Safety Data Sheet

Egmont Copper Sulphate

1. IDENTIFICATION

Product Name	Copper Sulphate Pentahydrate
Other Names	Copper sulphate, pentahydrate; Sulfuric acid, copper(2+) salt (1:1), pentahydrate
Uses	**Uses by worker in industrial setting:** Absorbents - Ceramics - Coating and Inks - Cosmetics - Electroplating and Galvanic (including use in electronics, printed wiring boards, engraving/lithography, metal surface treatment, wire coating) - Fertilizer - Glass – Laboratory Chemicals - Lubricants and Greases - Leather dyes - Mineral Flotation - Raw material for non-ferrous smelting – Non Metal surface treatment - Pigments - Processing aids - Putties, fillers, construction chemicals - Polishes and waxes - Photochemicals - Raw material for production of other compounds and fine chemicals - Rubber and plastic - Washing and clearing products - Catalyst - Textile dyes - Adhesives - Water treatment **Uses by professional workers:** Coating and Inks - Ceramics - Electroplating and Galvanic (including use in electronics, printed wiring boards, engraving/lithography, metal surface treatment, wire coating) - Fertilizer - Glass - Laboratory Chemicals – Lubricants and Greases - Putties, fillers, construction chemicals - Photochemicals -- Polishes and waxes - Rubber and plastic – Adhesives **Uses by consumers:** Coating and Inks - Ceramic - Cosmetics - Fertilizer - Glass - Laboratory Chemicals - Lubricants and Greases - Putties, fillers, construction chemicals – Photochemicals - Polishes and waxes - Rubber and plastic - Washing and clearing products - Catalyst - Textile dyes - Leather dyes – Adhesives
Chemical Family	No Data Available
Chemical Formula	CuSO4.5H2O
Chemical Name	Copper Sulphate Pentahydrate
Product Description	No Data Available

2. HAZARD IDENTIFICATION

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Egmont Commercial Ltd	347 Marshs Road Halswell Christchurch	+64 3 3495546

Emergency Contact Details:

National Poisons Centre	New Zealand	0800-764766

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications

Health Hazards	6.1D	Substances that are acutely toxic – Harmful
	6.3A	Substances that are irritating to the skin
	6.4A	Substances that are irritating to the eye
	6.5B	Substances that are contact sensitisers
	6.9B	Substances that are harmful to human target organs or systems
Environmental Hazards	9.1A	Substances that are very ecotoxic in the aquatic environment
	9.3C	Substances that are harmful to terrestrial vertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Entity	Copper (II) Sulphate Pentahydrate
Formula	No Data Available
CAS Number	7758-99-8
Proportion	>98.0 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	If swallowed seek immediately for medical advice. Show this safety data sheet or the label.

Eye	Wash immediately with plenty of water for at least 15 minutes. Seek immediately for medical advice.
Skin	Take off the contaminated clothes and wash with soap and plenty of water all the contaminated parts of the body. In case of irritation seek for medical advice.
Inhaled	If possible reduce exposure using fresh air. Remove from exposure take the person in a well aerated place and calm. Seek medical advice.
Advice to Doctor	Therapy: Gastric lavage with milk-albumin solution, If the copper level in blood is high use chelants, penicillamine if the oral via is practicable otherwise CaEDTA intravenous and BAL intramuscular; for the remainder, symptomatic therapy.
Medical Conditions Aggravated by Exposure	Most important symptoms and effects, both acute and delayed: May cause pain in mouth and pharynx, nausea, watery and bloody diarrhoeas and/or decrease of blood pressure. Desaturation of protein with damage at mucosa level, hepatic and renal damage and of the central nervous system, hemolysis. Vomiting with emission of green coloured material, gastric burning, haematic diarrhea, abdominal pain, hemolitic jaundice, hepatic and renal insufficiency, convulsion, collapse. Fever from metal inhalation. Possible eyes and skin irritation.

5. FIRE FIGHTING MEASURES

General Measures

Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk.

Flammability Conditions

Product is a non-flammable solid.

Extinguishing Media

Product is not flammable. Use extinguishing media appropriate for surrounding fire (micronized water, CO2, foam).
Collect the contaminated water to avoid reaching of sewers or water courses.
NON-SUITABLE EXTINGUISHING MEDIA: None, but avoid using plenty of water.

Hazardous Products of Combustion

Toxic gases / fumes of sulphur oxides SOx could be produced. The product decomposes over 560 deg C producing toxic gases of sulphur oxides (SOx).

