

Material Safety Data Sheet (MSDS)

Complies with OSHA 29 CFR 1910.120

Kerox ME-50 MEKP

Section 1 - Product Identification			
Manufacturers/Distributors Name : Kerox Chemicals Pvt. Ltd.		Date Prepared : June 03, 2004 Last Update : June 08, 2004	
Address : Kerox Chemicals Pvt. Ltd. No. 95, Basavanapura, Bannerghatta Road Bangalore – 560 083, INDIA		Emergency Phone # : (+91-80) 2842-9532 / 9774 / 9775 Email : keroxoffice@kerox.org Web : www.kerox.org	
Product (Trade) Name : Kerox™ ME-50 MEKP		General Chemical Name : Methyl Ethyl Ketone Peroxide	
NFPA Classification : 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Insignificant			
Health : 3	Fire : 2	Reactivity : 2	Other : None

Section 2 - Ingredients and Identity Information				
Chemical / Common Name	%Weight	Exposure Limits		CAS #
		PEL (ppm)	TLV (ppm)	
Methyl Ethyl Ketone Peroxide (~9% Active Oxygen)	45 – 60 %	1.5 mg/m ³		1338-23-4
Dimethyl Phthalate	30 – 40 %	5.0 mg/m ³		131-11-3
Proprietary Safety Diluent	1 – 5 %			

Section 3 - Physical Data			
Boiling Point (° C)	Unknown, Decomposes above 60° C.	Specific Gravity	1.08
Vapor Density	> 1	% Volatility by Weight	Unknown
Evaporation Rate	Unknown	Odor	Sharp and Pungent

Section 4 - Fire and Explosion Hazard Data		
Flash Point (° C) : >60	LEL : -	Flammability : Above Flash Point / NFPA Organic Peroxide Class III
Extinguishing Media : Water spray from a safe distance. For small fires, in addition to water spray, foam or dry chemical extinguishers may be effective. Traditional carbon dioxide extinguishers may be ineffective, since MEKP generates its own oxygen to support combustion. Dry chemicals in the extinguisher when combined with MEKP may re-ignite.		
Unusual Fire & Explosion Hazards : The heat of decomposition of MEKP adds to the heat of the fire. MEKP is capable of generating its own oxygen to support combustion and hence traditional carbon dioxide extinguishers will be ineffective. Chemical agents in dry chemical fire extinguishers may catalyze the decomposition.		
Special Fire Fighting Procedures : SCBA's must be used for fire fighting. Water must be sprayed on the fire. If dry chemicals are used to extinguish a fire, the extinguished area must be thoroughly wetted down to prevent re-ignition.		

Section 5 - Health Hazard Information

Permissible Exposure Limits:

ACGIH Ceiling STEL is 1.5 mg/m³ (0.2 ppm) for MEKP.

Potential Effects of Overexposure:

Eyes :

Eye contact causes severe corrosion and may cause blindness.

Skin :

Causes severe skin irritation, redness, blistering, and edema.

Inhalation :

Moderately toxic by inhalation.

Ingestion :

Could lead to changes in structure or function of esophagus, and also cause nausea, vomiting and other gastrointestinal effects.

First Aid Guidelines :

Skin :

Remove any contaminated clothing immediately. If the product gets on the skin, thoroughly wash exposed area with a running stream of water for 15 minutes. Seek medical help.

Eyes :

Thoroughly wash the eyes in a running stream of water for a minimum of 15 minutes. Seek medical aid.

Inhalation :

Remove victim from the exposure area, to an open area with fresh air. If the person is unconscious, administer artificial respiration. Seek medical help immediately, even if symptoms develop several hours after exposure.

Ingestion :

Do not induce vomiting, as this may be a breathing hazard. Drink plenty of water. Seek medical aid.

Primary Routes of Entry :

Inhalation and / or skin absorption.

Section 6 - Reactivity Data

Stability :

Stable when stored in closed original container and kept out of direct sunlight, at temperatures below 25° C.

Conditions to Avoid :

Contamination of any kind. Prolonged storage above 30° C. Storage near flammable or combustible materials.

Materials to Avoid :

Cobalt compounds and other promoters and accelerators, oxidizing and reducing agents, basic and acidic compounds, metals, metal alloys, and salts, dimethylaniline, acetone, amines, and soaps.

Hazardous Decomposition Products :

Decomposition products are flammable and may give rise to irritating vapors, carbon monoxide and dioxide, and phenols.

Hazardous Polymerization:

Will not occur.

