

Swan Oxycon Fe

Swan Analytical Australia Pty Ltd

Chemwatch: 31-9137

Version No: 2.1.1.1

Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 3

Issue Date: 01/01/2013

Print Date: 19/11/2014

Initial Date: **Not Available**

S.GHS.AUS.EN

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

Product Identifier

| | |
|-------------------------------|-------------------------------|
| Product name | Swan Oxycon Fe |
| Chemical Name | Not Applicable |
| Synonyms | Not Available |
| Proper shipping name | CHEMICAL KIT or FIRST AID KIT |
| Chemical formula | Not Applicable |
| Other means of identification | Not Available |
| CAS number | Not Applicable |

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

| | |
|--------------------------|-----------------------|
| Relevant identified uses | Reagent for analysis. |
|--------------------------|-----------------------|

Details of the manufacturer/importer

| | |
|-------------------------|--|
| Registered company name | Swan Analytical Australia Pty Ltd |
| Address | Unit 12 45 Leighton Place Hornsby 2077 NSW Australia |
| Telephone | +61 2 9482 1455 |
| Fax | +61 2 9482 1489 |
| Website | www.swan.ch |
| Email | sales@swan-analytical.com.au |

Emergency telephone number

| | |
|-----------------------------------|----------------|
| Association / Organisation | Chemwatch |
| Emergency telephone numbers | 1800 039 008 |
| Other emergency telephone numbers | +800 2436 2255 |

CHEMWATCH EMERGENCY RESPONSE

| Primary Number | Alternative Number 1 | Alternative Number 2 |
|----------------|----------------------|----------------------|
| 1800 039 008 | +612 9186 1132 | Not Available |

Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture


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

CHEMWATCH HAZARD RATINGS

| | Min | Max | |
|--------------|-----|-----|--------------|
| Flammability | 0 | | |
| Toxicity | 3 | | 0 = Minimum |
| Body Contact | 3 | | 1 = Low |
| Reactivity | 1 | | 2 = Moderate |
| Chronic | 2 | | 3 = High |
| | | | 4 = Extreme |

| | |
|------------------------|--|
| Poisons Schedule | Not Applicable |
| GHS Classification [1] | Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 2, Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Skin Sensitizer Category 1 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |

Label elements

| | |
|--------------------|---|
| GHS label elements |  |
|--------------------|---|

| | |
|-------------|---------------|
| SIGNAL WORD | DANGER |
|-------------|---------------|

Hazard statement(s)

| | |
|------|---|
| H301 | Toxic if swallowed |
| H311 | Toxic in contact with skin |
| H330 | Fatal if inhaled |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |
| H317 | May cause an allergic skin reaction |

Precautionary statement(s) Prevention

| | |
|------|--|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |

Precautionary statement(s) Response

| | |
|----------------|---|
| P301+P310 | IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider |
| P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |

Precautionary statement(s) Storage

| | |
|-----------|--|
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P405 | Store locked up. |

Precautionary statement(s) Disposal

| | |
|------|--|
| P501 | Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration |
|------|--|

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

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|-----------|-----------|--|
| 5421-46-5 | 25-50 | ammonium thioglycolate |
| 68-11-1 | 25-50 | thioglycolic acid |
| 7732-18-5 | NotSpec. | water |

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

| | |
|---------------------|--|
| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Immediately hold eyelids apart and flush the eye continuously with 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. ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. ▶ Transport to hospital or doctor without delay. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | <p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately flush body and clothes with large amounts of water, using safety shower if available. ▶ Quickly remove all contaminated clothing, including footwear. ▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. ▶ Transport to hospital, or doctor. |
| Inhalation | <ul style="list-style-type: none"> ▶ 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. |
| Ingestion | <ul style="list-style-type: none"> ▶ For advice, contact a Poisons Information Centre or a doctor at once. ▶ Urgent hospital treatment is likely to be needed. ▶ If swallowed do NOT induce vomiting. |

Swan Oxycon Fe

- ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- ▶ Observe the patient carefully.
- ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- ▶ Transport to hospital or doctor without delay.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
for corrosives:

