

#17971

Mead

MATERIAL SAFETY DATA SHEET

Fan-Apart Adhesive

1. PRODUCT and COMPANY IDENTIFICATION

Mead Paper, Fine Paper Division

Revision Date: 08/15/95

P.O Box 2500, South Paint Street

Chillicothe, Ohio 45601 USA

General Information and Emergency Telephone No.: 614-772-3111 (24 hours)

For Transportation Emergencies Only, Chem-Tel, Inc.: 1-800-255-3924 (24 hours)

Product Name: Fan-Apart Adhesive

Product Use: Fan-Apart Adhesive for Mead Carbonless Paper

Synonyms: S-4; Edge Padding Adhesive; Padding Compound

Trade Names: —

CAS No.: Mixture; see ingredient CAS numbers below.

MSDS Code: 15, U.S. ANSI MSDS

2. COMPOSITION/INFORMATION ON INGREDIENTS

No.	Ingredient Name	CAS No.	% Weight
1	Propylene Glycol	57-55-6	10-30
2	Acrylic Copolymer	Trade Secret	10-30
3	Ethyl Alcohol (Denatured)	Mixture	5-10

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- Milky white liquid with a balsam odor.
- Combustible liquid. Keep away from heat and flame.

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Potential Health Effects

Health effects information reported herein is based on information known about this product, similar products, and/or product ingredients.

The numbers in [brackets] used in this section refer to ingredients in this product. See Section 2 for a listing of ingredients and their respective numbers. For supporting toxicological data, refer to Section 11.

Acute Effects:

Inhalation: Non-toxic by inhalation based on animal data. Not expected to be a respiratory irritant.

Eye: Not a primary eye irritant based on animal data. Any foreign material in the eye may cause slight irritation (e.g., redness and tearing).

Skin: Non-irritating to the skin based on animal studies. Information on the ingredients indicate that this product is non-toxic by skin absorption.

Ingestion: Exposure by ingestion is not expected to occur through normal industrial use. Accidental swallowing of small amounts will not cause significant harm. This product is non-toxic by ingestion based on animal data. Accidental or deliberate ingestion of large quantities could be harmful.

Chronic Effects:

None known for this product or similar products. Based on ingredient data, chronic ingestion may cause heart disease, and damage to the liver, kidney, pancreas, and brain/central nervous system [3]; may also cause anesthetic effects, changes in heart rhythms, and convulsions [1].

Does not cause allergic skin sensitization based on animal data. Repeated or prolonged skin exposure may cause dryness or dermatitis.

Carcinogenicity:

This product and its ingredients are not listed as carcinogenic by NTP, IARC, or OSHA.

Reproductive/Teratogenic Effects:

None known for this product or similar products. Ethyl alcohol (contained in denatured ethyl alcohol) is associated with adverse reproductive effects in humans. See Section 11 for more information.

Medical Conditions Aggravated By Exposure:

No data available for product or similar products. However, skin, liver, and kidney problems may be aggravated by exposure to a product ingredient [3].

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4. FIRST AID MEASURES

- Inhalation:** No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of vapors or mists, remove to fresh air and get medical attention if cough or other symptoms develop.
- Ingestion:** If swallowed, do NOT induce vomiting. If the subject is conscious, give them 1 or 2 glasses of water to dilute the chemical. Call a physician or poison control center immediately.
- Never give anything by mouth to an unconscious person. If the victim is unconscious, keep airway open and lay the victim on his or her side with the head lower than the body. Get immediate medical attention.
- Skin:** This material is not expected to produce skin irritation or to cause toxic systemic effects if absorbed by the skin. However, if contact occurs, wash skin with soap and flush thoroughly with plenty of water. If irritation develops, or other symptoms occur, obtain medical attention.
- Eye:** First check the victim for contact lenses and remove if present. Immediately flush eyes with plenty of water or normal saline for at least 15 minutes while holding eyelids open. If symptoms such as redness or irritation develop or persist, get immediate medical attention. Do not put any medication in the victim's eyes unless instructed by a physician.

Note to Physicians: This product contains ingredients which may aggravate pre-existing skin, liver, and kidney disorders [3].

