M-Bond 300 Catalyst

MICROE
MEASUREMENTS
A VPG Brand
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ACCORDING TO: Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, 2020) & GHS 7 Date of Issue:27/02/2023 Date of First Issue: 27/02/2023 Version: 1.1

SECTION 1: IDENTIFICATION

1.1 Product identifier used on the label M-Bond 300 Catalyst

Other means of identification None

1.2 Recommended use of the chemical and restrictions

on use

Recommended use Adhesives.
Restrictions on use None Known

1.3 Suppliers name, address and telephone number

Supplier VISHAY MEASUREMENTS GROUP, INC.

Address of Supplier Post Office Box 27777
Raleigh, NC 27611

USA

Telephone +1 919-365-3800 / +1 919-365-3945

E-Mail (competent person) <u>mm.us@vpgsensors.com</u>

Importer/Distributor name, address and telephone number

Name Company Address Telephone

1.4 Emergency telephone number 1-800-424-9300 (24 hours)

61-290372994 (for spills and releases)

CHEMTREC (U.S.)

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 In accordance with the Safe Work Australia model

Work Health and Safety Regulations (2020) & GHS 7 $\,$

Organic peroxides, Type D; H242 Acute toxicity - Category 4; H302 Skin corrosion, Sub-category 1B; H314 Eye damage, category 1; H318 Acute toxicity - Category 4; H332

Specific target organ toxicity — single exposure - Category 3; H335

Germ cell mutagen, Category 2; H341 Reproductive - Category 2; H361

2.2 GHS Label elements, including precautionary statements

Product Name M-Bond 300 Catalyst

Hazard Pictogram(s)



Flame







Health hazard

Exclamation mark

Signal Word(s) DANGER

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Hazard Statement(s) H242: Heating may cause a fire.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H332: Harmful if inhaled.

H335: May cause respiratory irritation. H341: Suspected of causing genetic defects.

H361: Suspected of damaging fertility or the unborn child.

Precautionary Statement(s) P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. No smoking.

P234: Keep only in original packaging.

P280: Wear protective gloves/protective clothing/eye protection/face

protection/hearing protection.

P370+P380+P375: In case of fire: Evacuate area. Fight fire remotely due to the

risk of explosion.

P302+P352: IF ON SKIN: Wash with plenty of water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P312: Call a POISON CENTER/doctor if you feel unwell.

2.3 Other Hazards that do not Result in Classification None Known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Not applicable

3.2 Mixtures Substances in preparations / mixtures GHS Classification

Chemical identity of the substance	%W/W	CAS No.	EC No.	Hazard classification
Methyl ethyl ketone peroxide	34	1338-23-4	215-661-2/ 700-954-4	Organic peroxides, Type D; H242 Acute toxicity - Category 4; H302 Acute toxicity - Category 4; H312 Skin corrosion, Sub-category 1B; H314 Eye damage, category 1; H318 Acute toxicity - Category 4; H332 Specific target organ toxicity — single exposure - Category 3; H335 Germ cell mutagen, Category 2; H341
2,2,4-Trimethyl-1,3- Pentanediol Diisobutyrate	20	6846-50-0	229-934-9	Reproductive - Category 2; H361 Hazardous to the aquatic environment - Category 3; H412
Methyl ethyl ketone	2	78-93-3	201-159-0	Flammable Liquid - Category 2; H225 Eye Damage/Irritation - Category 2A; H319 Specific target organ toxicity — single exposure - Category 3; H335 Specific target organ toxicity — single exposure - Category 3; H336 AUH066
Hydrogen peroxide	1	7722-84-1	231-765-0	Oxidising liquid - Category 1; H271 Acute toxicity - Category 4; H302 Skin corrosion, Sub-category 1A; H314 Acute toxicity - Category 4; H332 Specific target organ toxicity — single exposure - Category 3; H335 Hazardous to the aquatic environment - Category 3; H412

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SECTION 4: FIRST AID MEASURES



Description of first aid measures 4.1

First aid facilities

Self-protection of the first aider

Inhalation

Skin Contact

Eye Contact

Ingestion

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of immediate medical attention and special treatment needed, if necessary

IF IN EYES:

Eyewash facilities should be stationed close to workplace where possible.

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Contaminated clothing should be laundered before reuse. Do not breathe vapour. Ensure adequate ventilation. Wear suitable respiratory protective equipment if exposure to high levels of material are likely. Do not use mouth-to-mouth resuscitation.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF exposed or concerned: Get medical advice/attention.