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.
- ▶ Anticipate seizures.
- ▶ Where eyes have been exposed, flush immediately with water and continue to irrigate with normal saline during transport to hospital.
- ▶ **DO NOT use emetics.** Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- ▶ Skin burns should be covered with dry, sterile bandages, following decontamination.
- ▶ **DO NOT attempt neutralisation as exothermic reaction may occur.**

ADVANCED TREATMENT

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- ▶ 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.
- ▶ Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- ▶ Consider endoscopy to evaluate oral injury.
- ▶ Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRANCE, P.L. *EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994*

For exposures involving sulfides and hydrogen sulfide (including gastric acid decomposition products of alkaline sulfides):

- ▶ Hydrogen sulfide anion produces its major toxic effect through inhibition of cytochrome oxidases.
- ▶ Symptoms include profuse salivation, nausea, vomiting and diarrhea. Central nervous effects may include giddiness, headache, vertigo, amnesia, confusion and unconsciousness. Tachypnoea, palpitations, tachycardia, arrhythmia, sweating, weakness and muscle cramps may also indicate overexposure.

Treatment involves:

- ▶ If respirations are depressed, application of artificial respiration, administration of oxygen (continue after spontaneous breathing is established).
- ▶ For severe poisonings administer amyl nitrite and sodium nitrite (as for cyanide poisoning) but omit sodium thiosulfate injection.
- ▶ Atropine sulfate (0.6 mg intramuscularly) may contribute symptomatic relief.
- ▶ Conjunctivitis may be relieved by installation of 1 drop of olive-oil in each eye and sometimes by 3 drops of epinephrine solution (1:1000) at frequent intervals. Occasionally local anesthetics and hot and cold compresses are necessary to control pain.
- ▶ Antibiotics at first hint of pulmonary infection.

[Gosselin et al, Clinical Toxicology of Commercial Products]

Hydrogen sulfide is metabolised by oxidation to sulfate, methylation and reaction with metallic ion- or disulfide containing proteins (principally cytochrome c oxidase). This latter reaction is associated with aerobic, cellular respiration and is largely responsible for the toxic effects

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

- ▶ Water spray or fog.
- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).

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.
- ▶ Wear breathing apparatus plus protective gloves in the event of a fire.
- ▶ Prevent, by any means available, spillage from entering drains or water courses.
- ▶ Use fire fighting procedures suitable for surrounding area.

Fire/Explosion Hazard

- ▶ Non combustible.
- ▶ Not considered a significant fire risk, however containers may burn. Decomposition may produce toxic fumes of:, carbon dioxide (CO₂), nitrogen oxides (NO_x), sulfur oxides (SO_x), other pyrolysis products typical of burning organic material

SECTION 6 ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Continued...

| | |
|---|--|
| Minor Spills | <p>WARNING: Never use dry, powdered hypochlorite or other strong oxidizer for mercaptan spills, as autoignition can occur.</p> <ul style="list-style-type: none"> ▶ 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 | <p>Minor hazard.</p> <ul style="list-style-type: none"> ▶ Clear area of personnel. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Control personal contact with the substance, by using protective equipment as required. |
| Personal Protective Equipment advice is contained in Section 8 of the MSDS. | |

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

| | |
|--------------------------|--|
| Safe handling | <ul style="list-style-type: none"> ▶ DO NOT allow clothing wet with material to stay in contact with skin <p>The careful design and assembly of equipment is paramount to the control of mercaptan odors. Although careful planning reduces the chances for leaks developing in the system, it is important to be prepared to locate and stop small leaks promptly. It is recommended that a leak check be made prior to every run carried out under pressure in metal equipment with a mercaptan or hydrogen sulfide present.</p> <p>An effective method to obtain a leak-free system involves two steps:</p> <ol style="list-style-type: none"> 1. Charge the system with nitrogen gas or other inert, nontoxic gas to a pressure at least as high as will be used in practice, and check for a drop in pressure with time on a suitable gauge. |
| Other information | <ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ Store in a cool, dry, well-ventilated area. ▶ Store away from incompatible materials and foodstuff containers. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|---|
| Suitable container | <ul style="list-style-type: none"> ▶ Polyethylene or polypropylene container. ▶ Packing as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks. |
| Storage incompatibility | <ul style="list-style-type: none"> ▶ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates. ▶ Avoid reaction with oxidising agents |



