

SOUDAL

SOUDAL CLEAR PRIMER

Soudal Pty Ltd

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S.GHS.AUS.EN

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Safety Data Sheet according to WHS and ADG requirements

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

| | |
|-------------------------------|---|
| Product name | Soudal Clear Primer |
| Chemical Name | methyl ethyl ketone |
| Synonyms | Not Available |
| Proper shipping name | ETHYL METHYL KETONE (METHYL ETHYL KETONE) |
| Other means of identification | Not Available |

Relevant identified uses of the substance or mixture and uses advised against

| | |
|--------------------------|---|
| Relevant identified uses | The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation. Use according to manufacturer's directions. A primer for solvent cements used on uPVC pipes. |
|--------------------------|---|

Details of the supplier of the safety data sheet

| | |
|-------------------------|---|
| Registered company name | Soudal Pty Ltd |
| Address | 1 Tollis Place, Seven Hills NSW 2147, Australia |
| Telephone | 1300 50 70 11 |
| Fax | Not Available |
| Website | www.soudal.com.au |
| Email | techsupport@soudal.com.au |

Emergency telephone number

| | |
|-----------------------------------|--|
| Association / Organisation | Not Available |
| Emergency telephone numbers | 1300 50 70 11 (business hours) [Menu option 3] |
| Other emergency telephone numbers | +61 2 8607 0305 (After hours) |


SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

| | |
|--------------------|---|
| Poisons Schedule | S5 |
| Classification [1] | Flammable Liquid Category 2, Eye Irritation Category 2A, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Specific target organ toxicity - single exposure Category 3 (narcotic effects) |
| Legend: | 1. Classification drawn from HSIS ; 2. Classification drawn from EC Directive 1272/2008 - Annex VI |

Label elements

| | |
|---------------------|---|
| Hazard pictogram(s) |  |
| SIGNAL WORD | DANGER |

Hazard statement(s)

| | |
|------|-------------------------------------|
| H225 | Highly flammable liquid and vapour. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |

Continued...

| | |
|--------|--|
| H336 | May cause drowsiness or dizziness. |
| AUH066 | Repeated exposure may cause skin dryness and cracking. |

Precautionary statement(s) Prevention

| | |
|------|---|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P240 | Ground/bond container and receiving equipment. |
| P241 | Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment. |

Precautionary statement(s) Response

| | |
|----------------|--|
| P370+P378 | In case of fire: Use alcohol resistant foam or normal protein foam for extinction. |
| 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 or doctor/physician if you feel unwell. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |

Precautionary statement(s) Storage

| | |
|-----------|--|
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |

Precautionary statement(s) Disposal

| | |
|------|---|
| P501 | Dispose of contents/container in accordance with local regulations. |
|------|---|

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|---------------|-----------|--|
| 78-93-3 | >95 | <u>methyl ethyl ketone</u> |
| Not Available | <10 | Ingredients determined not to be hazardous |

SECTION 4 FIRST AID MEASURES**Description of first aid measures**

| | |
|---------------------|---|
| Eye Contact | <p>If this product comes in contact with the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</p> |
| Skin Contact | <p>If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.</p> |
| Inhalation | <p>If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▶ Transport to hospital, or doctor, without delay.</p> |
| Ingestion | <p>▶ Immediately give a glass of water. ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.</p> |

Indication of any immediate medical attention and special treatment needed

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

for simple ketones:

BASIC TREATMENT

- ▶ Establish a patent airway with suction where necessary.
- ▶ Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- ▶ Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- ▶ Monitor and treat, where necessary, for pulmonary oedema .
- ▶ Monitor and treat, where necessary, for shock.
- ▶ **DO NOT use emetics.** Where ingestion is suspected rinse mouth and give up to 200 ml water (5mL/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- ▶ Give activated charcoal.

