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**MATERIAL SAFETY DATA SHEET**MSDS  
EP4920 MEK-P  
Polyester Catalyst  
Print Date  
01/09/08**EP4920**Back to our homepage at: [www.eagerplastics.com](http://www.eagerplastics.com)**SECTION 1 - IDENTIFICATION OF THE PRODUCT AND THE COMPANY**

<b>PRODUCT NAME</b>	EP4920 Polyester Catalyst	<b>TELEPHONE</b>	773-927-3484
<b>FROM</b>	Eager Polymers	<b>EMERGENCY (24hr)</b>	773-807-4314
<b>ADDRESS</b>	3350 W. 48 <sup>th</sup> Place, Chicago, IL 60632	<b>CAS NO.</b>	See Section II
<b>CHEMICAL NAME</b>	Methyl Ethyl Ketone Peroxide (MEKP)	<b>CHEMICAL FORMULA</b>	Mixture of many.
<b>CHEMICAL FAMILY</b>	Organic Peroxide		

**SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS**

<b>COMPONENTS</b>	<b>CAS NO.</b>	<b>%</b>
Methyl Ethyl Ketone Peroxide	1338-23-4	34
Dimethyl Phthalate	131-11-3	43
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	20
Hydrogen Peroxide	7722-84-1	01
Methyl Ethyl Ketone	78-93-3	02
Water	7732-18-5	01

**SECTION 3 - HAZARD IDENTIFICATION OF THE PREPARATION**

<b>PHYSICAL HAZARDS</b>	Organic Peroxide. Decomposition
<b>HEALTH HAZARDS</b>	Severe Irritant
<b>EXPOSURE LIMITS</b>	The ACGIH Ceiling STEL is 1.5 mg/m <sup>3</sup> (0.2 ppm) for Methyl Ethyl Ketone Peroxide.
<b>ROUTES OF EXPOSURE</b>	
<b>Skin Absorption</b>	Severe skin irritant, causes redness, blistering, and edema.
<b>Eye Contact</b>	Eye contact causes severe corrosion and may cause blindness.
<b>Ingestion</b>	Human systemic effects by ingestion: changes in structure or function of esophagus, nausea, or vomiting, and other gastrointestinal effects.
<b>Inhalation</b>	Moderately toxic by inhalation.
<b>EFFECTS OF OVER-EXPOSURE</b>	Prolonged inhalation of vapors may cause mucous membrane irritation and vertigo. There are no known medical conditions, which are recognized as being aggravated by exposure.

**SECTION 4 - FIRST-AID MEASURES**

<b>Skin</b>	Immediately remove any contaminated clothing. Wash contaminated area thoroughly with soap and copious amounts of water for at least 15 minutes. If irritation or adverse symptoms develop seek medical attention.
<b>Eyes</b>	Remove any contact lenses at once. Flush eyes with water for at least 15 minutes. Ensure adequate flushing by separating the eyelids with fingers. If irritation or adverse symptoms develop seek medical attention.
<b>Ingestion</b>	Contact a physician, hospital or Poison Control Center at once. DO NOT INDUCE VOMITING.
<b>Inhalation</b>	Remove to fresh air, if coughing, breathing becomes labored, irritation develops or other symptoms develop, seek medical attention at once, even if symptoms develop several hours after the exposure.

**SECTION 5 - FIRE-FIGHTING MEASURES**

<b>FLASH POINT: (C.O.C) &gt;200°F</b>	<b>FLAMMABLE LIMITS:</b> Unknown
<b>FIRE EXTINGUISHER MEDIA</b>	Water from a safe distance – preferably with a fog nozzle. In case of very small fires, other means such as carbon dioxide, foam or dry chemical extinguishers may be effective. Dry chemical combined with MEKP formulations may re-ignite. Light water additives may be particularly effective at extinguishing MEKP fires.
<b>SPECIAL FIRE FIGHTING PROCEDURES</b>	Firemen should be equipped with protective clothing and SCBA's. In case of fire near storage area, cool the containers with water spray. If dry chemical is used to extinguish an MEKP fire, the extinguished area must be thoroughly wetted down with water to prevent re-ignition.
<b>UNUSUAL FIRE AND EXPLOSION</b>	The heat of decomposition of the peroxides adds to the heat of the fire. Dry chemical fire

**HAZARDS**

extinguishing agent may catalyze the decomposition.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**STEPS TO BE TAKEN IN EVENT OF SPILL OR RELEASE**

Dike to prevent runoff from entering drains, sewers, streams, etc. and transfer into containers. Spilled material should be swept up with an inert, moist diluent such as perlite, vermiculite, or sand, and placed in a clean polyethylene drum or a polyethylene pail. Wet drum or pail with water prior to sealing containers.