5. FIRE FIGHTING MEASURES

Flash Point: 118-132 °F (47.8-55.5 °C)

Method: Tag Closed Cup Tester

Autoignition Temperature: Not available.

Flammable Limits:

Lower Limit: Not available.

Upper Limit: Not available.

Fire And Explosion Hazards:

This material is combustible; it is ignitable and may be ignited by heat or flame. This material will burn, but will not ignite readily.

Hazardous Combustion Products:

Hazardous combustion products include black smoke and toxic fumes of carbon dioxide and carbon monoxide.

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Common Extinguishing Methods:

For fires involving this product, use an extinguisher which is appropriate for combustibles and surrounding classes of fires. Use carbon dioxide, dry chemical, alcohol foam, or waterspray when fighting fires involving this material.

Fire Fighting Procedures:

Keep unnecessary people away; isolate hazard area and deny entry. Remove containers exposed to fire if possible, otherwise cool them from the side with water spray. Emergency equipment including self-contained breathing apparatus (SCBA) and full fire fighting turnout gear should be worn by fire fighters.

6. ACCIDENTAL RELEASE MEASURES

Eliminate all heat and ignition sources. Ventilate the area of the spill and isolate the area. When cleaning spills, wear appropriate personal protective equipment including splash-proof safety goggles and chemical resistant gloves (see Section 8).

Absorb small spills using inert material (e.g., paper towels, spill control pillows, absorbent particulate). Scoop up absorbed material and place in a container for disposal. In the event of a large spill, contain by diking with dry sand, sorbent booms, or other absorbent material. Prevent runoff into sewers, storm drains, surface waters, and soil.

Dispose of all material in accordance with local, state and federal regulations.

7. HANDLING AND STORAGE

Handling:

Do not handle near open flames, heat, sparks or other sources of ignition. Use in a well-ventilated area. Vapors can accumulate and ignite.

Storage:

Keep containers closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible materials (see Section 10). DO NOT store near heat, flames, or other sources of ignition. Avoid freezing or high temperatures that degrade adhesive quality.

8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Neither the Occupational Safety and Health Administration (OSHA) nor the American Conference of Governmental Industrial Hygienists (ACGIH) have developed exposure limits for this product. Exposure limits exist for the following ingredients:

<u>Ingredient Name</u>	<u>OSHA-PEL</u>	<u>ACGIH-TLV</u>
Ethyl Alcohol (Denatured)	1000 ppm; 1900 mg/m ³ (TWA)	1000 ppm; 1880 mg/m ³ (TWA)

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Engineering Controls:

No special ventilation requirements. Good room ventilation should be sufficient to control airborne levels. If operations generate vapor or mist, use adequate general or local ventilation to keep airborne concentrations below exposure limits.

Respiratory Protection:

Not normally required. If airborne contaminant levels may exceed recommended exposure limits, NIOSH/MSHA approved respiratory protection appropriate for employee exposure levels is recommended.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.1 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection:

Gloves: Recommend polyethylene or rubber gloves to prevent skin contact. Customer is responsible for determining suitability of gloves for the work environment and other solvents or chemicals that the employee may normally be exposed to. Replace gloves at first signs of deterioration (hardening, cracking, softening or swelling).

Other: Depending on the operation, labcoat, apron or other impermeable clothing may be appropriate. If adhesive contacts clothing, remove contaminated clothing and launder before reuse. (Dried latex is not easily removed from fabric. Immediate laundering is recommended before latex dries.)

Eye Protection:

Avoid contact with eyes.

Recommend use of safety glasses with side shields or goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance And Odor: Milky white liquid with a balsam odor.

Melting/Freezing Point: 30 °F

Boiling Point: Not available.

Specific Gravity/Density: 1.0

Vapor Density: Not available.

Vapor Pressure: 26.9 mmHg @ 20 °C

Solubility:

- Water: Dispersible.
- Other Solvents: Not available.

Decomposition Temperature: Not available.

pH: 5.8-6.1

Other: None.

