



# SAFETY DATA SHEET

## METHYL ETHYL KETONE PEROXIDE (Liquid Catalyst)

SAFETY DATA SHEET According to EC-directive 93/112/EC

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Chemical identity** Methyl ethyl ketone peroxide, in dimethyl phthalate  
**Supplier** Diamond GRP Roofing  
**Telephone No:** 01305 766 703  
**Emergency telephone**

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

This product is to be considered as a preparation in conformance to EC directives

Chemical description Methyl ethyl ketone peroxide, in dimethyl phthalate

#### Composition/information on ingredients

Number	% w/w	CAS-number	Chemical Name
1	33.0	1338-23-4	Methyl ethyl ketone peroxide
2	63.0	131-11-3	Dimethyl phthalate
3	1.0	78-93-3	Methyl ethyl ketone

Number	EINECS/ELINGS	EEC-number	Symbol(s)	Risk-phase(s)
1	2156612		E C	R2 R20/22 R34 R7
2	2050116		None	None
3	2011590	606-002-00-3	F	R11

**Other information** Balance: non-hazardous ingredients.

### 3. HAZARDS IDENTIFICATION

May cause fire.  
Harmful by inhalation and if swallowed.  
Causes burns.

### 4. FIRST AID MEASURES

**Symptoms and effects** Harmful by inhalation and if swallowed. Causes burns.  
Risk of serious damage to eyes.

#### First Aid

**General** Call a physician immediately

**Inhalation** Move to fresh air, rest, half-upright position, loosen clothing.  
Oxygen or artificial respiration if there is difficulty in breathing.  
Seek medical advice after significant exposure.

<b>Skin</b>	Remove all contaminated clothing immediately. Wash off with plenty of soap and water. Always seek medical advice. Launder clothes before re-use.
<b>Eye</b>	Rinse immediately and as long as possible with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Always seek medical advice.
<b>Ingestion</b>	Only when conscious, rinse mouth, give plenty of water to drink (approx. 500ml). DO NOT induce vomiting. Seek medical advice.
<b>Advice to physician</b>	No additional information available.

## 5. FIRE-FIGHTING MEASURES

<b>Extinguishing media</b>	Waterspray, foam, fire-extinguishing powder, carbon dioxide. Extinguish a small fire with powder or carbon dioxide then apply water to prevent re-ignition.
<b>Unsuitable extinguishing media</b>	Halones.
<b>Special Exposure Hazards</b>	If involved in a fire, it will support combustion. In case of fire and/ explosion do not breathe fumes.
<b>Hazardous decomposition/ combustion products</b>	Not determined.
<b>Protective equipment</b>	Wear suitable protective clothing. Wear self-contained breathing apparatus.
<b>Other information</b>	Cool closed containers with water.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Avoid contact with skin and eyes. For personal protection see Section 8.
<b>Environmental precautions</b>	Collect as much as possible in a clean container for (preferable) re-use or disposal. Do not empty into drains.
<b>Methods for cleaning up</b>	The waste should NOT be confined. Absorb the remainder with e.g. vermiculite.
<b>Other information</b>	For personal protection see Section 8.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Never weigh out in the storage room. Keep product and emptied container away from heat and sources of ignition. No sparking tools should be used. Avoid shock and friction. Confinement must be avoided. Do not pipet by mouth. Do not inhale. Never bring peroxide into direct contact with accelerator during processing. Weigh out and add peroxide and accelerator separately.
<b>Fire and explosion prevention</b>	Use explosion protected equipment. Keep away from sources of ignition. No smoking.
<b>Storage requirements</b>	Keep away from reducing agents e.g. amines, acids, alkali, heavy metal compounds (e.g. accelerators, dryers, metal soaps). Store in accordance with local/national regulations. Store in a dry well ventilated place away from sources of heat and direct sunlight. Do not mix with peroxide accelerators. Do not mix with reducing agents. Keep container tightly closed in a cool, well-ventilated place. Keep container upright to prevent leakage. Confinement must be avoided.
<b>Other information</b>	When using do not eat, drink or smoke. Wash thoroughly after handling. Keep working clothing separately and do not take them home.

## 8. EXPOSURE AND CONTROLS/PERSONAL PROTECTION

**Engineering controls** Ensure good ventilation and local exhaustion of the working area. Explosion proof ventilation recommended.