## SECTION 7 - HANDLING AND STORAGE

**HANDLING AND STORING**

Keep containers closed to prevent contamination. Rotate stock using the oldest material first. The activity and stability of MEKP is directly related to the shipping and storage temperature history. Cool storage at 80°F or below is recommended for longer shelf life and stability. Prolonged storage at elevated temperatures of 100°F and higher will cause product degradation, gassing and potential container rupture which can result in a fire and/or explosion.

**OTHER PRECAUTIONS**

MEKP should never be added to hot solvents or monomers as a violent decomposition and/or reaction may result. When using spray equipment, never spray raw MEKP onto curing or into raw resin or flues. Keep MEKP in its original container. DO NOT STORE WITH FOOD OR DRINK. DO NOT USE NEAR FOOD OR DRINK. Unmixed, uncontaminated material, remaining at the end of the day, shall be returned to a proper organic peroxide storage area.<sup>[1]</sup> Under no circumstances should material be returned to the original container.<sup>[2]</sup>

## SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

**RESPIRATORY PROTECTION**

If airborne concentrations are expected to exceed acceptable levels wear a NIOSH/MSHA approved air-purifying respirator with an organic vapor cartridge or canister. When using respirators refer to OSHA's 29CFR 1910.134.

**VENTILATION**

Mechanical, general.

**EYE PROTECTION**

Safety goggles recommended. Permanent eyewash is highly recommended.

**HAND PROTECTION**

Protective gloves recommended, solvent resistant, such as butyl rubber, nitrile or neoprene.

**OTHER**

A safety shower and eyewash is recommended when the risk of a significant exposure exists.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>BOILING POINT °F</b>	Unknown	<b>SPECIFIC GRAVITY (Water=1)</b>	1.1
<b>VAPOR PRESSURE mm Hg.</b>	Unknown	<b>% VOLATILE BY VOLUME</b>	Unknown
<b>VAPOR DENSITY (Air=1)</b>	> 1		
<b>SOLUBILITY IN WATER</b>	Slight	<b>EVAPORATION RATE</b>	Unknown
<b>APPEARANCE AND ODOR</b>	Water white liquid with a slight odor.		

## SECTION 10 - STABILITY AND REACTIVITY

**INCOMPATIBILITY (Materials to avoid)**

Dimethylaniline, cobalt naphthenate and other promoters, promoted resins, accelerators, reducing agents, strong acids, bases, metals, metal alloys and salts, sulfur compounds, amines or any hot material.

**STABILITY**

Stable when kept in original, closed container, out of direct sunlight at temperatures below 80°F.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Decomposition products are flammable. Acrid smoke and irritating fumes.

**HAZARDOUS POLYMERIZATION**

Will not occur.

## SECTION 11 - TOXICOLOGICAL INFORMATION

**Methyl Ethyl Ketone Peroxide****Hazard Data:**

**Inhalation:** Rat--LC<sub>50</sub>: 200 ppm/4 hr, lung, thorax, respiration, or dyspnea; Mouse--LC<sub>50</sub>: 170 ppm/4 hr, lung, thorax, respiration, or dyspnea.

**Intraperitoneal:** Rat--LD<sub>50</sub>: 65 mg/kg, behavioral, muscle weakness behavioral, ataxia.

**Oral:** Rat--LD<sub>50</sub>: 484 mg/kg; Mouse--LD<sub>50</sub>: 470 mg/kg; Human--TD<sub>L0</sub>: 480 mg/kg, changes in structure or function of esophagus gastrointestinal, nausea or vomiting gastrointestinal.

