

3M

Tape Primer

94

Technical Data

October, 2002

Product Description 3M™ Tape Primer 94 can be used to promote adhesion of 3M tapes to surfaces such as polyethylene, polypropylene, ABS, PET/PBT blends, concrete, wood, glass, metal and painted metal surfaces.

| Low VOC Alternates | g/l VOC | Substrates |
|--|---------|-------------------------------|
| 3M™ Scotch-Grip™ Plastic Adhesive 2262 Thin 5 or 10 to 1 in acetone | 196 | Powder Paints |
| 3M™ Scotch-Grip™ Plastic Adhesive 1099 Unthinned | 0 | Neoprene, Santoprene, EPDM |

Note: Primer 94 contains greater than 250 g/l of volatile organic carbons (VOC). Less water, less exempt solvents. Please contact your local Air Quality Regulation to be sure this primer is compliant.

Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

| | |
|--------------------|--|
| Solids: | Approximately 6% |
| Color: | Clear light yellow – clear dark orange |
| Flashpoint: | -4°F (-20°C) O.C. |
| Coverage: | 600 sq. ft. (211 sq. m/l) per gallon |
| Net Weight: | 750 grams per liter |
| Viscosity: | 35 ± 5 cps. |

Application Techniques

Surface Preparation: The bonding surface must be relatively clean and dry. Contaminated surfaces should be cleaned with a 50/50 Isopropyl Alcohol and water mixture. A clean lint-free cloth should be used.

Application: Shake primer 94 well before using. Apply a thin uniform coating to the bonding surface using the minimum amount that will fully coat the surface. Allow primer 94 to dry thoroughly before applying tape. This is usually accomplished in 5 minutes at room temperature. Be sure the primed surface remains free from contaminants prior to applying the tape. Porous surfaces may require 2 applications of primer 94 for uniform coverage and good adhesion. Allow first application of primer to dry before applying the second coat. Primer 94 may be applied with brush or swab. It can also be applied with a pressurized flow gun, knurled roller or other similar type of application equipment.

Clean up: Primer 94 can be removed with isopropyl alcohol. Vigorous scrubbing may be required.

Note: Carefully read and follow manufacturer's precautions and directions for use when handling cleaning solvents.

3M™ Tape Primer

94

Shelf Life One year from date of receipt by customer when the following conditions are observed:

- Keep 3M™ Tape Primer 94 in the original container.
- Transfer only a small amount into a work vessel for use.
- Keep original container tightly sealed to avoid solvent evaporation.

Precautionary Information Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

For Additional Information To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550 or visit www.3M.com/adhesives. Address correspondence to: 3M Industrial Adhesives and Tapes Division, 3M Center, Building 220-7E-01, St. Paul, MN 55144-1000. Our fax number is 651-733-9175. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

Important Notice 3M MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9002 standards.



Industrial Adhesives and Tapes Division
3M Center, Building 220-7E-01
St. Paul, MN 55144-1000



Recycled Paper
40% pre-consumer
10% post-consumer



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Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) PRIMER 94
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: 09/19/2006
Supersedes Date: 09/13/2005

Document Group: 06-8243-5

Product Use:
 Specific Use: SURFACE PRIMER

SECTION 2: INGREDIENTS

| <u>Ingredient</u> | <u>C.A.S. No.</u> | <u>% by Wt</u> |
|---|-------------------|----------------|
| CYCLOHEXANE | 110-82-7 | 45 - 50 |
| XYLENE | 1330-20-7 | 20 - 35 |
| ETHYL ALCOHOL | 64-17-5 | 5 - 10 |
| ETHYLBENZENE | 100-41-4 | 3 - 7 |
| CHLORINATED POLYOLEFIN | 68609-36-9 | 1 - 7 |
| ACRYLATE POLYMER (N.J. T.S REG. NO. 04499600-5984P) | Trade Secret | 1 - 5 |
| ETHYL ACETATE | 141-78-6 | 1 - 5 |
| EPOXY RESIN | 25068-38-6 | 0.1 - 1 |
| TOLUENE | 108-88-3 | < 0.5 |
| METHYL ALCOHOL | 67-56-1 | < 0.5 |

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Liquid

Odor, Color, Grade: Amber colored, solvent odor

General Physical Form: Liquid

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 allergic skin reaction. Contains a chemical or chemicals which can cause cancer. 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:

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

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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.

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.

Chemical (Aspiration) Pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish colored skin (cyanosis), and may be fatal.

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:

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

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

NOTE: This product contains ethanol. In IARC published Monograph No. 44, entitled, "Alcohol Drinking", the carcinogenicity of ethanol was determined based on chronic exposure to ethanol through human consumption of alcoholic beverages. This is not an expected effect during the foreseeable use of this product.

| <u>Ingredient</u> | <u>C.A.S. No.</u> | <u>Class Description</u> | <u>Regulation</u> |
|-------------------|-------------------|--------------------------|---|
| ETHYL ALCOHOL | 64-17-5 | Group 1 | International Agency for Research on Cancer |
| ETHYLBENZENE | 100-41-4 | Group 2B | International Agency for Research on Cancer |

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. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

| | |
|--|--|
| Autoignition temperature | <i>No Data Available</i> |
| Flash Point | Approximately -4 °F [<i>Test Method: Open Cup</i>] |
| Flammable Limits - LEL | Approximately 1 % |
| Flammable Limits - UEL | Approximately 6 % |
| OSHA Flammability Classification: | Class IB 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: 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: 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: 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. 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. 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. 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. No smoking while handling this material. Avoid breathing of vapors, mists or spray. 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.