10. STABILITY AND REACTIVITY

Stability:

Product is stable under normal conditions of use. However, it may decompose at elevated temperatures. Hazardous polymerization has not been reported to occur under normal temperatures and pressures. Product will not react with water.

Hazardous Decomposition Products:

Hazardous decomposition products include black smoke and toxic fumes of carbon dioxide and carbon monoxide. Thermal decomposition products of an ingredient in this product may include acrylic monomers.

Conditions To Avoid:

Avoid heat, high temperatures, pressure, or other conditions that might result in a hazardous situation.

Materials And Substances To Avoid (Incompatibility):

Ingredients in this product are incompatible with strong oxidizing agents. One ingredient is also incompatible with peroxides, strong acids, acid chlorides, acid anhydrides, alkali metals, and ammonia [3].

11. TOXICOLOGY INFORMATION

When available, toxicological data specific to this product are provided below. In the absence of product-specific data, data on similar product mixtures are summarized. In addition, ingredient data is included when: (1) product-specific data and similar product data are not available, or (2) the ingredient is not represented by the similar product mixture.

The ingredient(s) associated with the data described is indicated in [brackets] by ingredient number (see Section 2 for a listing of ingredients and their respective numbers.)

Acute Data:

Inhalation:

The inhalation LC_{50} for this product is $> 5,000 \text{ mg/m}^3$ (rat).

Eyes:

In an eye irritation study with rabbits, Fan-Apart Adhesive was found not to be a primary eye irritant.

Skin:

The dermal LD_{50} for this product is $> 2,000 \text{ mg/kg}$ (rabbit).

In a dermal irritation study in rabbits, Fan-Apart Adhesive was found not to be a primary skin irritant (primary irritation index of 0.0/8.0).

Ingestion:

The oral LD₅₀ for this product is > 5,000 mg/kg (rat).

Sensitization Data:

This product did not cause dermal sensitization in guinea pigs in a closed patch test.

Target Organ Effects Data (Subchronic/Chronic):

No data available for this product or similar products. The following data have been reported for product ingredients:

Carcinogenic Effects Data:

No data available for this product or similar products. The following data have been reported for product ingredients:

Mutagenic Effects Data:

No data available for this product or similar products. The following data have been reported for product ingredients:

Reproductive/Teratogenic Effects Data:

No data available for this product or similar products. The following data have been reported for product ingredients:

12. ECOLOGICAL INFORMATION**Ecotoxicological Information:**

No data available for this product or similar products.

Chemical Fate Information:

No data available for this product or similar products.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations.

CERCLA Reportable Quantity: This product does not contain any Reportable Quantity (RQ) Substances listed under 40 CFR 302.4.

RCRA Status: Under 40 CFR 261, it is the responsibility of the product user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste.

14. TRANSPORTATION INFORMATION

For rail and truck shipment, FanApart Adhesive can be reclassified as a combustible liquid and is excepted from the requirements of U.S. Department of Transportation Hazardous Materials Regulations [49 CFR 173.150(f)]. Mead provides FanApart Adhesive in packages designed for shipment of FanApart Adhesive by ground transportation only. **ATTENTION!** These cartons and inner containers must not be shipped by air or marine transportation.

Mead also provides FanApart Adhesive in a package designed for all modes of shipment -

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ground, air, and marine transportation. When shipped by air or marine transportation, FanApart Adhesive must be shipped per applicable hazardous materials regulations, as described below.

U.S. Department Of Transportation (DOT):

DOT Proper Shipping Name: Adhesives
DOT Hazard Class or Division: 3
Identification Number: UN 1133
Packing Group: III
Label Required: Flammable Liquid
DOT ERG Number: 26

Special Restrictions: Maximum net quantity is 60 L for passenger aircraft or railcar, and 220 L for cargo aircraft. May be stored "on deck" or "under deck" on both passenger and cargo vessels.

International Air Transportation Association (IATA):

IATA Proper Shipping Name: Adhesives
IATA Hazard Class: 3
Identification Number: 1133
Packing Group: III
IATA Label: Flammable Liquid

Special Restrictions: For passenger aircraft, follow IATA Packing Instruction 309; maximum net quantity per package is 60 L. For cargo aircraft, follow IATA packing instruction 310; maximum net quantity per package is 220 L.