ADVANCED TREATMENT

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- ▶ Consider intubation at first sign of upper airway obstruction resulting from oedema.
- ▶ Positive-pressure ventilation using a bag-valve mask might be of use.
- ▶ Monitor and treat, where necessary, for arrhythmias.
- ▶ Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- ▶ Drug therapy should be considered for pulmonary oedema.
- ▶ Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- ▶ Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

EMERGENCY DEPARTMENT

- ▶ Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- ▶ Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- ▶ Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▶ Alcohol stable foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility

- ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters

| | |
|------------------------------|--|
| Fire Fighting | Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water course. |
| Fire/Explosion Hazard | Liquid and vapour are highly flammable. Severe fire hazard when exposed to heat, flame and/or oxidisers. Vapour may travel a considerable distance to source of ignition. Heating may cause expansion or decomposition leading to violent rupture of containers. Combustion products include: , carbon dioxide (CO2) , , other pyrolysis products typical of burning organic material. Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions. |
| HAZCHEM | •2YE |

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

| | |
|---------------------|--|
| Minor Spills | Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. |
| Major Spills | Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

| | |
|----------------------|--|
| Safe handling | <ul style="list-style-type: none"> ▶ Containers, even those that have been emptied, may contain explosive vapours. ▶ Do NOT cut, drill, grind, weld or perform similar operations on or near containers. ▶ DO NOT allow clothing wet with material to stay in contact with skin ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. |
|----------------------|--|

| | |
|--------------------------|---|
| | <ul style="list-style-type: none"> ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps. |
| Other information | <ul style="list-style-type: none"> ▶ Store in original containers in approved flame-proof area. ▶ No smoking, naked lights, heat or ignition sources. ▶ DO NOT store in pits, depressions, basements or areas where vapours may be trapped. ▶ Keep containers securely sealed. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|---|
| Suitable container | <ul style="list-style-type: none"> ▶ Packing as supplied by manufacturer. ▶ Plastic containers may only be used if approved for flammable liquid. ▶ Check that containers are clearly labelled and free from leaks. ▶ For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure. ▶ For materials with a viscosity of at least 2680 cSt. (23 deg. C) ▶ For manufactured product having a viscosity of at least 250 cSt. |
| Storage incompatibility | <p>Ketones in this group:</p> <ul style="list-style-type: none"> ▶ are reactive with many acids and bases liberating heat and flammable gases (e.g., H₂). ▶ react with reducing agents such as hydrides, alkali metals, and nitrides to produce flammable gas (H₂) and heat. ▶ are incompatible with isocyanates, aldehydes, cyanides, peroxides, and anhydrides. ▶ react violently with aldehydes, HNO₃ (nitric acid), HNO₃ + H₂O₂ (mixture of nitric acid and hydrogen peroxide), and HClO₄ (perchloric acid). <p>Avoid strong bases. Avoid reaction with oxidising agents</p> |

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA


| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|------------------------------|---------------------|---------------------------|---------------------------------|---------------------------------|---------------|---------------|
| Australia Exposure Standards | methyl ethyl ketone | Methyl ethyl ketone (MEK) | 445 mg/m ³ / 150 ppm | 890 mg/m ³ / 300 ppm | Not Available | Not Available |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---------------------|--|---------------|---------------|---------------|
| methyl ethyl ketone | Butanone, 2-; (Methyl ethyl ketone; MEK) | Not Available | Not Available | Not Available |

| Ingredient | Original IDLH | Revised IDLH |
|--|---------------|---------------|
| methyl ethyl ketone | 3,000 ppm | Not Available |
| Ingredients determined not to be hazardous | Not Available | Not Available |

Exposure controls

| | |
|---|---|
| Appropriate engineering controls | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p> |
| Personal protection |  |
| Eye and face protection | <ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. |
| Skin protection | See Hand protection below |
| Hands/feet protection | <ul style="list-style-type: none"> ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p> |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▶ Overalls. ▶ PVC Apron. ▶ PVC protective suit may be required if exposure severe. ▶ Eyewash unit. <ul style="list-style-type: none"> • Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity. • For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets). • Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot an shall dissipate static |

electricity from the body to reduce the possibility of ignition of volatile compounds.