X — Must not be stored together

0 — May be stored together with specific preventions

+ — May be stored together

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

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 | thioglycolic acid | Thioglycolic acid | 3.8 mg/m ³ / 1 ppm | Not Available | Not Available | Sk |

EMERGENCY LIMITS






| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|-------------------|--|--------|--------|---------|
| thioglycolic acid | Mercaptoacetic acid; (Thioglycolic acid) | 1 ppm | 1 ppm | 2.5 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|------------------------|---------------|---------------|
| ammonium thioglycolate | Not Available | Not Available |
| thioglycolic acid | Not Available | Not Available |
| water | 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> |
|---|--|

Swan Oxycon Fe

| | |
|--------------------------------|---|
| Personal protection |      |
| Eye and face protection | <ul style="list-style-type: none"> ▶ Chemical goggles. ▶ Full face shield may be required for supplementary but never for primary protection of eyes. ▶ 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 ▶ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots. <p>NOTE:</p> <ul style="list-style-type: none"> ▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C. apron. ▶ Barrier cream. |
| 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:

Swan Oxycon Fe

| Material | CPI |
|----------|-----|
| BUTYL | A |
| NEOPRENE | A |
| VITON | A |
| NITRILE | C |

* CPI - Chemwatch 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 10 x ES | A-AUS | - | A-PAPR-AUS / Class 1 |
| up to 50 x ES | - | A-AUS / Class 1 | - |
| up to 100 x ES | - | A-2 | A-PAPR-2 ^ |

^ - 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)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Appearance | Colourless acidic liquid with a characteristic odour; mixes with water. | | |
|---|---|--|----------------|
| Physical state | Liquid | Relative density (Water = 1) | 1.19 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Applicable |
| pH (as supplied) | 3-4 | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | Not Available | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Not Available | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Applicable | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Applicable | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water (g/L) | Miscible | pH as a solution(1%) | Not Available |
| Vapour density (Air = 1) | Not Available | 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 | Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo. Inhalation of thioglycolic acid mists may cause olfactory paralysis, weakness, shortness of breath and liver damage. |
| Ingestion | Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual. The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. Symptoms of exposure to thioglycolic acid include weakness, shortness of breath and liver damage. It has been asserted that the acid releases significant amounts of hydrogen sulfide in contact with gastric juices. |
| Skin Contact | Skin contact with the material may produce toxic effects; systemic effects may result following absorption. The material can produce chemical burns following direct contact with the skin. Fatalities were produced by topical application of a 10% solution of thioglycolic acid to guinea pigs at less than 5 ml/kg. Signs of intoxication included weakness, gasping and convulsions. |
| Eye | The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation. Instillation of thioglycolic acid into rabbit eye resulted in severe pain, severe conjunctival inflammation, dense corneal opacity and severe iritis. |
| Chronic | Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Gastrointestinal disturbances may also occur. Chronic exposures may result in dermatitis and/or conjunctivitis. |

| Swan Oxycon Fe | TOXICITY | IRRITATION |
|------------------------|---|------------------|
| | Not Available | Not Available |
| ammonium thioglycolate | TOXICITY | IRRITATION |
| | Intraperitoneal (mouse) LD50: 100 mg/kg | |
| | Intraperitoneal (rat) LD50: 165 mg/kg | |
| | Intravenous (cat) LD50: 175 mg/kg | |
| | Intravenous (rabbit) LD50: 100 mg/kg | |
| | Oral (Rat) LD50: 3500 mg/kg | |
| Not Available | Not Available | |
| thioglycolic acid | TOXICITY | IRRITATION |
| | Oral (mouse) LD50: 242 mg/kg | Skin (human): 3% |
| | Oral (rat) LD50: 114 mg/kg | |
| Not Available | Not Available | |
| water | TOXICITY | IRRITATION |
| | Not Available | Not Available |

* Value obtained from manufacturer's msds

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

| | |
|--|--|
| AMMONIUM THIOGLYCOLATE | Somnolence recorded |
| WATER | No significant acute toxicological data identified in literature search. |
| Swan Oxycon Fe, AMMONIUM THIOGLYCOLATE, THIOGLYCOLIC ACID | The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. |

Continued...

