# Safety Data Sheet

## KNOCKOUT

**Revision:** 2018-11-11 **Version:** 01.1

## SECTION 1: Identification of the substance/mixture and supplier

**1.1 Product identifier**
**Product name:** KNOCKOUT

**1.2 Recommended use and restrictions on use**
**Identified uses:**
Commercial grade disinfectant
Deodoriser - disinfectant
**Restrictions of use:**
Uses other than those identified are not recommended

**1.3 Details of the supplier**
Diversey Australia Pty. Limited
29 Chifley St, Smithfield, NSW, 2164, Australia
Telephone: 1800 647 779 (toll free)
Fax: (02) 9725 5767
Email: aucustserv@diversey.com
Website: www.diversey.com/

**1.4 Emergency telephone number**
Call 1800 033 111 (24hrs)

## SECTION 2: Hazards identification

**2.1 Classification of the substance or mixture**
Skin irritation, Category 2
Serious eye irritation, Category 2

**2.2 Label elements**

**Signal word:** Warning

**Hazard statements:**
H315 + H319 - Causes skin and serious eye irritation.

**Prevention statement(s):**
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P280 - Wear protective gloves.

**Response statement(s):**
P332 + P313 - If skin irritation occurs: Get medical advice or attention.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P362 - Take off contaminated clothing.

**Disposal statement(s):**
P501 - Dispose of unused content as chemical waste.

**2.3 Other hazards**
No other hazards known.

**2.4 Classification diluted product:**
Recommended maximum concentration (%): 20

Not classified as hazardous

## SECTION 3: Composition/information on ingredients

**3.1 Substances / Mixtures**

| Ingredient(s) | CAS number | EC number | Weight percent |
|---|---|---|---|
| alkyl alcohol ethoxylate | 64425-86-1 | [4] | 1-3 |
| alkyldimethylbenzylammoniumchloride | 68424-85-1 | 270-325-2 | 1-3 |

Non-hazardous ingredients are the remainder and add up to 100%.

Workplace exposure limit(s), if available, are listed in subsection 8.1.

## SECTION 4: First aid measures

**4.1 Description of first aid measures**

**Inhalation:** Get medical attention or advice if you feel unwell.

**Skin contact:** Wash skin with plenty of lukewarm, gently flowing water. If skin irritation occurs: Get medical advice or attention.

**Eye contact:** Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention. If irritation occurs and persists, get medical attention.

**Ingestion:** Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Get medical attention or advice if you feel unwell.

**Self-protection of first aider:** Consider personal protective equipment as indicated in subsection 8.2.

**First aid facilities:** Eyewash facilities should be considered in a workplace where necessary.

**4.2 Most important symptoms and effects, both acute and delayed**

**Inhalation:** No known effects or symptoms in normal use.

**Skin contact:** Causes irritation.

**Eye contact:** Causes severe irritation.

**Ingestion:** No known effects or symptoms in normal use.

**4.3 Indication of any immediate medical attention and special treatment needed**

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

**Poison Information Center:** Call 13 11 26 (Australia Wide).

## SECTION 5: Firefighting measures

**5.1 Extinguishing media**

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

**5.2 Special hazards arising from the substance or mixture**

No special hazards known.

**5.3 Advice for firefighters**

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

**5.4 Hazchem code**

*None allocated*

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Wear suitable gloves.

**6.2 Environmental precautions**

Do not allow to enter drainage system, surface or ground water. Dilute with plenty of water.

**6.3 Methods and material for containment and cleaning up**

Absorb with liquid-binding material (sand, diatomite, universal binders, sawdust).

**6.4 Reference to other sections**

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling**
**Measures to prevent fire and explosions:**
No special precautions required.