### Exposure limits

<b>Name</b>	Exposure limits
<b>Methyl ethyl ketone peroxide</b>	OES-STEL (1993) 1.5mg/m <sup>3</sup>
<b>Methyl ethyl ketone</b>	OES-TWA (1993) 590.0 mg/m <sup>3</sup> OES-STEL (1993) 885.0 mg/m <sup>3</sup>

### Personal protection

<b>Respiratory</b>	Do not breath vapour. Ensure good ventilation and local exhaustion of the working area.
<b>Hand</b>	Wear suitable gloves of neoprene or synthetic rubber.
<b>Eye</b>	Wear eye/face protection. A face shield is preferred over goggles.
<b>Skin and body</b>	Wear suitable protective clothing and gloves. Take off contaminated clothing immediately.
<b>Other information</b>	Launder clothes before re-use.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Liquid
<b>Colour</b>	Clear and colourless
<b>Odour</b>	Faint
<b>Boiling point/range</b>	Do not distil (decomposes)
<b>Melting point/range</b>	Turbid < -10°C
<b>Flash point</b>	52°C (Setaflash ISO 3679)
<b>Flammability</b>	Not determined
<b>Auto ignition temperature</b>	218°C (DIN 51794)
<b>Explosive properties</b>	No
<b>Explosion limits</b>	Not applicable
<b>Oxidising properties</b>	Not applicable
<b>Vapour pressure</b>	Not determined
<b>Density</b>	1180 kg/m <sup>3</sup> (20°C)
<b>Bulk density</b>	Not applicable
<b>Solubility in water</b>	Partly mixable with water
<b>Solubility in other solvents</b>	Phthalates
<b>pH value</b>	Slightly Acidic character

<b>Partition coefficient n-octanol/water</b>	Not determined
<b>Relative vapour density air = 1</b>	Not determined
<b>Viscosity</b>	20 MM2/SEC. (20°C)
<b>Active oxygen content</b>	8.8-9.0%
<b>Peroxide content</b>	33.00%
<b>SADT</b>	60°C. See also Section 10: Other information.
<b>Specific conductivity</b>	Not determined

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by direct contact with incompatible substances or by thermal decomposition at and above the following temperature: +60°C.
<b>Conditions to avoid</b>	Violent reactions may be expected with acid, alkali, heavy metals and reducing agents. Avoid contact with rust. Confinement must be avoided. Do not mix with peroxide accelerators. Do not mix with reducing agents.
<b>Materials to avoid</b>	Use only Stainless Steel 316, PVC, polyethylene or glass-lined equipment.
<b>Hazardous decomposition products</b>	Not determined
<b>Other information</b>	The SADT (self-accelerating decomposition temperature) is an experimentally derived temperature at which the product in a typical package will undergo self-accelerating decomposition.

## 11. TOXICOLOGICAL INFORMATION

<b>Name</b>	Based on: Methyl ethyl ketone peroxide 33%
<b>Acute toxicity</b>	
<b>Oral LD50</b>	rat: 1017 mg/kg (Methyl ethyl ketone peroxide 40%)
<b>Dermal LD50</b>	rat: 4000 mg/kg (Methyl ethyl ketone peroxide 40%)
<b>Inhalation LC50</b>	rat: 17 mg/l; 4 hours exposure time (Methyl ethyl ketone peroxide 40%)
<b>Irritation</b>	
<b>Skin</b>	Corrosive (33%)
<b>Eye</b>	Severely irritating/corrosive (Methyl ethyl ketone peroxide 33%)
<b>Genotoxicity</b>	Ames test: not mutagenic
<b>Name</b>	Based on: Dimethyl phthalate
<b>Acute toxicity</b>	
<b>Oral LD50</b>	Rat: > 2400 mg/kg
<b>Dermal LD50</b>	Rabbit: > 10.000 mg/kg
<b>Inhalation LC50</b>	9.3 mg/m <sup>3</sup> (6.5 hours)

## Irritation

<b>Skin</b>	Moderately irritating
<b>Eye</b>	Minimally irritating
<b>Name</b>	Based on: Methyl ethyl ketone