International Maritime Dangerous Goods (IMDG) Code:

IMDG Proper Shipping Name: Adhesives
IMDG Hazard Class or Division: 3
Identification Number: UN 1133
Packing Group: III
IMDG Label: Flammable Liquid
IMDG Code Page Number: 3123

15. REGULATORY INFORMATION

Federal Regulations:

TSCA Inventory Status: All of the ingredients of this product are listed, or are exempt from listing, on the EPA TSCA Inventory.

SARA Title III Section 302 Extremely Hazardous Substances: This product does not contain any ingredients listed under 40 CFR 355.

SARA Section 311/312 Hazard Category: This product is a fire hazard (combustible liquid with a flash point at or above 100°F but less than 200°F) as defined under 40 CFR 370.2.

SARA Section 313 Toxic Chemicals Listing: This product does not contain any ingredients at or above de minimis concentrations which are listed under 40 CFR 372.65.

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CONEG Status: No lead, cadmium, mercury, or hexavalent chromium is intentionally added to this product. The combined concentration of lead, cadmium, mercury, and hexavalent chromium in this product does not exceed one hundred parts per million by weight.

State Regulations:

California Proposition 65: This product contains a chemical known to the State of California to cause cancer [ethyl acrylate, 140-88-5]. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm [formaldehyde, 50-00-0]. Ethyl acrylate and formaldehyde are present at trace/residual levels in the raw materials used to manufacture this product.

New Jersey Right-To-Know: This product contains one ingredient listed on the New Jersey Right-To-Know Hazardous Substances List at or above reportable concentrations [3]. The most predominant ingredients are Water, CAS No. 7732-18-5, and the ingredients listed as ingredient numbers 1-3 (See Section 2). The CAS No. for product ingredient #2 is a vendor trade secret.

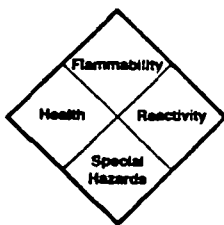
Pennsylvania Right-To-Know: This product contains two ingredient listed on the Pennsylvania Hazardous Substances List at or above reportable concentrations [1,3].

Massachusetts Right-To-Know: This product contains one ingredient listed on the Massachusetts Substance List at or above reportable concentrations [3].

16. OTHER INFORMATION

Hazard Ratings*

[Refer to Section 3 for additional label information, including target organ effects.]



NFPA:
Health- 1
Flammability- 2
Reactivity- 0
Special Hazards- None

Health
Flammability
Reactivity
Personal Protection

HMIS:
Health- 1
Flammability- 2
Reactivity- 0
Personal Protection- See Section 8

*A hazard rating has not been developed by NFPA for this product. The hazard ratings included in this MSDS have been developed based on NFPA and HMIS criteria as well as professional judgement. This information is intended solely for the use of individuals trained in these hazard rating systems.

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Preparation And Revision Information

Prepared by Mead, Human and Environmental Protection Department, 3475 Newmark Drive, Miamisburg, Ohio 45342 and the Mead Fine Paper Division, South Paint Street, Chillicothe, Ohio, 45601.

The information and recommendations presented in this MSDS are provided in good faith, and are based on sources believed to be accurate. NO WARRANTIES OF USE OR OTHERWISE ARE EXPRESSLY MADE OR IMPLIED FROM THIS INFORMATION. The information provided relates to this specific material, and may not be valid for this material if used in combination with any other materials or in any process. It is the user's responsibility to determine the suitability of this information for his/her own particular purposes.

SARA Section 313 Reporting

The following table lists the materials present in this product that are subject to SARA Section 313 Annual Toxic Chemical Release Reporting. It also lists the reportable quantities for spills under CERCLA Section 103.