**Measures required to protect the environment:**
For environmental exposure controls see subsection 8.2.

**Advices on general occupational hygiene:**
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless adviced by Diversey. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with eyes. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

**7.2 Conditions for safe storage, including any incompatibilities**
Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging. Keep from freezing.
For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

**7.3 Specific end use(s)**
No specific advice for end use available.

## SECTION 8: Exposure controls/personal protection

**8.1 Control parameters**
**Workplace exposure limits**

Air limit values, if available:

Biological limit values, if available:

**8.2 Exposure controls**

*The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet.*
*If available, please refer to the product information sheet for application and handling instructions.*
*Normal use conditions are assumed for this section.*

*Recommended safety measures for handling the undiluted product:*
*Covering activities such as filling and transfer of product to application equipment, flasks or buckets*

**Appropriate engineering controls:** If the product is diluted by using specific dosing systems with no risk of splashes or direct skin contact, the personal protection equipment as described in this section is not required.
**Appropriate organisational controls:** Avoid direct contact and/or splashes where possible. Train personnel.

**Personal protective equipment**
**Eye / face protection:** Safety glasses are not normally required. However, their use is recommended in those cases where splashes may occur when handling the product (EN 166).
**Hand protection:** Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.
Suggested gloves for prolonged contact: Material: butyl rubber Penetration time: ≥ 480 min Material thickness: ≥ 0.7 mm
Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time: ≥ 30 min Material thickness: ≥ 0.4 mm
In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.
**Body protection:** No special requirements under normal use conditions.
**Respiratory protection:** No special requirements under normal use conditions.

**Environmental exposure controls:** No special requirements under normal use conditions.

*Recommended safety measures for handling the diluted product:*

**Recommended maximum concentration (%):** 20

**Appropriate engineering controls:** Use only in well ventilated areas.
**Appropriate organisational controls:** No special requirements under normal use conditions.

**Personal protective equipment**
**Eye / face protection:** No special requirements under normal use conditions.
**Hand protection:** No special requirements under normal use conditions.
**Body protection:** No special requirements under normal use conditions.
**Respiratory protection:** No special requirements under normal use conditions.

**Environmental exposure controls:** No special requirements under normal use conditions.

## SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**

| | Method / remark |
|---|---|
| **Physical State:** Liquid | |
| **Colour:** Clear, Purple | |
| **Odour:** Product specific | |
| **Odour threshold:** Not applicable | |
| **pH:** ≈ 6.3 (neat) | ISO 4316 |
| **Melting point/freezing point (°C):** Not determined | Not relevant to classification of this product |
| **Initial boiling point and boiling range (°C):** Not determined | |
| **Flammability (liquid):** Not flammable. | |
| **Flash point (°C):** > 93.3 | closed cup |
| **Sustained combustion:** Not applicable. *( UN Manual of Tests and Criteria, section 32, L.2 )* | |
| **Evaporation rate:** Not determined | Not relevant to classification of this product |
| **Flammability (solid, gas):** Not applicable to liquids | |
| **Upper/lower flammability limit (%):** Not determined | |
| **Vapour pressure:** Not determined | |
| **Vapour density:** Not determined | Not relevant to classification of this product |
| **Relative density:** ≈ 1.001 (20 °C) | OECD 109 (EU A.3) |
| **Solubility in / Miscibility with Water:** Fully miscible | |
| **Partition coefficient: n-octanol/water** No information available. Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3 | |
| **Autoignition temperature:** Not determined | |
| **Decomposition temperature:** Not applicable. | |
| **Viscosity:** Not determined | |
| **Explosive properties:** Not explosive. | |
| **Oxidising properties:** Not oxidising | |

**9.2 Other information**
**Surface tension (N/m):** Not determined
**Corrosion to metals:** Not corrosive
0 %P

## SECTION 10: Stability and reactivity

**10.1 Reactivity**
No reactivity hazards known under normal storage and use conditions.

**10.2 Chemical stability**
Stable under normal storage and use conditions.

**10.3 Possibility of hazardous reactions**
No hazardous reactions known under normal storage and use conditions.

**10.4 Conditions to avoid**
None known under normal storage and use conditions.

**10.5 Incompatible materials**
None known under normal use conditions.

**10.6 Hazardous decomposition products**
None known under normal storage and use conditions.

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects**

Mixture data:

**Relevant calculated ATE(s):**
ATE - Oral (mg/kg): >2000
ATE - Dermal (mg/kg): >2000

**Skin irritation and corrosivity**
**Result:** Not corrosive **Method:** Non guideline test, Epiderm

**Eye irritation and corrosivity**
**Result:** Eye irritant 2 **Method:** Weight of evidence

Substance data, where relevant and available, are listed below:.

