



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 5-Way Penetrant
MANUFACTURER: 3M
DIVISION: International Operations
 Electrical Markets Division
ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 05/24/2005
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Product Use:

General Use: Lubrication

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
MEDIUM ALIPHATIC SOLVENT NAPHTHA	64742-88-7	35 - 45
LIQUEFIED PETROLEUM GAS	68476-85-7	25 - 35
SOLVENT DEWAXED HEAVY PARAFFINIC DISTILLATE (PETROLEUM)	64742-65-0	10 - 20
KEROSENE	8008-20-6	10 - 20
CALCIUM DINONYLNAPHTHALENESULFONATE	57855-77-3	1 - 5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol

Odor, Color, Grade: Yellow, oil/propellant odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Extremely flammable liquid and vapor. Aerosol container contains flammable gas under pressure. 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. Aerosol container contains flammable material under pressure. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

Skin Contact:

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

May be absorbed through skin and cause target organ effects.

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.

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: 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
Flash Point
Flammable Limits - LEL
Flammable Limits - UEL

No Data Available
-101.2 °F [Details: Liquified petroleum gas's flash point]
No Data Available
No Data Available

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: Extremely flammable liquid and vapor. 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. 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

Accidental Release Measures: 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. Contain spill. 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. 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. 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. No smoking while handling this material. Do not spray near flames or sources of ignition. Avoid breathing of vapors, mists or spray. Aerosol container contains flammable gas under pressure. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. For industrial or professional use only. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container tightly closed. Do not store containers on

their sides. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

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.

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 supplied-air respirator. 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. Not applicable.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
KEROSENE	ACGIH	TWA, as total hydrocarbon vapor	200 mg/m ³	Skin Notation*;Table A3
KEROSENE	CMRG	TWA	500 ppm	
LIQUEFIED PETROLEUM GAS	ACGIH	TWA	1000 ppm	
LIQUEFIED PETROLEUM GAS	OSHA	TWA	1000 ppm	Table Z-1A
MEDIUM ALIPHATIC SOLVENT	CMRG	TWA	100 ppm	
NAPHTHA				
SOLVENT DEWAXED HEAVY	CMRG	TWA	5 mg/m ³	
PARAFFINIC DISTILLATE (PETROLEUM)				
SOLVENT DEWAXED HEAVY	CMRG	STEL	10 mg/m ³	
PARAFFINIC DISTILLATE (PETROLEUM)				

* 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

Specific Physical Form:	Aerosol
Odor, Color, Grade:	Yellow, oil/propellant odor
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	-101.2 °F [<i>Details:</i> Liquified petroleum gas's flash point]
Flammable Limits - LEL	<i>No Data Available</i>
Flammable Limits - UEL	<i>No Data Available</i>
Boiling point	<i>No Data Available</i>
Density	<i>No Data Available</i>
Vapor Density	<i>No Data Available</i>
Vapor Pressure	<i>No Data Available</i>
Specific Gravity	<i>No Data Available</i>
pH	<i>No Data Available</i>
Melting point	<i>No Data Available</i>
Solubility In Water	<i>No Data Available</i>
Evaporation rate	<i>No Data Available</i>
Percent volatile	<i>No Data Available</i>
Viscosity	<i>No Data Available</i>

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat; Avoid shock or friction.; Combustibles; Sparks and/or flames; High shear and high temperature conditions

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products**Substance**

Carbon monoxide
Carbon dioxide

Condition

Not Specified
Not Specified

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: Dispose of waste product in a permitted hazardous waste facility. Facility must be capable of handling aerosol cans.

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

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

SECTION 14: TRANSPORT INFORMATION

ID Number(s):
XP-0038-0036-2

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.

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

Contact 3M for more information.

All the components of this product are listed on China's Inventory of Chemical Substances.

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.

Reason for Reissue: To update first primary division.

Revision Changes:

Section 16: NFPA hazard classification heading was modified.
Section 16: NFPA hazard classification for health was modified.
Section 3: Other potential health effects heading was modified.
Copyright was modified.
Section 8: Exposure guidelines data source legend 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 7: Handling information was modified.
Section 7: Storage information was modified.
Section 8: Eye/face protection phrase was modified.
Section 8: Skin protection phrase was modified.
Section 8: Respiratory protection information was modified.
Section 8: Prevention of swallowing information was modified.
Section 15: International regulations information was modified.
Section 15: State regulations information was modified.
Section 15: US federal regulations information was modified.
Section 4: First aid for skin contact - decontamination - was modified.
Section 4: First aid for skin contact - 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: Hazardous polymerization heading was modified.
Section 3: Other health effects information was modified.
Section 16: NFPA explanation was modified.
Section 15: Inventories information was modified.
Section 12: Ecotoxicological information heading was modified.
Section 12: Chemical fate information heading was modified.
Section 8: Exposure guidelines ingredient information was modified.

Section 1: Secondary Division name was modified.
Section 16: NFPA hazard classification for special hazards was modified.
Section 16: Reason for reissue heading was modified.
Section 12: Ecotoxicological phrase was modified.
Section 12: Chemical Fate phrase was modified.
Section 4: First aid for skin contact - termination of exposure - was added.
Section 4: First aid for skin contact - handling - was added.
Section 8: Exposure guideline note was added.
Sections 3 and 9: Specific physical form information was added.
Sections 3 and 9: Specific physical form heading was added.
Section 2: Ingredient phrase was added.

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