

# MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY:

POLYURETHANE PARTING COMPOUND

The Perma-Flex Mold Co.  
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This Material Safety Data Sheet is principally directed to managerial, safety, hygiene and medical personnel. The description of physical, chemical and toxicological properties and handling advice is based on experimental results and past experience. It is intended as a starting point for the development of health and safety procedures.

This Material Safety Data Sheet (MSDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200).

## SECTION 1. PRODUCT IDENTIFICATION

<b>MATERIAL NAME (Trade Name):</b>	POLYURETHANE PARTING COMPOUND
<b>CHEMICAL FAMILY:</b>	Anionic Soap Liquid
<b>CHEMICAL NAMES AND SYNONYMS:</b>	Potassium Oleate (CAS No. 143-18-0) Soap Emulsion
<b>FORMULA:</b>	Not applicable, a mixture
<b>COMPOSITION:</b>	This product is a potassium oleate soap completely saponified. Also contains emulsion copolymer of organic phosphate esters and cross-linked polyolefins in combination with otherwise modified fatty acids. The specific chemical identities of the non toxic additives of this formulation are considered a trade secret.
<b>LABEL WARNING: CAUTION:</b> May cause eyes, skin, throat or nose irritation. Do not ingest. Contains MINERAL SPIRITS and SILICONE FLUIDS. Wear protective clothing and devices. Use with adequate ventilation.	

## SECTION 1-A. HAZARDOUS COMPONENTS

**EXPOSURE LIMITS:** No exposure limit has been established for this product. However, the following exposure limits apply for products constituents:

CHEMICAL NAME	CAS NO.	OSHA PEL	ACGIH TLV	% (Optional)
Mineral Spirits	64742-47-8	100 ppm	100 ppm	>2%
Polydimethylsiloxane	63148-62-9	n.e.	n.e.	8%

## SECTION 2. PHYSICAL PROPERTIES

<b>BOILING POINT (°F):</b>	>212°F	<b>SPECIFIC GRAVITY (Water=1):</b>	1.0
<b>VAPOR PRESSURE (68° F mm. Hg.):</b>	<1	<b>PERCENT VOLATILE (BY WEIGHT):</b>	71.0
<b>VAPOR DENSITY(AIR =1):</b>	Not determined	<b>EVAPORATION RATE (Ether= 1):</b>	Not applicable
<b>SOLUBILITY IN WATER:</b>	84%	<b>MELTING POINT:</b>	Not available
<b>APPEARANCE AND ODOR:</b>	Free flowing off white liquid, mild soap odor.		
<b>FLASH POINT:</b>	180°F COC		
<b>FLAMMABLE LIMITS:</b>	% LEL Not determined	UEL Not determined	

## SECTION 3. FIRE HAZARD

This material is a liquid which burns with difficulty, but will support combustion.

#### SECTION 4: FIRE FIGHTING TECHNIQUES

Use standard fire fighting techniques to extinguish fires involving this material: use water spray, dry chemical or carbon dioxide.

Fire fighters should wear full face NIOSH-OSHA approved self-contained breathing apparatus and impervious protective clothing. If not leaking, keep fire exposed containers cool with a water spray to prevent rupture due to excessive heat. High pressure water hose may spread product from broken containers increasing contamination and fire hazard.

If the product starts to decompose under fire conditions, vapors from combustion are toxic. Hazardous/thermal decomposition products can be severely irritating to the eyes, respiratory tract and may cause breathing difficulty.

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate non-essential personnel from the fire area. Contaminated buildings, areas and equipment must not be used until they are properly decontaminated.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** High temperatures > 150°C in presence of air may generate formaldehyde and formic acid.

#### SECTION 5: TOXICOLOGY

This product was evaluated 04/19/87.

**SKIN CONTACT:** Minimal irritant to rabbit skin.

**EYE CONTACT:** Mild irritant to rabbit eyes.

**ORAL:** Acute oral LD50 is >34,600 mg/kg in female rats.

**DERMAL:** Acute dermal LD50 is >10,200 mg/kg in rabbits.

#### SECTION 6: HUMAN HEALTH HAZARDS

**EYE CONTACT:** The alkalinity of this product is irritating to the eyes.

**SKIN CONTACT:** Prolonged contact may irritate and defat the skin.

**INHALATION:** No toxic effects are expected.

**INGESTION:** Ingestion is not expected in industrial use.

**ACUTE EFFECTS OF EXPOSURE:** Refer to routes of exposure above.

**CHRONIC EFFECTS OF EXPOSURE:** None known.

There is no data available which address medical conditions which are generally recognized as being aggravated by exposure to this product.