**Acute toxicity**
Acute oral toxicity

| Ingredient(s) | Endpoint | Value (mg/kg) | Species | Method | Exposure time (h) |
|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | |
| alkyldimethylbenzylammoniumchloride | $LD_{50}$ | 398 | Rat | | |

Acute dermal toxicity

| Ingredient(s) | Endpoint | Value (mg/kg) | Species | Method | Exposure time (h) |
|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | |
| alkyldimethylbenzylammoniumchloride | $LD_{50}$ | 3412 | Rabbit | Method not given | |

Acute inhalative toxicity

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | |
| alkyldimethylbenzylammoniumchloride | | No data available | | | |

**Irritation and corrosivity**
Skin irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|---|---|---|---|---|
| alkyl alcohol ethoxylate | No data available | | | |
| alkyldimethylbenzylammoniumchloride | Corrosive | Rabbit | Method not given | |

Eye irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|---|---|---|---|---|
| alkyl alcohol ethoxylate | No data available | | | |
| alkyldimethylbenzylammoniumchloride | Severe damage | | Method not given | |

Respiratory tract irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|---|---|---|---|---|
| alkyl alcohol ethoxylate | No data available | | | |
| alkyldimethylbenzylammoniumchloride | No data available | | | |

**Sensitisation**
Sensitisation by skin contact

| Ingredient(s) | Result | Species | Method | Exposure time (h) |
|---|---|---|---|---|
| alkyl alcohol ethoxylate | No data available | | | |
| alkyldimethylbenzylammoniumchloride | Not sensitising | Guinea pig | OECD 406 (EU B.6) / Buehler test | |

Sensitisation by inhalation

| Ingredient(s) | Result | Species | Method | Exposure time |
|---|---|---|---|---|
| alkyl alcohol ethoxylate | No data available | | | |
| alkyldimethylbenzylammoniumchloride | No data available | | | |

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Mutagenicity

| Ingredient(s) | Result (in-vitro) | Method (in-vitro) | Result (in-vivo) | Method (in-vivo) |
|---|---|---|---|---|
| alkyl alcohol ethoxylate | No data available | | No data available | |
| alkyldimethylbenzylammoniumchloride | No evidence of genotoxicity, negative test results | OECD 471 (EU B.12/13) OECD 476 OECD 473 | No evidence of genotoxicity, negative test results | OECD 474 (EU B.12) |

Carcinogenicity

| Ingredient(s) | Effect |
|---|---|
| alkyl alcohol ethoxylate | No data available |
| alkyldimethylbenzylammoniumchloride | No data available |

Toxicity for reproduction

| Ingredient(s) | Endpoint | Specific effect | Value (mg/kg bw/d) | Species | Method | Exposure time | Remarks and other effects reported |
|---|---|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | | No data | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | available | | | | |
| alkyldimethylbenzylammoniumchloride | | | No data available | | | | |

**Repeated dose toxicity**

Sub-acute or sub-chronic oral toxicity

| Ingredient(s) | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|---|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | | |
| alkyldimethylbenzylammoniumchloride | | No data available | | | | |

Sub-chronic dermal toxicity

| Ingredient(s) | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|---|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | | |
| alkyldimethylbenzylammoniumchloride | | No data available | | | | |

Sub-chronic inhalation toxicity

| Ingredient(s) | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|---|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | | |
| alkyldimethylbenzylammoniumchloride | | No data available | | | | |

