Material Safety Data Sheet-COSHH

Catalyst (Methyl Ethyl Ketone Peroxide) Catalyst/MSDS/Jan15

1. Identification of the substance/preparation and the company undertaking

Chemical identity
Methyl ethyl ketone peroxide in dimethyl phthalate

Supplier
Tuff Waterproofing Limited Unit 5 First Avenue Sherburn in Elmet LS25 6PD

Emergency Telephone number
01977 680 250 Fax 01977 680 284

2. Hazards Identification

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

3. Composition/Information on ingredients

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

Chemical description
Methyl ethyl ketone peroxide in demethyl phthalate

Number	%W/W	Cas number	Chemical Name
1	-	330 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/ELINCS	EEC number	Symbol(s)	Risk phrase(s)
1	2156612	-	E C	R2, R20/22, R34, R7
2	2050116	-	none	none
3	2011590	606-002-003	F	R11

Other information
Balance: non-hazardous ingredients.

4. First aid measures

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

Affected Area	Action
General	Call a physician immediately.
Inhalation	Move to fresh air, rest, half-upright position, loosen clothing. Use Oxygen or artificial respiration if there is any difficulty in breathing. Seek medical advice after significant exposure.

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

5. Fire fighting measures

Extinguishing media
Waterspray, foam, fire extinguishing powder, carbon dioxide. Extinguish a small fire with powder or carbon dioxide then apply water to prevent re-ignition.

Unsuitable extinguishing media
Halones.

Special exposure hazards
If involved in a fire, it will support combustion. In case of fire and/or explosion do not breathe fumes.

Hazardous decomposition/combustion products
Not determined.

Protective equipment
Wear suitable protective clothing. Wear self-contained breathing apparatus.

Other information
Cool closed containers with water.

6. Accidental release measures

Personal precautions
Avoid contact with skin and eyes. For personal protection see Section 8

Environmental precautions
Collect as much as possible in a clean container for (preferable) re-use or disposal. Do not empty into drains.

Methods for cleaning up
The waste should NOT be confined. Absorb the remainder with e.g. vermiculite.

Other information
For personal protection see Section 8.

7. Handling and storage

Handling

Never weigh out in the storage room. Keep product and emptied container away from heat and storage 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.

Fire and explosion prevention

Use explosion protected equipment. Keep away from sources of ignition. No smoking.

Storage requirements

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.

Other information

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

Name	Exposure limits
Methyl ethyl ketone peroxide	OES-STEL (1993) 1.5mg/m³
Methyl ethyl ketone	OES-TWA (1993) 590.OMG/M³ OES-STEL (1993) 885.OMG/M³

Personal protection

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

9. Physical and chemical properties

Appearance

Liquid

Colour

Clear an colourless

Odour
Faint

Boiling point/range
Do not distil (decomposes)

Melting point/range
Turbid <-10ºC

Flash point
52ºC (Setaflash ISO 3679)

Flammability
Not determined

Auto ignition
218ºC (DIN 51794)

Explosive properties
No

Explosion limits
Not applicable

Oxidising properties
Not applicable

Vapour pressure
Not determined

Density
1180kg/m³ (20ºC)

Bulk density
Not applicable

Solubility in water
Partly mixable with water

Solubility in other solvents
Phthalates

pH value
Slightly acidic character

Partition coefficient n-octanol/water
Not determined

Relative vapour density air = 1
Not determined

Viscosity
20 MM2/SEC. (20ºC)

Active oxygen content
8.8-9.0%

Peroxide content
33%

SADT
60ºC. See also section 10: Other information

Specific conductivity
Not determined

10. Stability and reactivity

Stability
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 or above the following temperature: +60ºC.

Conditions to avoid
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.

Materials to avoid
Use only Stainless Steel 31.6. PVC, polythene or glass-lined equipment.

Hazardous decomposition products
Not determined.

Other information
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

Acute toxicity (Base on Methyl ethyl ketone peroxide 33%)

Oral LD50	rat: 1017mg/kg (**Methyl ethyl ketone peroxide 40%**)
Dermal LD50	rat: 4000mg/kg (**Methyl ethyl ketone peroxide 40%**)
Inhalation LC50	rat: 17mg/1; 4 hours exposure time (**Methyl ethyl ketone peroxide 40%**)

Skin (irritation)
Corrosive (33%)

Eye (irritation)
Severely irritating/corrosive (Methyl ethyl ketone peroxide 33%

Genotoxicity (irritation)
Ames test: Not mutagenic

Acute toxicity (based on: Dimethyl phthalate)

Oral LD50	rat: >2400mg/kg
Dermal LD50	rabbit: 10.000mg/m³
Inhalation LC50	rat: 9.3mg/m³ (6.5 hours)

Skin (irritation)
Moderately irritating

Eye (irritation)
Minimal irritation

Acute toxicity (based on: Methyl ethyl ketone)

Oral LD50	rat: 2737mg/kg
Dermal LD50	rabbit: 6480mg/kg
Inhalation LC50	rat: 23.5000mg/m³

Skin (irritation)
Moderately irritating

Eye (irritation)
Moderately irritating

12. Ecological information

Ecotoxicity (based on: Methyl ethyl ketone peroxide 33%)

Fish	Acute toxicity, 96h-LC50 = 44.2mg/l (Poecilia reticulate)
Bacteria	Activated sludge respiration inhibition test EC50 = 48.0mg/l

Fate

Degradation Biotic	Readily biodegradable (closed bottle test)

Ecotoxicity (based on: Dimethyl phthalate)

Fish	Lepomis macrochirus: 96h-LC50: 3.22g/l
Algae	Selenastrum capricornutum: 39.8mg/l (96h-LC50)

Fate

Degradation Biotic	Readily biodegradable (closed bottle test)

Other information
Naturally occurring substance

13. Disposal Considerations

Product
Probably in controlled incineration but according to local regulations. The waste should NOT be confined. Absorb the remainder with e.g. vermiculite.

Contaminated Packaging
Collect for recycling or most probably controlled incineration.

Other information
Dilute before burning with organic solvents. Controlled incineration according to local regulations (e.g. burn in small portions on a remote place, using a torch with a long rod to ignite the material).

14. Transport information

Land Transport	
ADR Class	**ADR Item Number**
5.2	5b
RID Class	**RID Item Number**
5.2	5b
Hazard Identification Number	**Substance Identification Number**
Trem Card: cefic tec(r) -52g01	UN Number: 3105

Proper Shipping Name

Organic peroxide type d, liquid: (Methyl ethyl ketone peroxide)

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

Risk phrase(s)	
R7	May cause fire
R20/22	Harmful by inhalation and if swallowed.
R34	Causes burns

Safety phrase(s)	
S3/7	Keep container closed in a well-ventilated place.
S14	Keep away from reducing agents e.g. amines, acids, Alkalis, heavy metal compounds. (e.g. 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 (WGK) (Germany)	1 (own classification)