This material does not contain any ingredient listed by IARC, NTP or OSHA as carcinogens in amounts exceeding 0.1%.

#### SECTION 7: FIRST AID

**EYE CONTACT:** In case of contact, wipe out carefully with dry tissue and immediately flush eyes with large amounts of water for 15 minutes lifting upper and lower eyelids frequently to ensure rinsing of the entire surface of the eye and lids with water. Obtain medical attention if irritation occurs.

**SKIN CONTACT:** Remove excess material from the skin with a dry tissue and apply a waterless skin cleaner and remove. Flush skin and wash well with soap and water. Obtain medical attention if irritation occurs. Remove contaminated clothing and shoes at once and wash before reuse.

**INGESTION:** Obtain medical attention at once. If ingested, do not induce vomiting but give lots of water. Have medical personnel determine if evacuation of stomach is necessary. If unavailable, contact nearest Poison Control Center. Do not give anything by mouth to an unconscious or convulsing person.

**INHALATION:** Remove to fresh air. Seek medical attention if respiratory irritation occurs or breathing becomes difficult. Keep affected person warm and at rest. If breathing has stopped, perform artificial respiration and get medical attention immediately.

#### SECTION 8: INDUSTRIAL HYGIENE

The recommendations described in this section are provided as general guidance for minimizing exposure when handling this product. Because use conditions will vary depending upon customer applications, specific safe handling procedures should be developed by a person knowledgeable of the intended use conditions and equipment. During the development of safe handling procedures, consideration should be given to the need for cleaning of equipment and piping systems to render them non hazardous before maintenance and repair activities are performed.

**ENGINEERING CONTROLS:** In those cases where engineering controls are indicated by the use conditions, the following traditional exposure control techniques may be used to effectively minimize employee exposure. Local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment. Eyewash stations and safety showers should be easily accessible.

**INGESTION:** All food should be kept in a separate area away from the storage and use, location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Before eating, hands and face should be thoroughly washed.

**SKIN CONTACT:** Skin contact should be minimized through the use of gloves and suitable long-sleeved clothing selected with regard for use condition exposure potential.

**EYE CONTACT:** Eye contact should be avoided through the use of chemical safety glasses, goggles or a face shield selected with regard for use condition exposure potential.

**INHALATION:** If use conditions generate airborne contamination, the material should be handled in an open (e.g. outdoor) or well ventilated area. Where adequate ventilation is not available, use NIOSH-approved organic vapor respirators with dust, mist and fume filter to reduce exposure. Where exposure potential under the use conditions necessitates a higher level of protection, use a positive-pressure, air-supplied respirator.

**OTHER:** Prolonged contact should be avoided. Following good housekeeping and personal hygiene. Food, beverages and tobacco products should not be carried, stored or consumed where this material is in use. Before eating, drinking or smoking, wash face and hands with soap and water. Eyewash equipment and safety shower should be provided in areas of potential exposure.

**EXPOSURE LIMITS:** No exposure limit has been established for this product. Exposure limits for its hazardous components, if any, are listed in Section 2.

#### SECTION 9: CHEMICAL REACTIVITY

Relatively non reactive.

#### SECTION 10: STABILITY

Stable at ambient temperature and atmospheric pressure.

**Hazardous Decomposition or By-products:** Oxides of carbon, nitrogen, sulfur, SO<sub>2</sub>, carbon monoxide, carbon dioxide, formaldehyde and various hydrocarbon fragments.

**Conditions to avoid:** Avoid open flame, welding arcs and other high temperature sources. High temperatures >150°C in presence of air may generate formaldehyde and formic acid. Aqueous solution will corrode steel.

**Hazardous Polymerization:** Will not occur.

**Conditions to avoid:** Not applicable.

#### SECTION 11: SPILL HANDLING

Make sure all personnel involved in a spill cleanup follow good industrial hygiene practices (refer to Section 2 Hazardous Components and Section 8 Industrial Hygiene). Any person entering either a significant spill area or an unknown concentration of vapor should use a positive-pressure, self-contained breathing apparatus or a positive-pressure, supplied-air respirator with escape pack.