7.2 STORAGE

Store away from heat. Keep container in well-ventilated area. Keep container tightly closed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust ventilation on open containers. Use in a well-ventilated area. 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.

8.2.2 Skin Protection

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: Fluoroelastomer (Viton), Polyvinyl Alcohol (PVA).

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. 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 | 300 ppm | Table Z-1 |
| ETHYL ACETATE | ACGIH | TWA | 400 ppm | |
| ETHYL ACETATE | OSHA | TWA | 400 ppm | Table Z-1 |
| ETHYL ALCOHOL | ACGIH | TWA | 1000 ppm | Table A4 |
| ETHYL ALCOHOL | OSHA | TWA | 1000 ppm | Table Z-1 |
| ETHYLBENZENE | ACGIH | TWA | 100 ppm | Table A3 |
| ETHYLBENZENE | ACGIH | STEL | 125 ppm | Table A3 |
| ETHYLBENZENE | OSHA | TWA | 100 ppm | Table Z-1A |
| ETHYLBENZENE | OSHA | STEL | 125 ppm | Table Z-1A |
| METHYL ALCOHOL | ACGIH | TWA | 200 ppm | Skin Notation* |
| METHYL ALCOHOL | ACGIH | STEL | 250 ppm | Skin Notation* |
| METHYL ALCOHOL | OSHA | TWA | 200 ppm | Skin Notation*; Table Z-1A |
| METHYL ALCOHOL | OSHA | STEL | 250 ppm | Skin Notation*; Table Z-1A |
| TOLUENE | ACGIH | TWA | 50 ppm | Skin Notation*; Table A4 |
| TOLUENE | CMRG | STEL | 75 ppm | Skin Notation* |
| TOLUENE | OSHA | TWA, Vacated | 100 ppm | |
| TOLUENE | OSHA | STEL, Vacated | 150 ppm | |
| TOLUENE | OSHA | TWA | 200 ppm | Table Z-2 |
| TOLUENE | OSHA | CEIL | 300 ppm | Table Z-2 |
| XYLENE | ACGIH | TWA | 100 ppm | Table A4 |
| XYLENE | ACGIH | STEL | 150 ppm | Table A4 |
| XYLENE | OSHA | TWA | 100 ppm | Table Z-1A |
| XYLENE | OSHA | STEL | 150 ppm | Table Z-1A |

* 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.

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:

Liquid

Odor, Color, Grade:

Amber colored, solvent odor

| | |
|---|--|
| General Physical Form: | Liquid |
| Autoignition temperature | <i>No Data Available</i> |
| Flash Point | Approximately -4 °F [<i>Test Method: Open Cup</i>] |
| Flammable Limits - LEL | Approximately 1 % |
| Flammable Limits - UEL | Approximately 6 % |
| Boiling point | 170 °F - 280 °F |
| Vapor Density | Approximately 0.0043 g/ml [<i>@ 100 °C</i>] |
| Vapor Pressure | Approximately 68 mmHg [<i>@ 25 °C</i>] |
| Specific Gravity | Approximately 0.82 |
| pH | Approximately 5.5 |
| Melting point | <i>Not Applicable</i> |
| Solubility In Water | Approximately 10 % |
| Evaporation rate | Approximately 6.4 [<i>Ref Std: XYLENE=1</i>] |
| Hazardous Air Pollutants | 34 - 36 % weight |
| Volatile Organic Compounds | Approximately 750 g/l |
| Percent volatile | Approximately 94 % |
| VOC Less H2O & Exempt Solvents | Approximately 755 g/l |
| Viscosity | 30 - 40 centipoise |

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> |
|-------------------|-------------------|
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |
| Hydrogen Chloride | 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.
 Combustion products will include HCl. Facility must be capable of handling halogenated materials.

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 |
|----------------|------------------|----------------|------------------|
| 70-0064-1371-3 | | 70-0160-4782-4 | 00-21200-46201-6 |
| 70-0160-5476-2 | 00-21200-23930-4 | 70-0160-5477-0 | 00-21200-23929-8 |
| 70-0160-5478-8 | 00-21200-23926-7 | 70-0160-5497-8 | 00-21200-24481-0 |
| 70-0160-5499-4 | 00-21200-24479-7 | 70-0160-5500-9 | 00-21200-24478-0 |
| 70-0160-5501-7 | 00-21200-24477-3 | 70-0160-5506-6 | 00-21200-26207-4 |
| 70-0160-5507-4 | 00-21200-26206-7 | 70-0160-5508-2 | 00-21200-26205-0 |
| 70-0705-7964-7 | 00-21200-23925-0 | 70-0707-4298-9 | 00-21200-31530-5 |

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 - No 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> |
|-------------------|------------------|----------------|
| ETHYLBENZENE | 100-41-4 | 3 - 7 |
| CYCLOHEXANE | 110-82-7 | 45 - 50 |
| XYLENE | 1330-20-7 | 20 - 35 |

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> |
|--|------------------|---|---------------|
| CYCLOHEXANE | 110-82-7 | Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals | Applicable |
| ETHYL ACETATE | 141-78-6 | Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals | Applicable |

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

| <u>Ingredient</u> | <u>C.A.S. No.</u> | <u>Classification</u> |
|-------------------|-------------------|-----------------------|
| ETHYLBENZENE | 100-41-4 | **Carcinogen |
| TOLUENE | 108-88-3 | *Developmental Toxin |

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

** WARNING: contains a chemical which can cause cancer.

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.

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.

Revision Changes:

Section 1: Division name was modified.

Copyright was modified.

Section 14: ID Number(s) and/or UPC(s) was added.

Section 14: ID Number heading was deleted.

Section 14: ID Number(s) was deleted.

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