IF ON SKIN: Remove contaminated clothing and wash all affected areas with plenty of water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. IF SWALLOWED: Rinse mouth. Make victim drink plenty of water. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless instructed to do so by medical personnel. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Call a POISON CENTER/doctor if you feel unwell. IF exposed or concerned: Get medical advice/attention.

May be harmful if swallowed. Causes severe skin burns and eye damage. Suspected of damaging fertility or the unborn child.

Treat symptomatically.

Treatment by an ophthalmologist due to possible caustic burn of the eyes may be

required.

Notes to a physician:

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media

only.

Unsuitable extinguishing Media

Special hazards arising from the chemical 5.2

> Special protective equipment and precautions for fire fighters

5.4 **Hazchem Code**

5.3

As appropriate for surrounding fire. Extinguish preferably with waterspray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires

Do not use water jet. Direct water jet may spread the fire. Heating may cause a fire or explosion. May decompose in a fire giving off toxic

fumes. Carbon monoxide, Carbon dioxide and Acrid smoke. May form explosive mixture with air particularly in enclosed spaces.

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

•2WE

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and 6.1 emergency procedures

Ensure adequate ventilation. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin, eyes or clothing. Avoid breathing vapours. Ensure suitable personal protection during removal of spillages. See Section: 8.

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6.2 Environmental precautions

Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.

6.3 Methods and material for containment and cleaning up

Use non-sparking equipment when picking up flammable spill. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Dispose of this material and its container as hazardous waste. Ventilate the area and wash spill site after material pick-up is complete.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Ensure operatives are trained to minimise exposures. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid all contact. Do not breathe vapour. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. May form explosive peroxides. Take precautionary measures against static discharges. Use personal protective equipment as required. See Section: 8. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep from direct sunlight.

Storage temperature Storage life Incompatible materials Store at temperatures not exceeding (°C): 27°C. SADT 6 0°C.

Stable under normal conditions.

Keep away from: Aerosol, Flammable liquid, Oxidizing agents, Reducing agents, Acids, strong bases, metals (and their alloys), Sulphur products, Amines and Corrosive Substances. Avoid impurities (e.g. rust, dust, ash), risk of decomposition.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

- 8.1 Control Parameters
- 8.1.1 Occupational Exposure Limits

Chemical name	Synonym(s)	CAS No.	TWA (ppm)	TWA (mg/m³)	STEL (ppm)	STEL (mg/m³)	Advisory carcinogen category	Other advisory information	Notes
Methyl ethyl ketone peroxides	MEKP	1338-23-4	0.2 peak limitation	1.5 peak limitation	-	-	-	-	-
Methyl ethyl ketone (MEK)	MEK 2-Butanone	78-93-3	150	445	300	890	-	-	-
Hydrogen peroxide		7722-84-1	1	1,4	-	-	-	-	-

Source: Safe Work Australia Workplace Exposure Standards for Airbourne Contaminants (2019)

8.1.2 Biological exposure indicies

Not established

8.2 Appropriate engineering controls

Ensure adequate ventilation. Atmospheric levels should be controlled in compliance with the occupational exposure limit. A washing facility/water for eye and skin cleaning purposes should be present.

8.2.2 Individual protection measures, such as personal protective equipment (PPE)

General hygiene measures for the handling of chemicals are applicable. Keep good industrial hygiene. Avoid all contact. Avoid breathing vapours. Wash hands before breaks and after work. Keep work clothes separately. Do not eat, drink or smoke at the work place.

Eye/face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).

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Skin protection



Hand protection:

Wear impervious gloves. Protective index 6, corresponding > 480 minutes of permeation time. Gloves should be changed regularly to avoid permeation problems. (Recommended: EN374) Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Recommended: PVC / Nitrile rubber

Suitable materials: Polyethylene-Laminate (Minimum thickness 0.1mm)

Body protection:

Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact. For large quantities - Wear apron or other light protective clothing. Recommended: Polyethylene.

In case of inadequate ventilation wear respiratory protection. A suitable mask with filter type A (EN141 or EN405) may be appropriate.



Thermal hazards

Not applicable.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance Liquid Almost colourless
Odour Ether-like Odour

Odour threshold Not available pH Not established.

