

# SAFETY DATA SHEET



Revision date: 22-Apr-2024

Revision Number 1

## Section 1: Identification

### Product identifier

Product Name PAC23 C PLUS

Product Code(s) 000000054629

### Other means of identification

UN number or ID number 3082

### Recommended use of the chemical and restrictions on use

Recommended use Water treatment chemical.

Uses advised against No information available.

### Details of manufacturer or importer

#### Supplier

IXOM Operations Pty Ltd  
ABN: 51 600 546 512  
Level 8, 1 Nicholson Street  
Melbourne 3000  
Australia

Telephone Number: +61 3 9906 3000

### Emergency telephone number

Emergency telephone number 1 800 033 111 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## Section 2: Hazard identification

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).  
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in: packagings that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

### GHS Classification

Skin corrosion/irritation	Category 3
Serious eye damage/eye irritation	Category 2
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

### Label elements

Exclamation mark

Environment

**Signal word**  
WARNING**Hazard statements**

H316 - Causes mild skin irritation  
 H319 - Causes serious eye irritation  
 H411 - Toxic to aquatic life with long lasting effects

**Precautionary Statements - Prevention**

Wash hands thoroughly after handling.  
 Wash eyes thoroughly after handling.  
 Wear protective gloves/clothing and eye/face protection.  
 Avoid release to the environment.

**Precautionary Statements - Response**

Specific treatment (see First aid on this SDS).  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 If eye irritation persists: Get medical advice/attention.  
 If skin irritation occurs: Get medical advice/attention.  
 Collect spillage.

**Precautionary Statements - Storage**

No storage statements.

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

**Other hazards which do not result in classification****Section 3: Composition and information on ingredients**

Chemical name	CAS No.	Weight-%
Aluminium monochloride pentahydroxide	12042-91-0	30-60
Copper sulfate pentahydrate	7758-99-8	<10
Non hazardous component(s)	-	to 100

**Section 4: First aid measures****Description of first aid measures**

<b>General advice</b>	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.
<b>Inhalation</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. (Call a physician if symptoms occur).
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water. Get medical attention if symptoms occur.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Get medical attention if symptoms occur.

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

**Symptoms** Irritation. May cause redness and tearing of the eyes. Erythema (skin redness).

**Effects of Exposure** No information available.

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

**Note to physicians** Treat symptomatically.

**Section 5: Firefighting measures**

**Suitable Extinguishing Media**

**Suitable extinguishing media** Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal protein foam can be used.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Environmentally hazardous.

**Special protective actions for fire-fighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Hazchem code** •3Z

**Section 6: Accidental release measures**

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

**Personal precautions** Avoid contact with skin, eyes and inhalation of vapors. Ensure adequate ventilation. Stop leak if you can do it without risk. Do not touch or walk through spilled material. Use personal protective equipment as required. Wash thoroughly after handling.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

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

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

**Section 7: Handling and storage****Precautions for safe handling****Advice on safe handling**

Avoid contact with skin and eyes. Avoid breathing vapors or mists. Ensure adequate ventilation. Use personal protection equipment. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities****Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from foodstuffs. Keep container closed when not in use.

This material is a Scheduled Poison and must be stored, maintained and used in accordance with the relevant regulations.

**Incompatible materials**

Strong acids. Strong bases. Alkalis. Cyanides. Hypochlorites. Strong reducing agents. Metals.

**Section 8: Exposure controls and personal protection****Control parameters****Exposure Limits**

No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Chemical name	Australia	New Zealand	ACGIH TLV
Aluminium monochloride pentahydroxide 12042-91-0	-	-	TWA: 1 mg/m <sup>3</sup> respirable particulate matter
Copper sulfate pentahydrate 7758-99-8	-	TWA: 0.01 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> Cu dust and mist

Chemical name	European Union	United Kingdom	Germany DFG
Copper sulfate pentahydrate 7758-99-8	-	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup> Peak: 0.02 mg/m <sup>3</sup>

Aluminium, soluble salts (as Al): 8hr TWA = 2 mg/m<sup>3</sup>

Copper dusts & mists (as Cu): 8hr TWA = 1 mg/m<sup>3</sup>

Copper (fume): 8hr TWA = 0.2 mg/m<sup>3</sup>

Sulfuric acid: 8hr TWA = 1 mg/m<sup>3</sup>, 15 min STEL = 3 mg/m<sup>3</sup>

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

These Workplace 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 workplace 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.

As published by the American Conference of Governmental Industrial Hygienists (ACGIH).

**Appropriate engineering controls**

**Engineering controls**

Apply technical measures to comply with occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

**Individual protection measures, such as personal protective equipment**

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.

**Eye/face protection**

Goggles.

**Skin and body protection**

Overalls. Wear suitable protective clothing. Boots.

**Hand protection**

Impervious gloves.

**Respiratory protection**

If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

**Environmental exposure controls**

No information available.

**Thermal hazards**

No information available.

