

Material Safety Data Sheet

Material Name: PB-300™

ID: OSS-001

*** Section 1 - Chemical Product and Company Identification ***

Chemical Name: Drysuit Adhesive

Synonyms: Not available

Manufacturer Information

O.S. Systems, Incorporated

Responsible Party: Paul H. Gunderson

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*** Section 2 - Composition / Information on Ingredients ***

CAS #	Component	Percent
78-93-3	Methyl Ethyl Ketone	80-85
Proprietary	Resin	<20
Proprietary	High Molecular Weight Polymer	<20

Component Information/Information on Non-Hazardous Components

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

*** Section 3 - Hazards Identification ***

Emergency Overview

DANGER ! Product is a flammable liquid. Toxic fumes and gases may be released during combustion. Contact may cause irritation to eyes and skin. Inhalation of vapors or mists may produce respiratory tract irritation and central nervous system depression.

Potential Health Effects: Eyes

This product is severely irritating to the eyes. Symptoms include redness, swelling, pain and tearing. Vapors may also cause eye irritation.

Potential Health Effects: Skin

This product may cause irritation to the skin. Prolonged or repeated contact with this product may dry and/or defat the skin. A component in this product may be absorbed through the skin.

Potential Health Effects: Ingestion

Ingestion of this product may cause nausea, vomiting and diarrhea. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury.

Potential Health Effects: Inhalation

This product may cause irritation to the respiratory system. Excessive inhalation of this material causes headache, dizziness, nausea and incoordination. Continued overexposure may lead to more serious adverse effects including unconsciousness.

HMIS Ratings: Health: 2* Fire: 3 Reactivity: 0 Pers. Prot.: Goggles, gloves, respiratory protection

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 4 - First Aid Measures ***

First Aid: Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. If product cannot be removed from eyes or if irritation persists, seek immediate medical attention.

First Aid: Skin

For skin contact, wash immediately with soap and water. If irritation persists get medical attention.

First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting unless instructed to do so by medical personnel.

First Aid: Inhalation

If vapor or mist from this material is inhaled, remove the person immediately to fresh air. Seek immediate medical attention if symptoms develop or persist.

First Aid: Notes to Physician

This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

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*** Section 5 - Fire Fighting Measures ***

Flash Point: -6°C (21°F)

Upper Flammable Limit (UFL): 11.4%

Auto Ignition: Not available

Rate of Burning: Not Available

General Fire Hazards

DANGEROUS when exposed to heat or flame. This material can be ignited by flame or spark under all normal atmospheric conditions. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. Irritating and toxic gases or fumes may be released during a fire. Vapors may form explosive mixture with air. Container may explode in heat of fire.

Hazardous Combustion Products

Oxides of nitrogen, low molecular weight hydrocarbons including carbon monoxide, carbon dioxide and possibly acrolein.

Extinguishing Media

Dry chemical, foam, carbon dioxide, water fog.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self contained breathing apparatus.

NFPA Ratings: Health: 2 Fire: 3 Reactivity: 0 Other:

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Containment Procedures

Contain the discharged material. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

Clean-Up Procedures

Do not flush spill to drain. Do not allow the spilled product to enter public drainage system or open water courses. Wear appropriate protective equipment and clothing during clean-up. Ventilate the contaminated area. Thoroughly wash the area with water after a spill or leak clean-up.

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Special Procedures

None.

*** Section 7 - Handling and Storage ***

Handling Procedures

Use non-sparking tools when opening or closing containers. Do not inhale vapors or mists of this product. Do not get this material in your eyes, on your skin, or on your clothing. Use this product with adequate ventilation. Keep this product from heat, sparks, or open flame. Wash thoroughly after handling.

Storage Procedures

Keep the container tightly closed and in a cool, well-ventilated place. Eliminate all sources of ignition.

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines

A: General Product Information

Attempts should be made to eliminate all contact with skin and eyes, and to limit inhalation exposure.

B: Component Exposure Limits

Methyl Ethyl Ketone (78-93-3)

ACGIH: 200 ppm TWA; 590 mg/m³ TWA

300 ppm STEL; 885 mg/m³ STEL

OSHA: 200 ppm TWA; 590 mg/m³ TWA

300 ppm STEL; 885 mg/m³ STEL

NIOSH: 200 ppm TWA; 590 mg/m³ TWA

300 ppm STEL; 885 mg/m³ STEL

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Engineering Controls

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear chemical goggles; face shield (if splashing is possible).

Personal Protective Equipment: Skin

Use impervious gloves. Butyl rubber gloves may be suitable, however it is recommended that the gloves be tested to determine suitability for prolonged contact. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.

Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively prevent buildup of vapors or mists, NIOSH approved respiratory protection must be provided.

Personal Protective Equipment: General

Use good industrial hygiene practices in handling this material.