Melting point and freezing point Not available

Boiling point or initial boiling point and boiling range 66℃

Lower and upper explosion limit or lower and upper Flammable Limits (Upper) (%v/v): 11.8 (Acetone) flammability limit Flammable Limits (Lower) (%v/v): 1.8 (Acetone)

flammability limit Flammable Limits (Lower) (%v/v): Vapour pressure 129 (mmHg) @ 20 $\mathbb C$

 $\begin{array}{lll} \mbox{Relative vapour density} & 2.4 \ (\mbox{Air} = 1) \\ \mbox{Density and Relative density} & 0.9 \ (\mbox{H}_2\mbox{O} = 1) \\ \mbox{Solubility} & \mbox{Water:} > 50\% \\ \mbox{Partition coefficient n-octanol/water (log value)} & \mbox{Not available} \\ \mbox{Auto-ignition temperature} & \mbox{Not available} \\ \mbox{Decomposition temperature} & \mbox{Not available} \\ \mbox{Not a$

Kinematic viscosity

Not established.

Specific heat

Saturated Vapour Concentration

Release of invisible flammable vapours and gases

Not available

Not established.

Not established.

Not applicable

Not applicable (Liquid) Particle characteristics Particle size distribution Not applicable (Liquid) Shape and aspect ratio Not applicable (Liquid) Crystallinity Not applicable (Liquid) Level of dustiness Not applicable (Liquid) Surface Area Not applicable (Liquid) Not applicable (Liquid) Degree of aggregation or agglomeration, and dispersibility Not established. Redox potential

Redox potential Not established.
Biodurability or biopersistence Not established.
Surface coatings Not established.

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9.2 Additional parameters

> Volatile Organic Compound Content Volatile Organic Compound Content: 712 g/L Explosive properties Heating may cause a fire or explosion.

Oxidising properties Not oxidising.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions. May form peroxides on prolonged storage if air

10.2 Chemical stability Stable under normal conditions.

10.3 Possibility of hazardous reactions The vapour may be invisible, heavier than air and spread along ground. May form

explosive peroxides. Contact with aliphatic amines will cause irreversible

polymerization with considerable heat build-up.

10.4 Conditions to avoid Keep away from heat, hot surfaces, sparks, open flames and other ignition

> sources. No smoking. Keep away from direct sunlight. Keep at a temperature not exceeding (°C): 32. Avoid contact with air. Avoid contact with heat and ignition sources and oxidizers. Avoid distillation to dryness, which can form explosive

peroxides.

10.5 Incompatible materials Oxidizing agents, corrosive Substances, Reducing agent, Strong Acids and

Alkalis

10.6 May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon Hazardous decomposition product(s)

dioxide, Phenolic and Explosive Peroxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Skin corrosion/irritation

(Substances in preparations / mixtures)

Acute toxicity

11.1.3

11.1.4

Ingestion Mixture: Acute toxicity Category 4; May be harmful if swallowed.

Calculated acute toxicity estimate (ATE): estimated LD50: > 2000 - < 5,000

mg/kg.

Acute toxicity, Category 4: Harmful if swallowed. Methyl ethyl ketone peroxide

LD50 (oral,rat) mg/kg: 1017 (OECD 401)

Hydrogen peroxide Acute toxicity, Category 4: Harmful if swallowed.

LD50 (oral,rat) mg/kg: 1026 (OECD 401)

11.1.1 Inhalation Mixture: Acute toxicity Category 4; May be harmful if inhaled.

Calculated acute toxicity estimate (ATE): estimated LC50 > 20 mg/l (Vapour).

Methyl ethyl ketone peroxide Acute toxicity, Acute toxicity Category 4; May be harmful if inhaled.

(Hazardous Chemical Information System (HCIS))

LD50 (oral,rat) mg/kg: 1017 (OECD 401)

Hydrogen peroxide Acute toxicity Category 4; May be harmful if inhaled.

(Hazardous Chemical Information System (HCIS))

11.1.2 Dermal Mixture: Based upon the available data, the classification criteria are not met.

Calculated acute toxicity estimate (ATE): estimated LD50: >5,000 mg/kg. Mixture: Skin corrosion, Sub-category 1B, H314: Causes severe skin burns and

eye damage.

Methyl ethyl ketone peroxide Skin corrosion, Sub-category 1B, H314: Causes severe skin burns and eye

damage.