Special Fire Fighting Instructions

Do NOT allow fire-fighting water to reach waterways, drains or sewers. Store fire-fighting water for treatment.

Personal Protective Equipment

Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire-fighting clothing (includes fire-fighting helmet, coat, trousers, boots and gloves).

Flash Point	Not applicable to an inorganic solid
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure

Protect adequately all the body parts. The air passages must be protected (suitable filter mask FFP2/P2) if the material form dust (microcrystals form has more probability to forms dust). Take away all the unauthorised people, children and animals. Avoid that the product could reach water bodies or sewage. In case this happened advise
immediately competent Authorities.

Clean Up Procedures

Use sand or soil to contain the loss of product. Avoid the possibility that significant quantity of product has entered water courses or sewer; if this should happen advise immediately the local competent authority.

Containment

Cover drains near the polluted area. Vacuum the product if possible otherwise cover the product with sand or soil and clean up accurately all the product. Put it into another clean and dry container, close and remove it from the area. Do not clean contaminated area with water. If necessary, arrange disposal in an authorised area. Contact local
Waste Disposal Authority.

Environmental Precautionary Measures

Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management.

Evacuation Criteria

Evacuate all unnecessary personnel

Personal Precautionary Measures

Wear plastic disposable cloths, appropriated FFP2/P2 filter musk, rubber gloves and protective eye goggles or total face protection.

7. HANDLING AND STORAGE

Handling

Avoid dust formation. Do not breathe dust. Handle in a well-ventilated area or wear adequate respiratory protection (FFP2/P2 filter mask). Avoid contact with skin and eyes wearing working clothes, gloves and protective glasses. Do not eat, smoke or drink during use. After use keep the packaging well closed. See also point 8.
Specific end uses: Refer to point 1.2 and at the attached exposure scenario. An exposure scenario needs to be requested by the user of this substance indicating the appropriate uses and destination.

Storage

Keep in sealed containers away from humidity and sunlight. Store the product in well ventilated warehouse away from flammable product. Keep out of the reach of children, animal and unauthorised people. Keep away from food, drink and feeding stuff. Incompatibility: None known. Due to its chemical Cu++ in presence of water/humidity is corrosive to iron.

Incompatibility: None known. Due to its chemical Cu++ in presence of water/humidity is corrosive to iron. This product has a UN classification of 3077 and a Dangerous Goods Class 9 (Miscellaneous) according to The Australian Code for the Transport of Dangerous Goods by Road and Rail.
NOTE: This product is subject to special provision AU01 according to The ADG7. SP No. AU01 Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in; (a) packagings; (b) IBCs; or (c) any other receptacle not exceeding 500 kg(L).

Container

Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer. Packaging material: Polyethylene or polypropylene.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General

No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the exposure standard for constituents: Copper Dusts and Mists (as Cu): 8hr TWA = 1 mg/m3 Copper (fume) : 8hr TWA = 0.2 mg/m3

NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Exposure Limits

No Data Available

Biological Limits

No information available on biological limit values for this product.

Engineering Measures

Industrial use of the product should to be conducted under LEV (Local Exhaust Ventilation) but please refer to the Exposure scenario (to be required for the intended uses and destination) for detailed conditions.

Personal Protection

Equipment RESPIRATOR: Use a suitable dust mask (FFP2/P2 filter mask) if the product forms dust. Do not breathe dust (AS1715/1716)

EYES Avoid contact with eyes. Use protective glasses or total face protection (AS1336/1337).

HANDS Protect the hands using suitable gloves (plastic, rubber or resistant to chemical product). Wash the hands after use (AS2161).

CLOTHING Use appropriate clothes and avoid prolonged contact with skin and wear safety footwear (AS3765/2210).

Work Hygienic Practices

Wash deeply and daily the working clothes. After use wash the body with water and soap.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline solid (crystals or microcrystals)
Odour	Odourless
Colour	Blue or Light Blue
pH	3.0 - 4.2 5% water solution
Vapour Pressure	Not applicable to inorganic solids at environmental (@ No Data Available)
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	266g/100ml 20deg C

Specific Gravity	No Data Available
Flash Point	Not applicable to an inorganic solid
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	1.1 - 1.3 Kg/L
Corrosion Rate	No Data Available
Decomposition Temperature	Substance lose crystallization water at 110 deg C and decompose above 560 deg C
Density	>=2.286 g/cm3 Relative
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics Solubility:	Soluble in methanol (57-67 g/l at room temperature) and practically insoluble in most common organic solvent (< 1 g/)
Copper content:	25% w/w
Potential for Dust Explosion	No Data Available