Materials	% of Product by WT	CERCLA Reportable Quantity
Methyl Alcohol	<1%	5,000 pounds
Methyl Isobutyl Ketone	<1%	5,000 pounds

New Jersey Worker And Community Right-To-Know Act

The following information is provided to facilitate compliance with the container labelling requirements of the New Jersey Worker and Community Right-To-Know Act (N.J.A.C. 8:59). Shown below is a list of all hazardous substances contained in this product that are present in amounts greater than 1% (or greater than 0.1% for carcinogens, mutagens, and teratogens) and their CAS numbers. "Hazardous substances" are those defined by the New Jersey Department of Health Workplace Hazardous Substances List developed under Section 5 of the Act. The five most predominant ingredients by weight (or by volume), (whether hazardous substances or not), are indicated by an asterisk (*).

Hazardous Substance Ingredients	CAS Number
* Acrylic Latex	No CAS #
* Ethyl Alcohol	64-17-5
* Methyl Alcohol	67-56-1
Other Ingredients	CAS Number
* Water	7732-18-5
* 1,2-Propanediol	57-55-6

S-4 (Date Code After 010185)
Proposition 65 Warning

Proposition 65 Warning

The following is a list of materials that are present in this product that are subject to California Proposition 65 Cancer and/or Reproductive Toxicity Warning and Release Requirements. This material is known to the State of California to cause either cancer or birth defects/other reproductive harm as indicated below.

Material	Date Added To List	Carcinogen	Reproductive Toxin
Ethyl Acrylate	7/1/89	Yes	No

NOTE: Only residual trace amounts of ethyl acrylate are expected to be present in this product.

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MATERIAL SAFETY DATA SHEET

Section I - Product Identification

Trade Name or Code Ident.: S-4 (Date Code After 010185)
Chemical Name and Synonyms: Fan-Apart Adhesive For Trans/Rite® Carbonless Paper
Manufacturer's Name: Mead Paper, Fine Paper Division
Address:
P. O. Box 2500
South Paint Street
Chillicothe, OH 45601
Emergency Telephone No.: 614/772-3111

Section II - Hazardous Ingredients

Ingredient	CAS#	OSHA-PEL	OSHA-STEL	ACGIH-TLV
1,2-Propanediol	57-55-6	None Established.		
Acrylic Latex	None	None Established.		
<10.0% Ethyl Alcohol (Denatured with):	64-17-5	1000 ppm TWA	-----	1:100 ppm TWA
<1.0% Methyl Alcohol	67-56-1	200 ppm TWA	250 ppm TWA	200 ppm TWA
<1.0% Ethyl Acetate	141-78-6	400 ppm TWA	-----	400 ppm TWA
<1.0% Methyl Isobutyl Ketone	108-10-1	50 ppm TWA	75 ppm TWA	50 ppm TWA
<1.0% Heptane	142-82-5	400 ppm TWA	500 ppm TWA	400 ppm TWA

This adhesive also contains water and a balsam fragrance.
For other regulatory information, see Appendix A.

Section III - Physical Data

Boiling Point: N.A.
Specific Gravity (H₂O=1): 1.0
Vapor Density (Air=1): N.A.
% Volatiles By Volume (at 70°F): <10.0
Appearance and odor: Milky white liquid/balsam odor
Melting Point: 30°F
Vapor Pressure: Not Known
Solubility in H₂O, % By Weight: Dispersible
Evaporation Rate (Butyl Acetate=1): Not Known

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): 132°F Closed Cup ASTM-D-56
Extinguishing Media: Foam, CO₂, or Dry Chemical
Special Fire Fighting Procedures: None
Unusual Fire or Explosion Hazards: Excessive heat may cause disruptive pressure in closed container.
Flammable Limits
Upper N.A.
Lower N.A.

N.A. = Not Applicable

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Section V - Reactivity Data

Stability (Normal Conditions) Conditions to Avoid: None
 Stable: X Unstable:

Incompatibility (Materials to Avoid): None

Hazardous Decomposition Products: Burning will generate dense smoke, carbon monoxide and carbon dioxide gases.

Hazardous Polymerization Conditions to Avoid: None
 May Occur: Will Not Occur: X

Section VI - Health Hazard Information

Exposure Limits: No exposure limit has been established for this mixture. Observe the limits for components as listed in Section II of this MSDS.

Route(s) of Entry: Inhalation, accidental ingestion, or direct contact with skin.