Swan Oxycon Fe

| | | | |
|-----------------------------------|---|--------------------------|---|
| 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 required to make classification available
 ✗ – Data available but does not fill the criteria for classification
 ⊘ – Data Not Available to make classification

CMR STATUS

| | | | |
|------|-------------------|-------------------------------------|----|
| SKIN | thioglycolic acid | Australia Exposure Standards - Skin | Sk |
|------|-------------------|-------------------------------------|----|

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|------------------------|-------------------------|------------------|
| ammonium thioglycolate | LOW | LOW |
| thioglycolic acid | LOW | LOW |
| water | LOW | LOW |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|------------------------|-----------------------|
| ammonium thioglycolate | LOW (LogKOW = 0.0305) |
| thioglycolic acid | LOW (LogKOW = 0.09) |
| water | LOW (LogKOW = -1.38) |

Mobility in soil

| Ingredient | Mobility |
|------------------------|--------------------|
| ammonium thioglycolate | HIGH (KOC = 1.201) |
| thioglycolic acid | HIGH (KOC = 1.201) |
| water | LOW (KOC = 14.3) |

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|------------------------------|---|
| Product / Packaging disposal | <ul style="list-style-type: none"> Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: <ul style="list-style-type: none"> If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Where possible retain label warnings and MSDS and observe all notices pertaining to the product. |
|------------------------------|---|

SECTION 14 TRANSPORT INFORMATION

Labels Required

| | |
|------------------|---|
| |  |
| Marine Pollutant | NO |
| HAZCHEM | ZZ |

Land transport (ADG)

| | |
|----------------------------|---------------------------------------|
| UN number | 3316 |
| Packing group | Not Applicable |
| UN proper shipping name | CHEMICAL KIT or FIRST AID KIT |
| Environmental hazard | No relevant data |
| Transport hazard class(es) | Class : 9 Subrisk : Not Applicable |

| | | |
|------------------------------|--------------------|---------|
| Special precautions for user | Special provisions | 251 340 |
| | Limited quantity | 0 |

Air transport (ICAO-IATA / DGR)

| | | |
|------------------------------|---|----------------|
| UN number | 3316 | |
| Packing group | Not Applicable | |
| UN proper shipping name | Chemical kit †; First aid kit † | |
| Environmental hazard | No relevant data | |
| Transport hazard class(es) | ICAO/IATA Class | 9 |
| | ICAO / IATA Subrisk | Not Applicable |
| | ERG Code | 9L |
| Special precautions for user | Special provisions | A44A163 |
| | Cargo Only Packing Instructions | 960 |
| | Cargo Only Maximum Qty / Pack | 10 kg |
| | Passenger and Cargo Packing Instructions | 960 |
| | Passenger and Cargo Maximum Qty / Pack | 10 kg |
| | Passenger and Cargo Limited Quantity Packing Instructions | Y960 |
| | Passenger and Cargo Limited Maximum Qty / Pack | 1 kg |

Sea transport (IMDG-Code / GGVSee)

| | | |
|------------------------------|-------------------------------|----------------|
| UN number | 3316 | |
| Packing group | Not Applicable | |
| UN proper shipping name | CHEMICAL KIT or FIRST AID KIT | |
| Environmental hazard | No relevant data | |
| Transport hazard class(es) | IMDG Class | 9 |
| | IMDG Subrisk | Not Applicable |
| Special precautions for user | EMS Number | F-A , S-P |
| | Special provisions | 251 340 |
| | Limited Quantities | See SP251 |

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture**

| | |
|--|---|
| ammonium thioglycolate(5421-46-5) is found on the following regulatory lists | "Australia Inventory of Chemical Substances (AICS)" |
| thioglycolic acid(68-11-1) is found on the following regulatory lists | "Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists" |
| water(7732-18-5) is found on the following regulatory lists | "Australia Inventory of Chemical Substances (AICS)" |

SECTION 16 OTHER INFORMATION**Other information**

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references

The (M)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.

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.