Chronic toxicity

| Ingredient(s) | Exposure route | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time | Specific effects and organs affected | Remark |
|---|---|---|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | | No data available | | | | | |
| alkyldimethylbenzylammoniumchloride | | | No data available | | | | | |

STOT-single exposure

| Ingredient(s) | Affected organ(s) |
|---|---|
| alkyl alcohol ethoxylate | No data available |
| alkyldimethylbenzylammoniumchloride | No data available |

STOT-repeated exposure

| Ingredient(s) | Affected organ(s) |
|---|---|
| alkyl alcohol ethoxylate | No data available |
| alkyldimethylbenzylammoniumchloride | No data available |

**Aspiration hazard**

Substances with an aspiration hazard (H304), if any, are listed in section 3. If relevant, see section 9 for dynamic viscosity and relative density of the product.

**Potential adverse health effects and symptoms**

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

## SECTION 12: Ecological information

### 12.1 Toxicity

No data is available on the mixture.

Substance data, where relevant and available, are listed below:

**Aquatic short-term toxicity**

Aquatic short-term toxicity - fish

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | |
| alkyldimethylbenzylammoniumchloride | $LC_{50}$ | 0.515 | *Fish* | Method not given | 96 |

Aquatic short-term toxicity - crustacea

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | |
| alkyldimethylbenzylammoniumchloride | $EC_{50}$ | 0.016 | *Daphnia* | Method not given | 48 |

Aquatic short-term toxicity - algae

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | |
| alkyldimethylbenzylammoniumchloride | $EC_{50}$ | 0.02 | *Selenastrum capricornutum* | OECD 201 (EU C.3) | 72 |

Aquatic short-term toxicity - marine species

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (days) |
|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | |
| alkyldimethylbenzylammoniumchloride | | No data available | | | - |

Impact on sewage plants - toxicity to bacteria

| Ingredient(s) | Endpoint | Value (mg/l) | Inoculum | Method | Exposure time |
|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | |
| alkyldimethylbenzylammoniumchloride | $EC_{20}$ | 5 | *Activated sludge* | OECD 209 | 0.5 hour(s) |

### Aquatic long-term toxicity

Aquatic long-term toxicity - fish

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time | Effects observed |
|---|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | | |
| alkyldimethylbenzylammoniumchloride | | No data available | | | | |

Aquatic long-term toxicity - crustacea

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time | Effects observed |
|---|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | | |
| alkyldimethylbenzylammoniumchloride | NOEC | 0.025 | *Daphnia magna* | OECD 211 | 21 day(s) | |

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw sediment) | Species | Method | Exposure time (days) | Effects observed |
|---|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | No data available | | | | |
| alkyldimethylbenzylammoniumchloride | | No data available | | | - | |

### Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|---|---|---|---|---|---|---|
| alkyldimethylbenzylammoniumchloride | | No data available | | | - | |

Terrestrial toxicity - plants, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|---|---|---|---|---|---|---|
| alkyldimethylbenzylammoniumchloride | | No data available | | | - | |

Terrestrial toxicity - birds, if available:

| Ingredient(s) | Endpoint | Value | Species | Method | Exposure time (days) | Effects observed |
|---|---|---|---|---|---|---|
| alkyldimethylbenzylammoniumchloride | | No data available | | | - | |

Terrestrial toxicity - beneficial insects, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|---|---|---|---|---|---|---|
| alkyldimethylbenzylammoniumchloride | | No data available | | | - | |

Terrestrial toxicity - soil bacteria, if available:

| Ingredient(s) | Endpoint | Value | Species | Method | Exposure | Effects observed |
|---|---|---|---|---|---|---|

| | | (mg/kg dw soil) | | | time (days) | |
|---|---|---|---|---|---|---|
| alkyldimethylbenzylammoniumchloride | | No data available | | | - | |

**12.2 Persistence and degradability**
**Abiotic degradation**
Abiotic degradation - photodegradation in air, if available:

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

**Biodegradation**
Ready biodegradability - aerobic conditions

| Ingredient(s) | Inoculum | Analytical method | $DT_{50}$ | Method | Evaluation |
|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | | | | | No data available |
| alkyldimethylbenzylammoniumchloride | | Oxygen depletion | > 60% | Read across | Readily biodegradable |

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

**12.3 Bioaccumulative potential**
Partition coefficient n-octanol/water (log Kow)

| Ingredient(s) | Value | Method | Evaluation | Remark |
|---|---|---|---|---|
| alkyl alcohol ethoxylate | No data available | | | |
| alkyldimethylbenzylammoniumchloride | 2.88 | OECD 107 | No bioaccumulation expected | |

Bioconcentration factor (BCF)

| Ingredient(s) | Value | Species | Method | Evaluation | Remark |
|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | No data available | | | | |
| alkyldimethylbenzylam moniumchloride | 0.5 | | Method not given | No bioaccumulation expected | |

**12.4 Mobility in soil**
Adsorption/Desorption to soil or sediment

| Ingredient(s) | Adsorption coefficient Log Koc | Desorption coefficient Log Koc(des) | Method | Soil/sediment type | Evaluation |
|---|---|---|---|---|---|
| alkyl alcohol ethoxylate | No data available | | | | |
| alkyldimethylbenzylammoniumchloride | No data available | | | | |

**12.5 Other adverse effects**
No other adverse effects known.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**
**Waste from residues / unused products:** The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

**Empty packaging**
**Recommendation:** Dispose of observing national or local regulations.
**Suitable cleaning agents:** Water, if necessary with cleaning agent.

## SECTION 14: Transport information

**ADG, IMO/IMDG, ICAO/IATA**
**14.1 UN number:** Non-dangerous goods
**14.2 UN proper shipping name:** Non-dangerous goods
**14.3 Transport hazard class(es):** Non-dangerous goods
**14.4 Packing group:** Non-dangerous goods
**14.5 Environmental hazards:** Non-dangerous goods
**Environmentally hazardous:** No
**Marine pollutant:** No
**14.6 Special precautions for user:** Non-dangerous goods
**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:** The product is not transported in bulk tankers.
Non-dangerous goods

**Other relevant information:**
**Hazchem code:** None allocated

The product has been classified, labelled and packaged in accordance with the requirements of .? and the provisions of the IMDG Code.

Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

## SECTION 15: Regulatory information

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

| | |
|---|---|
| **National regulations** | Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia. |
| **Poison schedule** | A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP). |
| **Classification** | Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia. |
| **Inventory listing(s)** | AICS (Australian Inventory of Chemical Substances): All components are listed on AICS, or are exempt. |

## SECTION 16: Other information

*The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract*

**SDS code:** MS31000260 **Version:** 01.1 **Revision:** 2018-11-11

**Additional information:**
**Respirators:** In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

**Work practices - solvents:** Organic solvents may present both a health and flammability hazard. It is recommended that engineering controls should be adopted to reduce exposure where practicable (for example, if using indoors, ensure explosion proof extraction ventilation is available). Flammable or combustible liquids with explosive limits have the potential for ignition from static discharge. Refer to AS 1020 (The control of undesirable static electricity) and AS 1940 (The storage and handling of flammable and combustible liquids) for control procedures.

**Personal protective equipment guidelines:** The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

**Health effects from exposure:** It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Safety Data Sheet which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**Abbreviations and acronyms:**
- DNEL - Derived No Effect Limit
- AUH - GHS Specific hazard statement
- PNEC - Predicted No Effect Concentration
- ATE - Acute Toxicity Estimate
- LD50 - Lethal Dose, 50% / Median Lethal dose
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- EC50 - effective concentration, 50%
- NOEL - No observed effect level
- NOAEL - No observed adverse effect level
- STOT-RE - Specific target organ toxicity (repeated exposure)
- STOT-SE - Specific target organ toxicity (single exposure)
- EC No. - European Community Number
- OECD - Organization for Economic Cooperation and Development

**End of Safety Data Sheet**