**Section 9: Physical and chemical properties****Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid
<b>Appearance</b>	Clear to Slightly Hazy
<b>Color</b>	Bluish
<b>Odor</b>	Mild
<b>Odor threshold</b>	No information available

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	No data available	None known
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	Not applicable	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known

Vapor density	No data available	None known
Relative density	ca. 1.3	None known
Water solubility	Miscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information**Section 10: Stability and reactivity**Reactivity

**Reactivity** Reacts with calcium hypochlorite. Reacts with alkalis. Reacts with cyanides.

Chemical stability

**Stability** Stable under normal conditions.

Explosion data

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

Possibility of hazardous reactions

**Possibility of hazardous reactions** Mildly corrosive to metals.

**Hazardous polymerization** Hazardous polymerization does not occur.

Conditions to avoid

**Conditions to avoid** Heat. Do not contaminate food or feed stuffs. Contact with foodstuffs.

Incompatible materials

**Incompatible materials** Strong acids. Strong bases. Alkalis. Cyanides. Hypochlorites. Strong reducing agents. Metals.

Hazardous decomposition products

**Hazardous decomposition products** Aluminium oxides. Hydrogen chloride. Chlorine gas. Oxides of copper. Oxides of sulfur.

**Section 11: Toxicological information**Information on likely routes of exposure

**Product Information** No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

**Inhalation** May cause irritation.

**Eye contact** Causes serious eye irritation.

**Skin contact** Causes mild skin irritation.

**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Symptoms** Irritation. May cause redness and tearing of the eyes. Erythema (skin redness).

**Acute toxicity**

**Numerical measures of toxicity - Product Information**

No information available

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminium monochloride pentahydroxide	= 9187 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	-
Copper sulfate pentahydrate	= 960 mg/kg ( Rat )	> 8 g/kg ( Rabbit )	-

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Causes mild skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

## Section 12: Ecological information

**Ecotoxicity**

**Aquatic ecotoxicity** Keep out of waterways. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea

Aluminium monochloride pentahydroxide	-	LC50: 100 - 500mg/L (96h, Brachydanio rerio)	-	-
Copper sulfate pentahydrate	-	LC50: 0.66 - 1.15mg/L (96h, Lepomis macrochirus) LC50: 0.96 - 1.8mg/L (96h, Lepomis macrochirus) LC50: 0.1478 - 0.165mg/L (96h, Oncorhynchus mykiss) LC50: 0.09 - 0.19mg/L (96h, Oncorhynchus mykiss) LC50: =0.6752mg/L (96h, Pimephales promelas)	-	EC50: 0.147 - 0.227mg/L (48h, Daphnia magna)

**Terrestrial ecotoxicity** There is no data for this product.

#### Persistence and degradability

**Persistence and degradability** No information available.

#### Bioaccumulative potential

**Bioaccumulation** There is no data for this product.

#### Mobility

**Mobility** No information available.

#### Other adverse effects

**Other adverse effects** No information available.

### Section 13: Disposal considerations

#### Waste treatment methods

**Waste from residues/unused products** Refer to Waste Management Authority. Dispose of material through a licensed waste contractor.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

See section 8 for more information

### Section 14: Transport information

#### ADG

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous



Goods by Road and Rail when transported by road or rail in: packagings that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

**UN number or ID number** 3082  
**Proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS COPPER SULPHATE PENTAHYDRATE)  
**Transport hazard class(es)** 9  
**Packing group** III  
**Hazchem code** •3Z

**IATA** Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

**UN number** 3082  
**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS COPPER SULPHATE PENTAHYDRATE)  
**Transport hazard class(es)** 9  
**Packing group** III

**IMDG** Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

**UN number** 3082  
**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS COPPER SULPHATE PENTAHYDRATE)  
**Transport hazard class(es)** 9  
**Packing group** III  
**IMDG EMS Fire** F-A  
**IMDG EMS Spill** S-F  
**Marine pollutant** P

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
 No information available

## Section 15: Regulatory information

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

#### National regulations

##### Australia

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).  
 Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in: packagings that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

See section 8 for national exposure control parameters

#### **Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 5

#### **Australian Industrial Chemicals Introduction Scheme (AICIS)**

Contact supplier for inventory compliance status

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Aluminium monochloride pentahydroxide - 12042-91-0	Present	-
Copper sulfate pentahydrate - 7758-99-8	Present	-

#### Illicit Drug Precursors/Reagents

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

#### National pollutant inventory

Subject to reporting requirement

Chemical name	National pollutant inventory
Copper sulfate pentahydrate - 7758-99-8	10 tonne/yr Threshold category 1 2000 tonne/yr Threshold category 2b 60000 MWH Threshold category 2b 20 MW Threshold category 2b

#### International Inventories

<b>AIC</b>	Contact supplier for inventory compliance status.
<b>NZIoC</b>	Contact supplier for inventory compliance status.
<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDSL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.

#### Legend:

**AIC**- Australian Inventory of Industrial Chemicals

**NZIoC** - New Zealand Inventory of Chemicals

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

#### International Regulations

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

### Section 16: Other information

**Reason(s) For Issue:** First Issue Primary SDS

**Prepared By** This Safety Data Sheet has been prepared by IXOM Operations Pty Ltd (Toxicology and SDS Services).

**Revision date:** 22-Apr-2024

**Revision Note:**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend**

SVHC: Substances of Very High Concern for Authorization:  
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances  
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances  
STOT: Specific Target Organ Toxicity  
ATE: Acute Toxicity Estimate  
LC50: 50% Lethal Concentration  
LD50: 50% Lethal Dose

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
Australian Industrial Chemicals Introduction Scheme (AICIS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Disclaimer**

**This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since IXOM Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.**

**If clarification or further information is needed, the user should contact their IXOM representative or IXOM Operations Pty Ltd at the contact details on page 1.**

**IXOM Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.**

**End of Safety Data Sheet**