Health Hazards:

Acute: Inhalation: Acute animal toxicity tests on a representative adhesive indicate it is non-toxic by inhalation. Concentrated vapors may cause slight sensory irritation.

Ingestion: These animal tests show it to be non-toxic by ingestion. Since these formulas contain latex and solvents, avoid ingestion! Skin & Eyes: These animal tests show the formulas NOT to be primary skin or eye irritants, nor a skin sensitizer. Repeated or prolonged contact may cause: defatting of the skin. Avoid Skin Contact!

Chronic: Chronic contact with solvents may result in development of dermatitis.

Carcinogenicity Status (NTP, IARC Monographs or OSHA Regulated): Not listed or regulated as a carcinogen. However, see also Appendix A, Proposition 65 Warning.

Signs and Symptoms of Exposure: Itching, drying or cracking of skin. Coughing and sore throat from concentrated vapors. Odor may cause nausea for some people.

Medical Conditions Generally Aggravated by Exposure: Prior respiratory or skin disorders may be aggravated by exposure to solvents.

Emergency First Aid Procedures: Inhalation: Remove from exposure and treat symptomatically and supportively. If difficulties persist, see a physician. Ingestion: Induce vomiting and treat symptomatically. Skin: Wash with mild soap and water. Eyes: Flush large amounts of water, occasionally lifting eyelids until all signs of mixture are gone (approximately 15 minutes). Get medical attention.

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled: Absorb spill with inert material (sand, vermiculite, paper) and transfer to containers for disposal. Remove saturated clothing and wash affected skin areas with soap and water.

Waste Disposal Method: Incinerate or landfill, according to applicable local, state and federal regulations for combustible liquids.

Precautions to be Taken in Handling and Storing: Keep container closed when not in use to avoid loss of solvent. Store away from sources of ignition. Avoid freezing or high temperatures that degrade adhesive quality.

Section VIII - Control Measures

Ventilation Requirements: General or local ventilation to control odor or vapor concentrations to below levels listed in Section II.

Respiratory Protection: Not normally required. Use NIOSH/MSHA approved respirator with organic vapor cartridge or canister where solvent vapor concentrations may exceed levels listed in Section II.

Eye Protection: Use safety goggles to protect against splashes when appropriate.

Protective Gloves: Recommend polyethylene or rubber gloves to prevent skin contact with solvent component. Customer is responsible for determining suitability of gloves for the work environment and other solvents or chemicals the employee may normally be exposed to. Replace gloves at first signs of deterioration (hardening, cracking, softening or swelling).

Other Protective Clothing or Equipment: Not normally required. Note: Latex is difficult to remove from clothing once it is dried. Recommend laundering while adhesive is still wet.

Work or Hygienic Practices: Use normal good industrial hygiene practices. DO NOT SMOKE in areas where combustible or flammable mixtures are in use.

Section IX - Shipping Information

U.S. (Domestic Shipments Only):

DOT Hazardous Materials Description and Identification Number: Cement, adhesive, N.O.S. (contains ethyl alcohol, 1,2-propanediol) NA1133

DOT Hazard Class: Combustible liquid DOT Label: None

International (Maritime):

IMDG Hazardous Material Description and Proper Shipping Name: Adhesives

IMDG Hazard Class: 3 IMDG Page Number: 3123

UN Identification Number: 1133 IMDG Label: Flammable Liquid

International (Air):

IATA Hazardous Material Description and Proper Shipping Name: Adhesives

IATA Class or Division: 3 UN or ID Number: 1133

IATA Label: Flammable Liquid

Special Restrictions: For passenger aircraft, follow IATA Packing Instruction 309; maximum net quantity per package is 60 liters. For cargo aircraft, follow IATA Packing Instruction 310, maximum net quantity per package is 220 liters.

NOTE: For international shipments, additional or other requirements may apply, check local or regional transportation competent authorities.

NOTICE: Data contained herein is provided in good faith and, to the best knowledge of the undersigned, represents accurate information. No warranties of use or otherwise are expressly made or implied from this data or information.

Date: July 17, 1990

Prepared by: Ann H. Crone, CIH

Signed:

Ann H. Crone

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Fig. 12