Fast or Intensely Burning Characteristics

No Data Available

Flame Propagation or Burning Rate of Solid Materials

No Data Available

Non-Flammables That Could Contribute Unusual Hazards to a Fire

No Data Available

Properties That May Initiate or Contribute to Fire Intensity

No Data Available

Reactions That Release Gases or Vapours

No Data Available

Release of Invisible Flammable Vapours and Gases

No Data Available

10. STABILITY AND REACTIVITY

General Information

Stable to the light, humidity and heat. Stable in the usual warehouse conditions and in the original bags for at least 2 years. Loss water of crystallization from 50-60 deg C and 250 deg C. Decomposes over 560 deg C.

Chemical Stability

The product is stable under normal ambient and anticipated storage and handling condition. Loss of water of crystallization could change the colour of the product to very light blue to white (anhydrous form)

Conditions to Avoid

The product could be corrosive for iron material in presence of humidity.

Materials to Avoid

Strong reducing agents.

Hazardous Decomposition Products

Toxic gases / fumes of sulphur oxides SOx could be produced. The product decomposes over 560 deg C producing toxic gases of sulphur oxides (SOx).

Hazardous Polymerisation

Reactivity: The substance is a water soluble inorganic salt of copper (2+) and sulphate ions. It is not considered to have a high reactivity. Due to the presence of copper (2+) ion the product results corrosive to iron in presence of water or humidity.

11. TOXICOLOGICAL INFORMATION

General Information

Oral: LD50 = 482 mg/kg bw (male and female rats). Test guideline OECD 401: Copper sulphate pentahydrate meets the criteria for classification as harmful if swallowed.
Inhalation: Available information on particle size distribution indicates that exposure to copper sulphate pentahydrate will not occur by the inhalation route.
Copper sulphate pentahydrate does not meet the criteria for classification. Dermal: LD50 > 2000 mg/kg (male and female rats). Test guideline OECD 402: Copper sulphate pentahydrate does not meet the criteria for classification.

Negative effects on health:
Possible symptoms: Could cause sore throat, abdominal pains, diarrhoea, vomiting. Strongly irritating to eyes and irritating to skin and mucosa.
Most important symptoms and effects, both acute and delayed:
May cause pain in mouth and pharynx, nausea, watery and bloody diarrhoeas and/or decrease of blood pressure.

Denaturation of protein with damage at mucosa level, hepatic and renal damage and of the central nervous system, hemolysis. Vomiting with emission of green coloured material, gastric burning, haematic diarrheal, abdominal pain, hemolitic jaundice, hepatic and renal insufficiency, convulsion, collapse. Fever from metal inhalation. Possible eyes and skin irritation.

Acute toxicity:
OECD 401 (Acute Oral Toxicity) Male/female LD50: 482 mg/kg b.w.

OECD 402 (Acute Dermal Toxicity) Male/female LD50: > 2000 mg/kg b.w. LC50 Inhalation (rat): Despite the official classification (harmful by inhalation) due to its particle size the product contains negligible amounts of particles of inhalable size.

Skin corrosion/irritation:
OECD 404 (Acute Dermal Irritation / Corrosion):
Erythema: 0.22 (mean at 24, 48 and 72 hours across 3 animals).
Oedema: 0 (mean at 24, 48 and 72 hours across 3 animals).

Serious eye damage/irritation:
OECD 405 (Acute Eye Irritation/Corrosion):
Cornea: Average for 3 animals at 24, 48 and 72 h: 2.56
Iris: Average for 3 animals at 24, 48 and 72 h: 1.0
Conjunctivae: Average for 3 animals at 24, 48 and 72 h: 2.0
Chemosis: Average for 3 animals at 24, 48 and 72 h: 3.78. Lesions observed at 72 hours were still present in the
three rabbits when examined on day 21. The test material was shown to elicit severe ocular irritation and other lesions.

Respiratory or skin sensitisation:
OECD 406 (Skin sensitisation): 0/20 test animals sensitised.

Germ cell mutagenicity
micronucleus assay mouse (CD-1) male/female oral: gavage 447 mg/kg EU Method B.12 (Mutagenicity - In Vivo
Mammalian Erythrocyte Micronucleus Test) (Cited as Directive 2000/32/EC, B.12)
Evaluation of results: negative
Test results: Genotoxicity: negative (male/female)
Copper sulphate pentahydrate, copper and other copper compounds are not considered genotoxic.