Thermal hazards Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the "Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:
Soudal Clear Primer

| Material | PI |
|------------------|----|
| BUTYL | A |
| PE/EVAL/PE | A |
| TEFLON | A |
| BUTYL/NEOPRENE | B |
| PVA | B |
| HYPALON | C |
| NATURAL RUBBER | C |
| NATURAL+NEOPRENE | C |
| NEOPRENE | C |
| NEOPRENE/NATURAL | C |
| NITRILE | C |
| NITRILE+PVC | C |
| PVC | C |
| SARANEX-23 | C |
| VITON/NEOPRENE | C |

* PI - Performance Index A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 5 x ES | A-AUS / Class 1 | - | A-PAPR-AUS / Class 1 |
| up to 25 x ES | Air-line* | A-2 | A-PAPR-2 |
| up to 50 x ES | - | A-3 | - |
| 50+ x ES | - | Air-line** | - |

* - Continuous-flow; ** - Continuous-flow or positive pressure demand

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|---|--|--|----------------|
| Appearance | Thin colourless highly flammable liquid; partly mixes with water (257.5%). Less soluble at higher temperatures. Solubility of water in MEK: 12.5% at 25 deg.C. Penetrating, sharp smell. | | |
| Physical state | Liquid | Relative density (Water = 1) | 0.81 @ 20 C |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | 474 |
| pH (as supplied) | Not Applicable | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | -85.9 | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | 79-80 | Molecular weight (g/mol) | 72.12 |
| Flash point (°C) | -3.7 | Taste | Not Available |
| Evaporation rate | 5.7 Fast BuAc=1 | Explosive properties | Not Available |
| Flammability | HIGHLY FLAMMABLE. | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | 12.0 | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | 1.8 | Volatile Component (%vol) | 100 |
| Vapour pressure (kPa) | 9.5 @ 20 C | Gas group | Not Available |
| Solubility in water (g/L) | Partly Miscible | pH as a solution (1%) | Not Applicable |
| Vapour density (Air = 1) | 2.4 @ 20 C | VOC g/L | Not Available |

SECTION 10 STABILITY AND REACTIVITY

| | |
|---------------------------|--|
| Reactivity | See section 7 |
| Chemical stability | <ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur. |

| | |
|---|---------------|
| Possibility of hazardous reactions | See section 7 |
| Conditions to avoid | See section 7 |
| Incompatible materials | See section 7 |
| Hazardous decomposition products | See section 5 |

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

| | |
|---------------------|---|
| Inhaled | The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination. Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. Ketone vapours irritate the nose, throat and mucous membrane. High concentrations depress the central nervous system, causing headache, vertigo, poor concentration, sleep and failure of the heart and breathing. |
| Ingestion | Ingestion may result in nausea, abdominal irritation, pain and vomiting |
| Skin Contact | Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. There is some evidence to suggest that the material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. |
| Eye | This material can cause eye irritation and damage in some persons. |
| Chronic | Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Animal testing shows that methyl ethyl ketone may have slight effects on the nervous system, liver, kidney and respiratory system; there may also be developmental effects and an increase in birth defects. However, there is limited information available on the long-term effects of methyl ethyl ketone in humans, and no information is available on whether it causes developmental or reproductive toxicity or cancer. It is generally considered to have low toxicity, but it is often used in combination with other solvents, and the toxic effects of the mixture may be greater than with either solvent alone. Combinations of n-hexane or methyl n-butyl ketone with methyl ethyl ketone may increase the rate of peripheral neuropathy, a progressive disorder of the nerves of the extremities. |

| | | |
|----------------------------|--|--|
| Soudal Clear Primer | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| methyl ethyl ketone | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: 6480 mg/kg ^[2] | Eye (human): 350 ppm -irritant |
| | Inhalation (rat) LC50: 47 mg/l/8H ^[2] | Eye (rabbit): 80 mg - irritant |
| | Oral (rat) LD50: 2054 mg/kg ^[1] | Skin (rabbit): 402 mg/24 hr - mild Skin (rabbit):13.78mg/24 hr open |

Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

| | | | |
|--|---|---------------------------------|---|
| Acute Toxicity | ☉ | Carcinogenicity | ☉ |
| Skin Irritation/Corrosion | ☉ | Reproductivity | ☉ |
| Serious Eye Damage/Irritation | ✔ | STOT - Single Exposure | ✔ |
| Respiratory or Skin sensitisation | ☉ | STOT - Repeated Exposure | ☉ |
| Mutagenicity | ☉ | Aspiration Hazard | ☉ |