(Hazardous Chemical Information System (HCIS))

Hydrogen peroxide Skin corrosion, Sub-category 1A, H314: Causes severe skin burns and eye

damage.

(Hazardous Chemical Information System (HCIS))

Serious eye damage/irritation Mixture: Eye Damage, Category 1: Causes serious eye damage.

Methyl ethyl ketone peroxide Eye damage, category 1, H318: Causes serious eye damage. (Hazardous Chemical Information System (HCIS))

Methyl ethyl ketone Eye Damage/Irritation Category 2A, H319: Causes serious eye irritation.

(Hazardous Chemical Information System (HCIS))

11.1.5 Respiratory or skin sensitization Mixture: Based upon the available data, the classification criteria are not met.

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11.1.6 Germ cell mutagenicity Mixture: Germ cell mutagen, Category 2; H341: Suspected of causing genetic defects. Methyl ethyl ketone peroxide Germ cell mutagen, Category 2; H341: Suspected of causing genetic defects. (Hazardous Chemical Information System (HCIS)) 11.1.7 Carcinogenicity Mixture: Based upon the available data, the classification criteria are not met. Reproductive toxicity 11.1.8 Mixture: Reproductive toxicity, Category 2: H361: Suspected of damaging fertility or the unborn child. 2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate Reproductive toxicity, Category 2: H361: Suspected of damaging fertility or the unborn child. ECHA Registration Endpoint summary 11.1.9 STOT - single exposure Mixture: Specific target organ toxicity — single exposure - Category 3; H335: May cause respiratory irritation. Specific target organ toxicity — single exposure - Category 3; H335: May cause Methyl ethyl ketone peroxide respiratory irritation. (Hazardous Chemical Information System (HCIS)) 11.1.10 STOT - repeated exposure Mixture: Based upon the available data, the classification criteria are not met. **Aspiration hazard** Mixture: Based upon the available data, the classification criteria are not met. 11.1.11 Information on likely routes of exposure Inhalation Possible route of exposure. Ingestion Possible route of exposure. Skin Contact Possible route of exposure. Eye Contact Possible route of exposure. 11.1.12 Early onset symptoms related to exposure Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. Harmful in contact with skin. May cause respiratory irritation. 11.1.13 Delayed health effects from exposure Suspected of causing genetic defects. Suspected of damaging fertility or the unborn child. 11.1.14 Exposure levels and health effects See section 8 11.1.15 Interactive effects None Known 11.2 Other information None Known NTP Report on Carcinogens No components listed.

SECTION 12: ECOLOGICAL INFORMATION

IARC Monographs

12.1 Ecotoxicity Mixture: Based upon the available data, the classification criteria are not met.

Estimated Mixture LC50 <50 mg/l (Fish)

12.2 Persistence and degradability No data for the mixture as a whole.

Methyl ethyl ketone peroxide Readily biodegradable.

Degradation in water (28 days) – 87% (OECD 301 D)

Hydrogen peroxide: Group 3

2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate Readily biodegradable.

Degradation in water (28 days) – 70.73% (OECD 301 B)

Methyl ethyl ketone Readily biodegradable.

Water % Degradation: 98% (28 days) (Unnamed publication, 1998)

Hydrogen peroxide Degradation in soil is rapid due to the occurrence of high concentrations of

catalytic material.

12.3 Bioaccumulative potential No data for the mixture as a whole.

Methyl ethyl ketone peroxide Can be waived on basis of log Kow < 3

2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate Not anticipated to bioaccumulate

BCF: <500 (OECD 305)

Methyl ethyl ketone Low bioaccumulation potential.

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12.4

12.5



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Hydrogen peroxide Hydrogen peroxide is reactive and short-lived polar substance and no

bioaccumulation is expected.

Mobility in soil No data for the mixture as a whole.

Methyl ethyl ketone peroxide The substance has moderate mobility in soil.

Log Koc: 2.52 (Unnamed publication, 2018)

2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate The substance has moderate mobility in soil.

Log Koc: 3.51 (Meylan et al. 1992)

Methyl ethyl ketone The substance is predicted to have high mobility in soil.

EU ECHA Registration Endpoint summary

Hydrogen peroxide The substance is predicted to have high mobility in soil.

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Other adverse effects

13.1 Safe handling and disposal methods Do not release undiluted and unneutralised to the sewer. Dispose of contents in

accordance with local, state or national legislation. Dispose of this material and

its container as hazardous waste.