Eliminate all sources of ignition. Stop discharge and contain spill using dike or other means. If container is damaged, transfer to a glass or plastic container. Use adequate ventilation and wear a NIOSH approved respirator suitable for level of exposure. In addition to protective clothing and equipment, wear impervious boots. Small spills can be handled routinely. Use the following procedures for salvage or disposal:

Absorb spill with sand or Fuller's earth. Sweep up and place into an appropriate chemical waste container. Flush spill area with water. Clean up spills thoroughly as residue is slippery. Dike all spills to prevent material from flowing into public and municipal waterways.

**WASTE DISPOSAL METHOD:** See Section 14 Disposal of Unused Material.

**SECTION 12: CORROSIVITY TO MATERIALS OF CONSTRUCTION**

Non corrosive to materials commonly used in the construction or process equipment, storage and shipping containers. Aqueous solutions of this product will corrode steel.

**SECTION 13: STORAGE REQUIREMENTS**

Store in a cool, dry, well ventilated area in well marked, tightly closed containers under 75°F. Exercise due caution to prevent damage to the container. KEEP FROM FREEZING. FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.

Do not pour, spill or store material near heat, spark sources or open flame. Avoid contact with easily combustible materials.

**SECTION 14: DISPOSAL OF UNUSED MATERIAL**

Material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable regulations under the Resource Conservation and Recovery Act. NOTE: State and local regulations may be more stringent than Federal.

Observe all local, state and federal laws and regulations regarding disposal, spill, cleanup, removal or discharge. Recycle if feasible or allow material to solidify and dispose of as a solid non-hazardous biodegradable soap in authorized facilities in accordance with federal, state and local regulations. Do not mix with burnable waste material.

**HAZARDS TO BE AVOIDED:** Do not flush into stream, other bodies of water or into storm sewer.

**SECTION 15: DISPOSAL OF CONTAINERS**

Dispose of empty containers according to any applicable regulations under the Resource Conservation and Recovery Act. NOTE: State and local regulations may be more stringent than Federal.

Empty containers may contain residual material (vapor, liquid or solids). Do not reuse containers.

**SECTION 16: REGULATORY INFORMATION**

TSCA: This material of its components are listed on the TSCA Chemical Substance Inventory and is in compliance with all applicable rules and orders.

SARA: This material does not contain any substances on the list of Toxic Chemicals subject to Section 313 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III).

RCRA Waste Number: Not applicable

Department of Transportation (DOT):

Proper shipping name:

Compound, Soap Base,  
Liquid, Rubber Lubricating

Technical Name(s):

None

Hazard Class:

None - non-hazardous

UNNA Number:

Not applicable

Hazard Label Required:

None

Hazardous Substance RQ (Name):

Not applicable

Inhalation hazard:

Not applicable

CALIFORNIA PROPOSITION 65: No components listed.  
MASSACHUSETTS SUBSTANCE LIST: No components listed.  
PENNSYLVANIA HAZARDOUS SUBSTANCE LIST: No components listed.  
NEW JERSEY R-T-K HAZARDOUS SUBSTANCE LIST: No components listed.

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Hazardous Materials Identification System (HMIS) (for material as packed):

Health Hazard =	1
Flammability Hazard =	1
Reactivity Hazard =	0
Personal Protection =	0

**ADDITIONAL INFORMATION**

n.e. = Not established; n.a. = Not applicable/not available; n.d. = Not determined; TLV = Threshold Limit Value; PEL = Permissible Exposure Limit; OSHA = Occupational Safety and Health Administration; ACGIH = American Conference of Governmental Industrial Hygienists; LEL = Lower Explosive Limit; UEL = Upper Explosive Limit; ppm = parts per million; TSCA = Toxic Substance Control Act; SARA = Superfund Amendments and Reauthorization Act; DOT = Department of Transportation.

**DISCLAIMER OF LIABILITY**

A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe work-place, all aspects of an individual operations should be examined to determine if, or where, precautions, in addition to those described herein, are required. Any health hazard and safety information contained herein should be passed on to your customers or employees, as the case may be. THE PERMA-FLEX MOLD COMPANRY must rely on the user to utilize the information we have supplied to develop work practices and employee instructional programs for the individual operations and regulations.

**DISCLAIMER OF LIABILITY:** This information relates to the specific material designated and may not be valid for such material used in combination with any other material or in any process. Such information contained herein is to the best of our knowledge and belief accurate and reliable as of the date compiled.

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