Legend: ✘ – Data available but does not fill the criteria for classification
✔ – Data available to make classification
☉ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

| | | | | | |
|----------------------------|-----------------|---------------------------|-------------------------------|---------------|---------------|
| Soudal Clear Primer | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| methyl ethyl ketone | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | LC50 | 96 | Fish | >400mg/L | 4 |
| | EC50 | 48 | Crustacea | 308mg/L | 2 |
| | EC50 | 96 | Algae or other aquatic plants | >500mg/L | 4 |

Continued...

| | | | | | |
|--|------|----|-----------|--------|---|
| | NOEC | 48 | Crustacea | 68mg/L | 2 |
|--|------|----|-----------|--------|---|

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---------------------|---------------------------|------------------------------|
| methyl ethyl ketone | LOW (Half-life = 14 days) | LOW (Half-life = 26.75 days) |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---------------------|---------------------|
| methyl ethyl ketone | LOW (LogKOW = 0.29) |

Mobility in soil

| Ingredient | Mobility |
|---------------------|----------------------|
| methyl ethyl ketone | MEDIUM (KOC = 3.827) |

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

| Product / Packaging disposal | Waste treatment methods |
|------------------------------|---|
| | <ul style="list-style-type: none"> ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. ▶ It may be necessary to collect all wash water for treatment before disposal. ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▶ Where in doubt contact the responsible authority. ▶ Recycle wherever possible. ▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. ▶ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material). ▶ Decontaminate empty containers. |

SECTION 14 TRANSPORT INFORMATION

Labels Required

| | |
|------------------|---|
| |  |
| Marine Pollutant | NO |
| HAZCHEM | •2YE |

Land transport (ADG)

| | |
|------------------------------|---|
| UN number | 1193 |
| UN proper shipping name | ETHYL METHYL KETONE (METHYL ETHYL KETONE) |
| Transport hazard class(es) | Class : 3 Subrisk : Not Applicable |
| Packing group | II |
| Environmental hazard | Not Applicable |
| Special precautions for user | Special provisions : Not Applicable Limited quantity : 1 L |

Air transport (ICAO-IATA / DGR)

| | |
|----------------------------|--|
| UN number | 1193 |
| UN proper shipping name | Ethyl methyl ketone; Methyl ethyl ketone |
| Transport hazard class(es) | ICAO/IATA Class : 3 ICAO / IATA Subrisk : Not Applicable ERG Code : 3L |
| Packing group | II |
| Environmental hazard | Not Applicable |

| | | |
|-------------------------------------|---|----------------|
| Special precautions for user | Special provisions | Not Applicable |
| | Cargo Only Packing Instructions | 364 |
| | Cargo Only Maximum Qty / Pack | 60 L |
| | Passenger and Cargo Packing Instructions | 353 |
| | Passenger and Cargo Maximum Qty / Pack | 5 L |
| | Passenger and Cargo Limited Quantity Packing Instructions | Y341 |
| | Passenger and Cargo Limited Maximum Qty / Pack | 1 L |

Sea transport (IMDG-Code / GGVSee)

| | | |
|-------------------------------------|---|----------------|
| UN number | 1193 | |
| UN proper shipping name | ETHYL METHYL KETONE (METHYL ETHYL KETONE) | |
| Transport hazard class(es) | IMDG Class | 3 |
| | IMDG Subrisk | Not Applicable |
| Packing group | II | |
| Environmental hazard | Not Applicable | |
| Special precautions for user | EMS Number | F-E , S-D |
| | Special provisions | Not Applicable |
| | Limited Quantities | 1 L |

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture****METHYL ETHYL KETONE(78-93-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | |

| National Inventory | Status |
|-------------------------------|--|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | N (methyl ethyl ketone) |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | Y |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| Legend: | Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

SECTION 16 OTHER INFORMATION**Other information**

Classification of the preparation and its individual components has drawn on official and authoritative sources using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average PC –
 STEL: Permissible Concentration-Short Term Exposure Limit IARC:
 International Agency for Research on Cancer
 ACGIH: American Conference of Governmental Industrial Hygienists
 STEL: Short Term Exposure Limit
 TEEL: Temporary Emergency Exposure Limit,
 IDLH: Immediately Dangerous to Life or Health Concentrations
 OSF: Odour Safety Factor
 NOAEL :No Observed Adverse Effect Level
 LOAEL: Lowest Observed Adverse Effect Level
 TLV: Threshold Limit Value
 LOD: Limit Of Detection

OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index