## Acute toxicity

<b>Oral LD50</b>	Rat: 2737 mg/kg
<b>Dermal LD50</b>	Rabbit 6480 mg/kg
<b>Inhalation LC50</b>	Rat: 23.5000 mg/m <sup>3</sup>

## Irritation

<b>Skin</b>	Moderately irritating
<b>Eye</b>	Moderately irritating

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## 12. ECOLOGICAL INFORMATION

**Name** Based on: Methyl ethyl ketone peroxide 33%

### Ecotoxicity

**Fish** Acute toxicity, 96h-LC50 = 44.2 mg/l. (*Poecilia reticulata*).

**Bacteria** Activated sludge respiration inhibition test EC50 = 48.0 mg/l.

### Fate

**Degradation Biotic** Readily biodegradable (closed bottle test).

**Name** Based on: Dimethyl phthalate

### Ecotoxicit

**Fish** *Lepomis macrochirus*: 96h-LC50: 3.22 g/l

**Algae** *Selenastrum capricornutum*: 39.8 mg/l (96h-IC50)

### Fate

**Degradation Biotic** Readily biodegradable

**Other information** Bio Concentration Fact (BCF) fish 5.4 (24hours)

**Name** Based on: Methyl ethyl ketone

### Ecotoxicity

**Fish** *Lepomis macrochirus*: 96h-LC50: 3.22 g/l

### Fate

**Degradation Biotic** Readily biodegradable

**Other information** Naturally occurring substance.

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## 13. DISPOSAL CONSIDERATIONS

<b>Product</b>	Probably in controlled incineration but according to local regulations. The waste should NOT be confined. Absorb the remainder with eg vermiculite.
<b>Contaminated packaging</b>	Collect for recycling or most probably controlled incineration.
<b>Other information</b>	Dilute before burning with organic solvents. Controlled incineration according to local regulations (eg burn in small portions on a remote place, using a torch with a long rod to ignite the material).

#### 14. TRANSPORT INFORMATION

##### Land transport

<b>ADR class</b>	5.2	<b>ADR item number</b>	5b
<b>RID class</b>	5.2	<b>RID item number</b>	5b
<b>Hazard Identification</b>	No	<b>Substance Identification</b>	No
<b>TREM-Card</b>	CEFIC TEC(R)-52G01	<b>UN Number</b>	3105

**Proper shipping name** Organic peroxide type d, liquid; (Methyl ethyl ketone peroxide)

##### **Other information**

##### Sea Transport

<b>UN number</b>	3105	<b>Class</b>	5.2
<b>Packing Group</b>	II	<b>Marine Pollutant</b>	No
<b>EMS</b>	05/02/01	<b>MFAG</b>	735
<b>IMO/IMDG Code</b>	Page 5225		

**Proper shipping name** Organic peroxide type d, liquid; (Methyl ethyl ketone peroxide)

##### **Other information**

##### Air transport

<b>IATA/ICAO-DGR</b>	<b>UN number</b>	3105
<b>Class</b>	<b>Packing group</b>	3105
<b>Proper shipping name</b>	Organic peroxide type d, liquid; (Methyl ethyl ketone peroxide)	

##### **Other Information**

#### 15. REGULATORY INFORMATION

**Chemical identity** Methyl ethyl ketone peroxide, in dimethyl phthalate

##### **Labelling according to EC directives**

**EEC-number** Not applicable

##### **Classification based on**

**Symbol(s)** OXIDIZING CORROSIVE

<b>R(isk) phrase(s)</b>	R7	May cause fire.
	R20/22	Harmful by inhalation and if swallowed.
	R34	Causes burns.
<b>Safety phrase(s)</b>	S3/7	Keep container tightly closed in a well-ventilated place.
	S14	Keep away from reducing agents eg amines, acids, alkalis, heavy metal compounds (eg accelerators, dryers, metal soaps).
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	S50	Do not mix with peroxide accelerators. Do not mix with reducing agents.

Other information

Wassergefährdungsklasse 1 (WGK)(Germany) 1 (Own classification)

## 16. OTHER INFORMATION

This information only concerns the above-mentioned product and does not need to be valid if used with other product(s) or in any process. The information is, to our best present knowledge, correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

### History

**Date of printing** 08/06/94

### Revision

**Composed by** *A.R.M. Hesseling.* *N. Groenendaal.*

### Changes were made in section