**Skin:** Rabbit--LD<sub>50</sub>: 500 mg.

**Dimethyl Phthalate****Hazard Data:****Inhalation:** Cat--LC<sub>Lo</sub>: 9300 mg/m<sup>3</sup>/6.5 hr.**Intraperitoneal:** Mouse--LD<sub>50</sub>: 1380 mg/kg.**Oral:** Rat & Mouse--LD<sub>50</sub>: 6800 mg/kg, somnolence behavioral, withdrawal nutritional and gross metabolic, weight loss or decreased weight gain; Dog--LD: >1400 mg/kg; Rabbit--LD<sub>50</sub>: 4400 uL/kg.**Subcutaneous:** Mouse--LD<sub>Lo</sub>: 6500 mg/kg, dyspnea lung, thorax, respiration, or cyanosis.**2,2,4-Trimethyl-1,3-pentanediol diisobutyrate****Hazard Data:****Oral:** Rat--LD<sub>50</sub>: >3200 mg/kg**Hydrogen Peroxide****Hazard Data:****Inhalation:** Mouse--LC<sub>Lo</sub>: 227 ppm; Rat--TC<sub>Lo</sub>: 67 ppm/6hr/6W-1, dermatitis, irritative of the skin.**Intraperitoneal:** Mouse--LD<sub>50</sub>: 880 mg/kg.**Intravenous:** Rabbit--LD<sub>50</sub>: 15 gm/kg, behavioral, convulsions or effect on seizure threshold.**Oral:** Rat--LD<sub>50</sub>: 376 mg/kg, gastrointestinal, peritonitis blood, pigmented or nucleated red blood cells; Mouse--LD<sub>50</sub>: 2 mg/kg.**Subcutaneous:** Rat--LD<sub>50</sub>: 620 mg/kg; Mouse--LD<sub>50</sub>: 1072 mg/kg.**Skin:** Rat--LD<sub>50</sub>: 4060 mg/kg, lung, thorax, respiration, or pulmonary emboli; Rabbit--LD<sub>Lo</sub>: 500 mg/kg, behavioral, convulsions or effect on seizure threshold.**Methyl Ethyl Ketone****Hazard Data:****Eye:** Human: 350 ppm.**Inhalation:** Rat--LC<sub>50</sub>: 23500 mg/m<sup>3</sup>/8hr.**Intraperitoneal:** Rat--LD<sub>50</sub>: 607 mg/kg; Mouse--LD<sub>50</sub>: 616 mg/kg.**Oral:** Rat--LD<sub>50</sub>: 2737 mg/kg; Mouse--LD<sub>50</sub>: 4050 mg/kg.**Skin:** Rabbit--LD<sub>50</sub>: 6480 mg/kg.

Severely irritating to the skin, may cause redness, blistering, and edema. May be harmful if absorbed through the skin. Irritating to the eyes may cause severe corrosion and blindness. Harmful if swallowed. May be harmful if inhaled. Prolonged inhalation of vapors may cause mucous membrane irritation and vertigo.

<b>SECTION 12 - ECOLOGICAL INFORMATION</b>
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**Ecotoxicity:** Methyl ethyl ketone peroxide: EC<sub>50</sub> (Guppy), 44.2 mg/L/96 hr; EC<sub>50</sub> (alga), 42,700 ug/L/96 hr.

**Environmental Fate:** Methyl ethyl ketone peroxide (MEKP) was evaluated for biodegradability in a closed bottle system and was reported to be readily biodegradable. An EC<sub>50</sub> of 16mg MEKP/L activated sludge was reported in an activated sludge respiration inhibition test.

<b>SECTION 13 - DISPOSAL CONSIDERATIONS</b>
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Prevent material from entering drains, sewers, streams, etc.

Immediately dispose of waste material at a RCRA approved hazardous waste management facility in accordance with federal, state and local regulations.

<b>SECTION 14 - TRANSPORT INFORMATION</b>
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**DOT Shipping Name:** ORGANIC PEROXIDE TYPE D, LIQUID  
(METHYL ETHYL KETONE PEROXIDE, ≤45%)

**DOT Hazard Class:** 5.2

**UN/NA ID No.:** UN3105

**DOT Packing Group:** PG II

**DOT RQ** RQ

**2000 ERG GUIDE NO.:** 145

<b>SECTION 15 - REGULATORY INFORMATION</b>
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The following chemicals are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Percent</u>
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Dimethyl Phthalate	131-11-3	43
Methyl Ethyl Ketone	78-93-3	02

**Reportable Quantity**

2-Butanone Peroxide (MEKP): 10 lbs (4.54 kg)

**TSCA Status**

The ingredients in this product are listed in the US Toxic Substances Control Act (TSCA) Inventory.

**Canadian Domestic Substances List (DSL)**

The ingredients in this product are listed in the Canadian DSL Inventory.

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

The ingredients in this product are listed in the European EINECS Inventory.

**Australian Inventory of Chemical Substances (AICS)**

The ingredients in this product are listed in the Australian AICS Inventory.

**Status of Carcinogenicity**

Not recognized as a carcinogen by the IARC, NTP or OSHA.

**SECTION 16 - OTHER INFORMATION****VOC Information**

Using ASTM Test Method D-2369-87, but at 40°C (since MEKP decomposes rapidly above 100°C and is not a VOC), MEKP-9 contains 2.4% VOC, by weight, or 27 grams per liter. For more information call Norac.

**NFPA 432 Organic Peroxide Classification**

Class III

**NFPA 704 Rating**Health

3

Flammability

2

**HMIS Rating**Reactivity

2

Health

3

Flammability

2

Reactivity

2

**DISCLAIMER OF LIABILITY**The information in this MSDS was obtained from sources, which we believe are reliable. **However, the information is provided without any warranty, express or implied, regarding its correctness.**The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. **For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product.**

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

[\[1\]](#) See CCR Title 8 Section 5461, NFPA 432, and UFC (91) Sec. 80.307.[\[2\]](#) See NFPA 14-3