13.2 Disposal of contaminated packaging Containers of this material may be hazardous when empty since they retain

product residue. Handle contaminated packages in the same way as the

IATA/ICAO

IMDG

substance itself.

13.3 Avoid release to the environment. **Environmental regulations**

SECTION 14: TRANSPORT INFORMATION

14.1	UN number	UN 3105	UN 3105	UN 3105	
14.2	Proper Shipping Name	Organic peroxides, Type	Organic peroxides, Type	Organic peroxides, Type	
		D, Liquid	D, Liquid	D, Liquid	
14.3	Transport hazard class(es)	5.2	5.2	5.2	
14.4	Packing group	Not classified	Not classified	Not classified	
14.5	Environmental hazards	Not classified as a	Not classified as a	Not classified as a	
		Marine Pollutant.	Marine Pollutant.	Marine Pollutant.	
14.6	Special precautions for user	See Section: 2			

ADG

14.7 Transport in bulk according to Annex II of MARPOL Not applicable. 73/78 and the IBC Code

Hazchem code •2WE 14.8

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 International Regulations (for example)

Montreal Protocol/Stockholm Convention/ Rotterdam

Convention/ Basel Convention / MARPOL

All chemicals are not listed

15.3 **National Regulations**

Australian Inventory of Chemical Substances (AICS)

NICNAS - Priority Existing Chemicals

NICNAS - IMAP Framework

National Pollutant Inventory

All components are listed on AICS

All chemicals are not listed

Methyl ethyl ketone peroxide: Tier II: Human Health Assessment

2,2,4-trimethyl-1,3-pentanediol diisobutyrate: Tier I: Human Health Assessment

Methyl ethyl ketone: Tier I: Environment Assessment

Tier II: Human Health Assessment

Hydrogen peroxide: Tier I: Environment Assessment

Tier II: Human Health Assessment

NICNAS - High Volume Industrial Chemical List Methyl ethyl ketone: Threshold Range: Between 1,000 and 9,999 tonnes

Hydrogen peroxide: Threshold Range: Between 10,000 and 99,999 tonnes Methyl ethyl ketone peroxide: VOC - Threshold Category = 1a, Threshold = 25 tpa/a design capacity of 25 kilotonnes for bulk storage facilities; Threshold Category = 2a, Threshold = 400 tpa/1 tph; Threshold Category = 2b, Threshold

= 2,000 tpa/60,000 MWh/rated at 20 MW

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Methyl ethyl ketone: Threshold Category = 1, Threshold = 10 tpa

Methyl ethyl ketone peroxide: Schedule 5 Methyl ethyl ketone: Schedule 5, Schedule 9

Hydrogen peroxide: Schedule 5, Schedule 6, Schedule 10

SECTION 16: OTHER INFORMATION

and Poisons (SUSMP)

The following sections contain revisions or new statements: not applicable – V1.0

The Standard for the Uniform Scheduling of Medicines

Version: 1.0 Revision Date: not applicable – V1.0 Date of First Issue: 18 August 2021

References:

EU classification and labelling inventory for Methyl ethyl ketone peroxide (CAS No. 1338-23-4), 2,2,4-trimethyl-1,3-pentanediol diisobutyrate (CAS No. 6846-50-0)

Harmonised Classification(s) for Methyl ethyl ketone (CAS No. 78-93-3) and hydrogen peroxide (CAS No. 7722-84-1).

Existing Safety Data Sheet (SDS)

ECHA registration dossier for Methyl ethyl ketone peroxide (CAS No. 1338-23-4), 2,2,4-trimethyl-1,3-pentanediol diisobutyrate (CAS No. 6846-50-0), methyl ethyl ketone (CAS No. 78-93-3), hydrogen peroxide (CAS No. 7722-84-1).

The mixture is classified in accordance with Safe Work Australia model Work Health and Safety Regulations (2020) & GHS 7

LEGEND

ADG Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

BCF Bioconcentration factor

IATA International Air Transport Association
IARC International Agency for Research on Cancer
ICAO International Civil Aviation Organization
IMDG International Maritime Dangerous Goods

LTEL Long term exposure limit

NICNAS National Industrial Chemicals Notification and Assessment Scheme

NTP National Toxicology Program

QSAR Quantitative structure-activity relationship

RID Regulations concerning the International Carriage of Dangerous Goods by Rail

STEL Short term exposure limit TWA Time Weighted Average

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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