Carcinogenicity:
Available data on the genotoxicity and carcinogenicity of copper and its compounds have been considered against EU classification criteria. The available data for copper and copper compounds do not meet the criteria requiring classification for carcinogenicity.

Reproductive toxicity
EPA OPPTS 870.3800 (Reproduction and Fertility Effects)
OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)
LOAEL (P): > 1500 ppm (male) based on: test mat. (No reproductive toxicity was seen at any concentration.)
LOAEL (P): 1500 ppm (female) based on: test mat. (Decreased spleen weight in P1 adult females. No reproductive toxicity was seen at any concentration.)
LOAEL (F1): 1500 ppm (male) based on: test mat. (Decreased spleen weight in F1 male weanlings. No reproductive toxicity was seen at any concentration.)
LOAEL (F1): 1500 ppm (female) based on: test mat. (Decreased spleen weight in F1 female weanlings. No reproductive toxicity was seen at any concentration.)
LOAEL (F2): 1500 ppm (male) based on: test mat. (Decreased spleen weight in F2 male weanlings.)

LOAEL (F2): 1500 ppm (female) based on: test mat. (Decreased spleen weight in F2 female weanlings.)
NOAEL (P): 1500 ppm (male) based on: test mat. (Equivalent to 23.6 mg Cu/kg bw/day for P1 males during premating.)
NOAEL (P): 1000 ppm (female) based on: test mat. (No reproductive toxicity was seen at any concentration.
Equivalent to 19.1, 17.0 and 33.8 mg Cu/kg bw/day for P1 females during premating, gestation and the first 2 weeks of lactation, respectively.)
NOAEL (F1): 1000 ppm (male) based on: test mat. (No reproductive toxicity was seen at any concentration. Effects were seen in F1 weanlings. Equivalent to 23.5 mg Cu/kg bw/day for adults at 1000 ppm.)
NOAEL (F1): 1000 ppm (female) based on: test mat. (No reproductive toxicity was seen at any concentration. Effects were seen in F1 weanlings. 1000 ppm is equivalent to 26.7, 17.1 and 35.2 mg Cu/kg bw/day for F1 females during premating, gestation and the first 2 weeks of lactation, respectively.)
NOAEL (F2): 1000 ppm (male) based on: test mat. (No reproductive toxicity was seen at any concentration. Effects were seen in F2 weanlings.)
NOAEL (F2): 1000 ppm (female) based on: test mat. (No reproductive toxicity was seen at any concentration. Effects were seen in F2 weanlings.)
Conclusion: copper and copper compounds, are not classified as toxic to reproduction.

Carcinogenicity

Based on a weight of evidence approach, it was concluded that copper compounds do not have carcinogenic potential.
Copper sulphate pentahydrate does not meet the criteria for classification.

Eye Irritant

Irritating to eyes. A test carried out in 3 male rabbits resulted in severe ocular irritation that was not reversible within the duration of the test. Test guideline OECD 405. Copper sulphate pentahydrate meets the criteria for causing serious eye damage. This is more severe than the
harmonized classification as an eye irritant set out in Annex VI of Regulation EC 1272/2008

Ingestion Harmful if swallowed.

Inhalation Fever from metal inhalation.

Skin Irritant No skin irritation was seen in 3 male rabbits. Test guideline OECD 404.
Copper sulphate does not meet the criteria for classification. However, classification as a skin irritant is included in Annex VI of Regulation EC 1272/2008.

Sensitisation

No sensitisation reaction was seen in any test animals in a guinea pig Maximisation test carried out in accordance with OECD 406. Copper sulphate pentahydrate does not meet the criteria for classification.

Reproduction

NOAEL for reproductive toxicity of copper sulphate pentahydrate in rats is > 1500 ppm in food. Test guideline OECD 416. Copper sulphate pentahydrate does not meet the criteria for classification.

Carcinogen Category

No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. The lowest species-specific acute L(E) C50and chronic NOEC values at the three pH levels and across pHs were selected as final environmental classification reference values.

Acute and chronic reference values for soluble copper ions:

pH range	Acute reference L(E) C50 (ug Cu/l)	Chronic reference NOEC (ug Cu/l)
pH 5.5-6.5	25	20
pH >6.5-7.5	35	7.4
pH >7.5-8.5	29.8	11.4
Across pHs	34.4	14.9

PNEC aquatic:

PNEC aqua - freshwater (ug/l): Value 7.8; Assessment factor: 1
Remarks/Justification: Extrapolation method: statistical extrapolation as agreed by the Competent Authorities for Biocides and Existing Substance Regulations.