Section 7 – Spill or Leak Procedures

Response to Spills and Release :

If spills occur use a dike to prevent runoff into drains. Absorb the spilled material using an inert material such as cotton or sand. Take care not to use any cloth or absorbent material that may have been contaminated with acetone or other solvents. Collect the waste material and transfer into a plastic container and spray with a mist of water. Do not store waste in a metal container as it may lead to decomposition and combustion.

Waste Disposal Methods :

Dispose waste material at a hazardous waste management facility in accordance with regulations (Fed/State/EPA) and prevailing laws. Follow all proper manifesting procedures.

Section 8 - Special Protection Information

Protective Garments : Wear plastic gloves, shoes, and an apron while handling the product.

Respiratory Protection : Use product in a well ventilated area. A NIOSH approved half face respiratory protective equipment, may be used, and is recommended.

Ventilation : Use product in a well ventilated open area, and / or in an area with adequate mechanical (general and / or local exhaust) ventilation.

Eye protection : Wear chemical safety goggles.

Section 9 – Handling and Storage

Handling : To avoid contamination keep the containers closed. Avoid shock by handling the product gently. Vent the catalyst periodically to release any internal pressure.

Storage : Keep the catalyst in original containers. Do not return unused material to the container. Store in a cool, dark place. Keep away from direct sunlight, steam pipes, naked flame, and other sources of heat. All electrical installations should be flame proof. Do not store accelerators and resins along with the catalyst. Avoid contact with flammable material such as wood, paper, fabrics, saw dust, and other cellulosic materials. Large quantities of catalyst must be stored in an isolated building, away from other combustible materials. Prolonged storage above 30° C should be avoided, as this may result in build up on internal pressure. Storage at about 10 - 15° C will extend the product life. Storage below 10° C should be avoided since it may lead to the formation of shock sensitive peroxide crystals. Keep all food and drinks away.

Other Precautions : Avoid contamination with metallic, organic, acidic or basic materials, and in particular metal soaps and accelerators. Avoid contamination with solvents like acetone which may react to form explosive mixtures.

Section 10 – Ecological Information

Ecotoxicity: Methyl ethyl ketone peroxide: EC₅₀ (Guppy) 44.2 mg/L/96 hr; EC₅₀ (algae) 42,700 µg/L/96 hr.

Environmental Fate: Methyl ethyl ketone peroxide (MEKP) forms a stable mixture with water and can be mechanically separated. Published literature indicates that MEKP diluted with water is biodegradable and literature data indicates that an ED₅₀ of 16mg MEKP/L activated sludge was reported in an activated sludge respiration inhibition test.

Section 11 – Toxicological Information

Methyl Ethyl Ketone Peroxide

Hazard Data:

Inhalation: Rat-LC₅₀: 200 ppm/4 hr, lung, thorax, respiration, or dyspnea; Mouse-LC₅₀: 170 ppm/4 hr, lung, thorax, respiration, or dyspnea.

Intraperitoneal: Rat-LD₅₀: 65 mg/kg, behavioral, muscle weakness behavioral, ataxia.

Oral: Rat-LD₅₀: 484 mg/kg; Mouse-LD₅₀: 470 mg/kg; Human-TD_{Lo}: 480 mg/kg, changes in structure or function of esophagus gastrointestinal, nausea or vomiting gastrointestinal.

Skin: Rabbit- LD₅₀: 500 mg.

Dimethyl Phthalate

Hazard Data:

Inhalation: Cat-LC_{Lo}: 9300 mg/m³/6.5 hr.

Intraperitoneal: Mouse-LD₅₀: 1380 mg/kg.

Oral: Rat & Mouse-LD₅₀: 6800 mg/kg, somnolence behavioral, withdrawal nutritional and gross metabolic, weight loss or decreased weight gain; Dog-LD: >1400 mg/kg; Rabbit-LD₅₀: 4400 µL/kg.

Subcutaneous: Mouse-LD_{Lo}: 6500 mg/kg, dyspnea lung, thorax, respiration, or cyanosis.

Section 12 – Regulatory Information

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). It is included in this MSDS as a mandatory requirement.

Chemical Name	CAS Number	Weight %
Methyl Ethyl Ketone Peroxide	1338-23-4	45% - 60%
Dimethyl Phthalate	131-11-3	30 % - 40%

Reportable Quantity :

Methyl Ethyl Ketone Peroxide (MEKP) – 4.54 Kg.

Chemical Inventory :

United States: The ingredients in this product are listed on the TSCA inventory.

Canada: The ingredients in this product are listed on the DSL inventory.

Europe: The ingredients in this product are listed on the EINECS inventory.

Australia: The ingredients in this product are listed on the AICS inventory.

Status of Carcinogenicity :

MEKP is not recognized as a carcinogen by the IARC, NTP, or OSHA.

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