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REV 01/07

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**FOR CHEMICAL EMERGENCY
CALL (800) 424-9300 24 HRS.**

SECTION 1 - PRODUCT IDENTIFICATION

PRODUCT NAME: #2159 3M™ Hi-Strength Spray Adhesive 90 (aerosol)

PRODUCT USE:

Intended Use: Aerosol adhesive
Specific Use: Hi-Strength aerosol adhesive

SECTION 2 - INGREDIENTS

| <u>Ingredient</u> | <u>C.A.S. NO.</u> | <u>% byWt.</u> |
|--|-------------------|----------------|
| DIMETHYL ETHER | 115-10-6 | 35-45 |
| METHYL ACETATE | 79-20-9 | 25-35 |
| NONVOLATILE COMPONENTS-N.J TRADE SECRET REGISTRY NO. 04499600-6448P | Trade Secret | 10-20 |
| CYCLOHEXANE | 110-82-7 | 7-13 |
| PENTANE | 109-66-0 | 1-5 |
| 1,1-DIFLUOROETHANE | 75-37-6 | 1-5 |

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Specific Physical Form: Aerosol

Odor, Color, Grade: clear, sweet fruity odor

General Physical Form: Gas

Immediate health, physical, and environmental hazards: Flammable liquefied gas. May cause target organ effects.

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.

May be absorbed through skin and cause target organ effects.

Inhalation:

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

May be absorbed following inhalation and cause target organ effects.

Intentional concentration and inhalation may be harmful or fatal.

Ingestion:

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

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, above recommended guidelines, may cause:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Kidney Effects: Signs/symptoms may include reduced or absent urine production, increased serum creatinine, lower back pain, increased protein in urine, and increased blood urea nitrogen (BUN).

SECTION 4 – FIRST AID MEASURES

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. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION 5 – FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

| | |
|--|--|
| Autoignition temperature | No Data Available |
| Flash Point | -42.00°F (Test Method: Tagliabue Closed Cup) |
| Flammable Limits – LEL | No Data Available |
| Flammable Limits – UEL | No Data Available |
| OSHA Flammability Classification: | Class IA Flammable Liquid |

EXTHINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

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: Flammable liquefied gas.

| |
|--|
| Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information. |
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SECTION 6 – ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: 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. If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferable an operation exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Close cylinder. If the cylinder can't be closed, place in a well-ventilated area, preferable an operating exhaust hood, or if necessary outdoors. Dispose of collected material as soon as possible. Discharge the resulting residue containing solution to a municipal or industrial wastewater treatment facility.

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

HANDLING

Avoid eye contact with vapors, mists, or spray. Avoid prolonged or repeated skin contact. 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. Keep out of the reach of children.

STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. 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.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Eye/Face Protection

Avoid eye contact with vapors, mists, or spray. Avoid eye contact. The following eye protection(s) are recommended: Safety Glasses with side shields.

Skin Protection

Avoid prolonged or repeated skin contact. Gloves not normally required. Avoid skin contact.

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 face piece or full-face air-purifying respirator with organic vapor cartridge. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

Prevention of Swallowing

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

EXPOSURE GUIDELINES

| <u>Ingredient</u> | <u>Authority</u> | <u>Type</u> | <u>Limit</u> | <u>Additional Information</u> |
|--------------------------|-------------------------|--------------------|---------------------|--------------------------------------|
| 1,1-DIFLUOROETHANE | AIHA | TWA | 1000 PPM | |
| 1,1-DIFLUOROETHANE | CMRG | TWA | 1000 PPM | |
| CYCLOHEXANE | ACGIH | TWA | 100 PPM | |
| CYCLOHEXANE | OSHA | TWA | 300PPM | Table Z-1 |
| DIMETHYL ETHER | AIHA | TWA | 1000 PPM | |
| DIMETHYL ETHER | CMRG | TWA | 1000 PPM | |
| METHYL ACETATE | ACGIH | TWA | 200 PPM | |
| METHYL ACETATE | ACGIH | STEL | 250 PPM | |
| METHYL ACETATE | OSHA | TWA | 200 PPM | Table Z-1A |
| METHYL ACETATE | OSHA | STEL | 250 PPM | Table Z-1A |
| 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 |

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

| | |
|-----------------------------------|---|
| Specific Physical Form: | Aerosol |
| Odor, Color, Grade: | Clear, sweet fruity odor |
| General Physical Form: | Gas |
| Autoignition temperature | No Data Available |
| Flash Point | -42.00°F [Test method: Tagliabue Close Cup] |
| Flammable Limits - LEL | No Data Available |
| Flammable Limits - UEL | No Data Available |
| Boiling point | Not Applicable |
| Vapor Density | 2.97 [Ref Std: AIR=1] |
| Specific Gravity | 0.726 [Ref Std: WATER=1] |
| pH | No Data Available |
| Melting point | Not Applicable |
| Solubility in Water | Nil |
| Evaporation rate | 1.90 [Ref Std: ETHER=1] |
| Hazardous Air Pollutants | <=0.4% weight [Test Method: Calculated] |
| Volatile Organic Compounds | Approximately 54% [Test Method: Calculated SCAQMD rule 443.1] |

Percent volatile
VOC Less H2O & Exempt Solvents
Viscosity

<= 75% weight
No Date Available
Not Applicable

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable

Materials and Conditions to Avoid: Heat

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide
Carbon Dioxide
Irritant Vapors or Gases

Condition

During Combustion
During Combustion
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 DIPOSAL METHOD

Incinerate in a permitted hazardous waste incinerator. The facility should be equipped to handle gaseous waste.
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 – TRANSPORTATION INFORMATION

ID Number(s):

62-4942-0926-5, 62-4942-4925-3, 62-4942-4928-7, 62-4942-4930-3, 62-1942-4935-2, 62-4942-4938-6, CS-0406-7111-0

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

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 | 7-13 |

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 | Tox Substance Control Act (TSCA) 4 Test Rule Chemicals | Applicable |
| CYCLOHEXANE | 110-82-7 | Toxic Substance Control Act (TSCA) 4 Test Rule Chemicals | Applicable |
| METHYL ACETATE | 110-82-7 | Toxic Substance Control Act (TSCA) 4 Test Rule Chemicals | Applicable |

STATE REGULATIONS

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.

INTERNATIONAL REGULATIONS

This MSDS has been prepared to meet 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 also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

SECTION 17 - COMMENTS

The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with Fibre Glast Developments or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their needs.