PNEC aqua - marine water (ug/l): Value: 5.2; Assessment factor: 1
Remarks/Justification: Extrapolation method: assessment factor in accordance to the discussions with the Competent Authorities for Biocides and Existing Substance Regulations.

Persistence/Degradability

Copper ions derived from copper sulphate pentahydrate cannot be degraded. The fate of copper ions in the water column was modelled using the Ticket Unit World Model. Removal was also assessed using data from one mesocosm and three field studies. Rapid removal was demonstrated, defined as 70% removal within 28 days. Literature data confirm the strong binding of copper ions to sediment, with the formation of stable Cu-S complexes. Re-mobilisation of copper ions to the water column is therefore not expected. Copper does not meet the criteria as persistent.

Mobility

In soil copper is mainly bounded to organic material naturally present in the soil. Organic material content and pH determine the bioavailability of copper. Copper is strongly bounded to various components of the soil so that the free copper is at a very low level in the soil. The mobility of copper towards the deeper layer is negligible.
PNEC soil:
PNEC soil (mg/kg dw): Value: 65; Assessment Factor: 1

Remarks/Justification: in accordance to the Competent Authorities for Biocides and Existing Substance Regulations.

Environmental Fate

The PBT and vPvB criteria of Annex XIII to the Regulation do not apply to inorganic substances, such as copper and its inorganic compounds. Copper (as copper sulphate pentahydrate) is not PBT or vPvB.

Bioaccumulation Potential

Aquatic bioaccumulation: The information demonstrates that copper is well regulated in all living organisms and that BCF and BAF values have no meaning for a hazard assessment. The available data demonstrate that waterborne exposure is most the critical exposure route and that copper is not biomagnified in aquatic ecosystems.

Terrestrial bioaccumulation: The available information demonstrates that copper is well regulated in all living organisms and that the BCF and BAF values have no meaning for a hazard assessment.

The available data demonstrate that copper is not biomagnified in the terrestrial ecosystems and that there is no issue for secondary poisoning of copper.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS

General Information

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.
Waste treatment method: Product: Contact your supplier, local competent authorities or a serious disposal company to collect and dispose of the product or contaminated containers. The product has to be disposed of as hazardous waste.

Packaging: Dispose according to current national or local legislation recommendations. Copper could be toxic for STP (sewage treatment plant) micro-organism. Across endpoints/studies 0.23 mg dissolved
Cu/L was considered as the most reliable NOEC
Sewage disposal must be avoided.
PNEC stp (ug/l): Value: 230; Assessment factor: 1
Remarks/Justification: Extrapolation method: statistical extrapolation as agreed by the Competent Authorities for Biocides and Existing Substance Regulations.

Special Precautions for Land Fill

Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper Sulphate Pentahydrate)
Class	9 Miscllaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG 47	Low To Moderate Hazard Substances
UN Number	3077
Hazchem	2Z
Pack	Group III
Special Provision	No Data Available

Sea Transport
IMDG

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper Sulphate Pentahydrate)
Class	9 Miscllaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available
EMS	FA,SF
Marine Pollutant	Yes

Air Transport
IATA

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper sulphate pentahydrate)
Class	9 Miscllaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	6

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

Approval Code HSR003126

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	231-847-6
Europe (REACh)	01-2119520566-40-0000
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Not Determined
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes

COPLIQ0102, COPLIQ5300, COPLIQ6802, COPSUB1000, COPSUF0500, COPSUF0600, COPSUF0700, COPSUF1000, COPSUL0100, COPSUL0101, COPSUL0102, COPSUL0103, COPSUL0200, COPSUL0300, COPSUL0400, COPSUL0401, COPSUL0500, COPSUL0501, COPSUL0502, COPSUL0510, COPSUL0512, COPSUL0520, COPSUL0600, COPSUL0601, COPSUL0602, COPSUL0700, COPSUL0701, COPSUL0800, COPSUL0801, COPSUL0900, COPSUL1000, COPSUL1001, COPSUL1002, COPSUL1003, COPSUL1004, COPSUL1005, COPSUL1006, COPSUL1007, COPSUL1008, COPSUL1009, COPSUL1010, COPSUL1011, COPSUL1012, COPSUL1013, COPSUL1014, COPSUL1015, COPSUL1016, COPSUL1017, COPSUL1018, COPSUL1019, COPSUL1020, COPSUL1021, COPSUL1022, COPSUL1023, COPSUL1024, COPSUL1025, COPSUL1026, COPSUL1027, COPSUL1028, COPSUL1029, COPSUL1030, COPSUL1031, COPSUL1032, COPSUL1033, COPSUL1034, COPSUL1035, COPSUL1036, COPSUL1037, COPSUL1038, COPSUL1039, COPSUL1040, COPSUL1041, COPSUL1042, COPSUL1043, COPSUL1044, COPSUL1045, COPSUL1046, COPSUL1100, COPSUL1101, COPSUL1102, COPSUL1200, COPSUL1201, COPSUL1202, COPSUL1220, COPSUL1300, COPSUL1301, COPSUL1302, COPSUL1303, COPSUL1400, COPSUL1401, COPSUL1402, COPSUL1410, COPSUL1420, COPSUL1500, COPSUL1501, COPSUL1502, COPSUL1510, COPSUL1520, COPSUL1600, COPSUL1601, COPSUL1602, COPSUL1700, COPSUL1701, COPSUL1702, COPSUL1800, COPSUL1801, COPSUL1802, COPSUL1803, COPSUL1804, COPSUL1805, COPSUL1806, COPSUL1807, COPSUL1808, COPSUL1809, COPSUL1900, COPSUL1901, COPSUL2000, COPSUL2001, COPSUL2002, COPSUL2003, COPSUL2004, COPSUL2005, COPSUL2100, COPSUL2101, COPSUL2102, COPSUL2200, COPSUL2201, COPSUL2202, COPSUL2203, COPSUL2210, COPSUL2212, COPSUL2300, COPSUL2301, COPSUL2302, COPSUL2303, COPSUL2304, COPSUL2400, COPSUL2401, COPSUL2402, COPSUL2403, COPSUL2405, COPSUL2500, COPSUL2501, COPSUL2502, COPSUL2600, COPSUL2601, COPSUL2700, COPSUL2701, COPSUL2800, COPSUL2900, COPSUL2901, COPSUL3000, COPSUL3001, COPSUL3002, COPSUL3003, COPSUL3004, COPSUL3005, COPSUL3006, COPSUL3007, COPSUL3008, COPSUL3050, COPSUL3100, COPSUL3200, COPSUL3201, COPSUL3300, COPSUL3301, COPSUL3400, COPSUL3401, COPSUL3402, COPSUL3500, COPSUL3501, COPSUL3502, COPSUL3503, COPSUL3600, COPSUL3601, COPSUL3700, COPSUL3701, COPSUL3702, COPSUL3800, COPSUL3801, COPSUL3900, COPSUL3901,

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Revision	3
Revision Date	16 Jun 2015
Reason for Issue	Update SDS

Key/Legend

<	Less Than
>	Greater Than
AICS	Australian Inventory of Chemical Substances
atm	Atmosphere
CAS	Chemical Abstracts Service (Registry Number)
Cm2	Square Centimetres
CO2	Carbon Dioxide
COD	Chemical Oxygen Demand
deg C	Degrees Celcius
EPA	(New Zealand) Environmental Protection Authority of New Zealand
deg F	Degrees Farenheit
g	Grams
g/cm3	Grams per Cubic Centimetre
g/l	Grams per Litre
HSNO	Hazardous Substance and New Organism
IDLH	Immediately Dangerous to Life and Health
immiscible	Liquids are insoluble in each other.
inHg	Inch of Mercury
inH2O	Inch of Water
K	Kelvin
Kg	Kilogram
kg/m3	Kilograms per Cubic Metre
lb	Pound

LC50	LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50	LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or L	Litre
m3	Cubic Metre
mbar	Millibar
mg	Milligram
mg/24H	Milligrams per 24 Hours
mg/kg	Milligrams per Kilogram
mg/m3	Milligrams per Cubic Metre
Misc or	Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm	Millimetre
mmH2O	Millimetres of Water
mPa.s	Millipascals per Second
N/A	Not Applicable
NIOSH	National Institute for Occupational Safety and Health
NOHSC	National Occupational Health and Safety Commission
OECD	Organisation for Economic Co-operation and Development
Oz	Ounce
PEL	Permissible Exposure Limit
Pa	Pascal
ppb	Parts per Billion
ppm	Parts per Million
ppm/2h	Parts per Million per 2 Hours
ppm/6h	Parts per Million per 6 Hours
psi	Pounds per Square Inch
R	Rankine
RCP	Reciprocal Calculation Procedure
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
tne	Tonne
TWA	Time Weighted Average
ug/24H	Micrograms per 24 Hours
UN	United Nations
wt	Weight