*** Section 9 - Physical & Chemical Properties ***

Appearance:	Opaque	Odor:	Solvent
Physical State:	Liquid	pH:	Not available
Vapor Pressure:	101 mbar @ 20C	Vapor Density:	Heavier than air
Boiling Point:	175°F	Melting Point:	Not available
Solubility (H2O):	None	Specific Gravity:	0.85
Freezing Point:	Not available	Particle Size:	Not applicable
Softening Point:	Not applicable	Evaporation Rate:	Faster than n-Butyl Acetate
Viscosity:	Not available	Bulk Density:	Not available
Percent Volatile:	Not available	Molecular Weight:	Mixture

Physical Properties: Additional Information

None.

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

Stable

Chemical Stability: Conditions to Avoid

Keep container tightly closed. Keep away from heat, sparks, or open flame.

Incompatibility

This product may react with strong acids, bases and oxidizing agents.

Hazardous Decomposition

Oxides of nitrogen, low molecular weight hydrocarbons including carbon monoxide, carbon dioxide and possibly acrolein.

Hazardous Polymerization

Hazardous polymerization will not occur.

*** Section 11 - Toxicological Information ***

Acute and Chronic Toxicity

A: General Product Information

No information available for the product. This product contains the solvent methyl ethyl ketone which may be irritating to the eyes, skin and respiratory system and can cause central nervous system depression with symptoms including nausea, vomiting, headache, dizziness, fatigue and loss of coordination. Methyl ethyl ketone may exaggerate the toxicities of other solvents when exposed simultaneously. Peripheral neuropathy, characterized by numbness in the extremities, has been reported following overexposure to methyl ethyl ketone in combination with other solvents. Methyl ethyl ketone may be absorbed through intact skin. Prolonged contact with the skin can cause defatting dermatitis.

B: Component Analysis - LD50/LC50

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Methyl Ethyl Ketone (78-93-3)

Inhalation LC50 Rat : 23500 mg/m³/8H

Inhalation LC50 Mouse : 32 gm/m³/4H

Oral LD50 Rat : 2737 mg/kg

Oral LD50 Mouse : 4050 mg/kg

Dermal LD50 Rabbit : 6480 mg/kg

Carcinogenicity

A: General Product Information

No information available for the product.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Epidemiology

No information available for the product.

Neurotoxicity

No information available for the product. Chronic overexposure to solvent vapors may produce nervous system damage including intelligence and behavioral changes, loss of memory, fatigue, reduced awareness and damage to hearing and eyesight.

Mutagenicity

No information available for the product.

Teratogenicity

No information available for the product. Methyl ethyl ketone has been reported to cause delayed fetal development and birth defects in offspring of animals overexposed to the chemical during pregnancy.

Other Toxicological Information

None.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

No additional information available.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Methyl Ethyl Ketone (78-93-3)

LC50 (96 hr) fathead minnow: 3220 mg/L.; LC50 (96 hr) bluegill: 1690 mg/L.; EC50 (48 hr) water flea: 520 mg/L.; EC50 (25 min) Photobacterium phosphoreum: 51.9 mg/L Microtox test.; EC50 (30 min) Photobacterium phosphoreum: 3373 mg/L Microtox test.

Environmental Fate

No information available for the product.

* * * Section 13 - Disposal Considerations * * *

US EPA Waste Number & Descriptions

A: General Product Information

If discarded, as sold, this product is considered a RCRA ignitable waste, D001. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

B: Component Waste Numbers

Methyl Ethyl Ketone (78-93-3)

RCRA: waste number U159 (Ignitable waste; Toxic waste)
waste number D035; regulatory level = 200.0 mg/L

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

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*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Methyl ethyl ketone ,Mixture RQ

Hazard Class: 3

UN/NA #: UN1193

Packing Group: II

Required Label(s): FLAMMABLE LIQUID

Additional Info.: Methyl ethyl ketone has a reportable quantity (RQ) of 5000 lbs (2270 kg). For shipments exceeding this in a single container, the letters RQ must accompany the proper shipping name.

International Transportation Regulations

No additional information.

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

No additional information.

B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Methyl Ethyl Ketone (78-93-3)

SARA 313: form R reporting required for 1.0% de minimis concentration

CERCLA: final RQ = 5000 pounds (2270 kg)

State Regulations

A: General Product Information

No additional information.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Methyl Ethyl Ketone	78-93-3	Yes	Yes	Yes	Yes	Yes	Yes

Other Regulations

A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Methyl Ethyl Ketone	78-93-3	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Methyl Ethyl Ketone	78-93-3	1% item 1045 (1133)

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*** Section 16 - Other Information ***

Other Information

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; TLV = Threshold Limit Value; NFPA = National Fire Protection Association; HMIS = Hazardous Material Information System; CFR = Code of Federal Regulations; HEPA = High Efficiency Particulate Air; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; SARA = Superfund Amendments and Reauthorization Act

This is the end of MSDS # OSS-001