILABLE.

ENVIRONMENTAL DATA:

Not determined.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

5. ENVIRONMENTAL INFORMATION (continued)

REGULATORY INFORMATION:

Volatile Organic Compounds: 75 % tested per SCAQMD method 305.
Volatile Organic Compounds: ca. 4.4 lb/gal.
VOC Less H₂O & Exempt Solvents: 527 gms/liter tested per SCAQMD method 305.
Hazardous Air Pollutants: < 1 % by wt.
Hazardous Air Pollutants: 0.04 #/# solids calculated.

Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number = D001 (Ignitable)

OTHER ENVIRONMENTAL INFORMATION:

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%.

EPCRA HAZARD CLASS:

FIRE HAZARD: Yes PRESSURE: Yes REACTIVITY: No ACUTE: Yes CHRONIC: Yes

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water. Get immediate medical attention.

SKIN CONTACT:

Flush skin with large amounts of water. If irritation persists, get medical attention.

INHALATION:

Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

IF SWALLOWED:

Do not induce vomiting. Drink two glasses of water. Call a physician.

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:

Avoid eye contact with vapor, spray, or mist. Wear safety glasses with side shields.

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7. PRECAUTIONARY INFORMATION (continued)

SKIN PROTECTION:

Avoid prolonged or repeated skin contact.

RECOMMENDED VENTILATION:

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.

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-mask organic vapor respirator.

PREVENTION OF ACCIDENTAL INGESTION:

Do not ingest.

RECOMMENDED STORAGE:

Store at temperatures below 120 degrees F (49 degrees C). Store out of direct sunlight. Keep out of the reach of children.

FIRE AND EXPLOSION AVOIDANCE:

Aerosol container contains flammable gas under pressure. Keep away from heat, sparks, open flame, and other sources of ignition. Extremely flammable liquid and vapor. Do not pierce or burn container, even after use. No smoking while handling this material. Avoid static discharge.

HMIS HAZARD RATINGS: HEALTH: 2 FLAMMABILITY: 4 REACTIVITY: 0
PERSONAL PROTECTION: X (See precautions, section 7.)

EXPOSURE LIMITS

| INGREDIENT | VALUE | UNIT | TYPE | AUTH | SKIN* |
|----------------------------------|-------|------|------|-------|-------|
| ----- | | | | | |
| NON-VOLATILE COMPONENTS - N.J. | | | | | |
| TRADE SECRET (T.S.) REGISTRY NO. | | | | | |
| 04499600-5776P++..... | NONE | NONE | NONE | NONE | |
| CYCLOHEXANE..... | 300 | PPM | TWA | ACGIH | |
| CYCLOHEXANE..... | 300 | PPM | TWA | OSHA | |
| 2-METHYLPENTANE..... | 500 | PPM | TWA | ACGIH | |
| 2-METHYLPENTANE..... | 1000 | PPM | STEL | ACGIH | |
| ISOBUTANE..... | NONE | NONE | NONE | NONE | |
| PROPANE..... | 1000 | PPM | TWA | OSHA | |
| PROPANE..... | 2500 | PPM | TWA | ACGIH | |
| DIMETHYL ETHER..... | 1000 | PPM | TWA | CMRG | |
| DIMETHYL ETHER..... | 500 | PPM | TWA | AIHA | |
| 3-METHYLPENTANE..... | 500 | PPM | TWA | ACGIH | |

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EXPOSURE LIMITS (continued)

| INGREDIENT | VALUE | UNIT | TYPE | AUTH | SKIN* |
|-------------------------|-------|------------------|------|-------|-------|
| 3-METHYLPENTANE..... | 1000 | PPM | STEL | ACGIH | |
| 2,3-DIMETHYLBUTANE..... | 500 | PPM | TWA | ACGIH | |
| 2,3-DIMETHYLBUTANE..... | 1000 | PPM | STEL | ACGIH | |
| 2,2-DIMETHYLBUTANE..... | 500 | PPM | TWA | ACGIH | |
| 2,2-DIMETHYLBUTANE..... | 1000 | PPM | STEL | ACGIH | |
| HEXANE..... | 50 | PPM | TWA | ACGIH | Y |
| HEXANE..... | 50 | PPM | TWA | OSHAV | |
| | | OSHA VACATED PEL | | | |
| HEXANE..... | 500 | PPM | TWA | OSHA | |

* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN 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
- AIHA: American Industrial Hygiene Assoc. Workplace Environmental Exposure Level Guideline
- CMRG: Chemical Manufacturer Recommended Exposure Guidelines
- OSHA: Occupational Safety and Health Administration
- OSHAV: Occupational Safety and Health Administration Vacated PEL. Vacated Permissible Exposure Limits (PEL) are enforced as the OSHA PEL in some states. Check with your local regulatory authority.
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:

Moderate Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing, and hazy vision.

SKIN CONTACT:

Mild Skin Irritation (after prolonged or repeated contact): signs/symptoms can include redness, swelling, and itching.

INHALATION:

Intentional concentration and inhalation may be harmful or fatal.

Central Nervous System Depression: signs/symptoms can include headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

8. HEALTH HAZARD DATA (continued)

WHILE THE FOLLOWING EFFECTS ARE ASSOCIATED WITH ONE OR MORE OF THE INDIVIDUAL INGREDIENTS IN THIS PRODUCT AND ARE REQUIRED TO BE INCLUDED ON THE MSDS BY THE U.S. OSHA HAZARD COMMUNICATION STANDARD, THEY ARE NOT EXPECTED EFFECTS DURING FORESEEABLE USE OF THIS PRODUCT.

Kidney Effects: signs/symptoms can include reduced urine volume, blood in urine and back pain.

Liver Effects: signs/symptoms can include yellow skin(jaundice) and tenderness of upper abdomen.

Peripheral Neuropathy: signs/symptoms can include tingling of extremities, incoordination, numbness, weakness and tremors.

IF SWALLOWED:

Ingestion is not a likely route of exposure to this product.

WHILE THE FOLLOWING EFFECTS ARE ASSOCIATED WITH ONE OR MORE OF THE INDIVIDUAL INGREDIENTS IN THIS PRODUCT AND ARE REQUIRED TO BE INCLUDED ON THE MSDS BY THE U.S. OSHA HAZARD COMMUNICATION STANDARD, THEY ARE NOT EXPECTED EFFECTS DURING FORESEEABLE USE OF THIS PRODUCT.

Ingestion may cause:

Irritation of Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, blood in vomitus, and blood in feces.

SECTION CHANGE DATES

PHYSICAL DATA SECTION CHANGED SINCE May 30, 2001 ISSUE

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