

an *imdex* limited company

AMC POTASSIUM CHLORIDE-TECHNICAL GRADE

AMC

Chemwatch: 10205

Version No: 5.1.1.1

Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 1

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Initial Date: Not Available

S.GHS.AUS.EN

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

Product Identifier

Product name	AMC POTASSIUM CHLORIDE-TECHNICAL GRADE
Chemical Name	potassium chloride
Synonyms	121311 - GFDJIN - Filling Solution, Internal Double Junction Ref, 100mL, 121326 - GFKCL - Filling Solution for pH Probes, 100mL, 121327 - GFKCL1 - Filling Solution for Reference Probes, 100mL, 121328 - GFKCLL - Filling Solution for pH Probes, 1 Litre, 121554 - GSK - Potassium Ion Standard, 1000 ppM, 200mL, 121556 - GSKL - Potassium Ion Standard, 1000 ppM, 1L, 121804 - GF14 - ISE Internal Filling Solution 4, 45mL, 121808 - GF18 - ISE Internal Filling Solution 8, 45mL, 121832 - GISA4 - Ionic Strength Adjustor 4, 200mL, 121834 - GISA4L - Ionic Strength Adjustor 4, 1L, 122305 - GSC2.7L - Conductivity Standard, 2.76mS/cm, 1 Litre, 122306 - GSC2.7 - Conductivity Standard, 2.76mS/cm, 200mL, 122310 - GSCSUS - Custom Conductivity Standard, 1 Litre, 122311 - GSC8 - Conductivity Standard, 8.0 mS/cm, 200mL, 122314 - GSC150 - Conductivity Standard, 150 uS/cm, 1 Litre, 122317 - GSCUS5 - Custom Conductivity Standard, 5 Litres, 122318 - GSCUS10 - Custom Conductivity Standard, 10 Litres, 122319 - GSCUS25 - Custom Conductivity Standard, 25 Litres, 122320 - GSC1502 - Conductivity Standard, 150 uS/cm, 200 mL, 122323 - GSCUS.2 - Custom Conductivity Standard, 200 mL, 123303 - GFO - Filling Solution, ED500, ED1 & YSI DO sensors, 45mL, Crop King, Food Additive 508, KCL, KCl, KCl for refillable electrodes, Kalii chloridum, Kay Ciel Elixir, Merck Potassium Chloride GR, Merck Potassium chloride AnalaR 10198, Muriate of Potash, Potassium Chloride, Potassium Chloride (KCl) Solutions, Potassium Chloride - Technical grade, Potassium Chloride Solution, Potassium Chloride, Potash, Potassium chloride, Potassium chloride, powder and pieces, Product Code: EZ960V, Radiometer KCl.C Code No.943-786, chloropotassuril, dipotassium dichloride, emplets potassium chloride, enseal, k-lor, k-lyte/Cl, k-predne-dome, kalitabs, kaochlor, kaon-Cl
Proper shipping name	Not Applicable
Chemical formula	Cl-K ClK
Other means of identification	Not Available
CAS number	7447-40-7

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

Relevant identified uses	Fertilizer, source of potassium salts, pharmaceutical preparations, photography, spectroscopy, buffer solutions. Mill addition in porcelain enamels. Drilling fluid additive.
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Details of the manufacturer/importer

Registered company name	AMC
Address	216 Balcatta Rd, Balcatta 6916 WA Australia
Telephone	+ 61 8 9445 4000
Fax	+61 8 9445 4040
Website	www.amcoilandgas.com
Email	amcoilandgas@imdexlimited.com

Emergency telephone number

Association /	Not Available
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Organisation	
Emergency telephone numbers	Chemwatch - +612 9186 1132
Other emergency telephone numbers	Chemwatch - +612 9186 1132

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability	0	
Toxicity	0	
Body Contact	1	
Reactivity	0	
Chronic	0	

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

Poisons Schedule	Not Applicable
GHS Classification	Not Applicable

Label elements

GHS label elements	Not Applicable
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SIGNAL WORD	NOT APPLICABLE
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Hazard statement(s)

AUH066	Repeated exposure may cause skin dryness and cracking
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Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

CAS No	%[weight]	Name
7447-40-7	>99	potassium chloride
7447-40-7	0-40	potassium chloride
7732-18-5	>60	water

Mixtures

See section above for composition of Substances

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"> ▶ Wash out immediately with fresh running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
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Skin Contact	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ If dust is inhaled, remove from contaminated area. ▶ Encourage patient to blow nose to ensure clear breathing passages. ▶ Ask patient to rinse mouth with water but to not drink water. ▶ Seek immediate medical attention.
Ingestion	<ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ 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. ▶ Seek medical advice.

Indication of any immediate medical attention and special treatment needed

For potassium intoxications:

- ▶ Hyperkalaemia, in patients with abnormal renal function, results from reduced renal excretion following intoxication.
- ▶ The presence of electrocardiographic evidence of hyperkalemia or serum potassium levels exceeding 7.5 mE/L indicates a medical emergency requiring an intravenous line and constant cardiac monitoring.
- ▶ The intravenous ingestion of 5-10 ml of 10% calcium gluconate, in adults, over a 2 minute period antagonises the cardiac and neuromuscular effects. The duration of action is approximately 1 hour. [Ellenhorn and Barceloux: Medical Toxicology]

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

	<ul style="list-style-type: none"> ▶ There is no restriction on the type of extinguisher which may be used. ▶ Use extinguishing media suitable for surrounding area.
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Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
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Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves in the event of a fire.
Fire/Explosion Hazard	<ul style="list-style-type: none"> ▶ Non combustible. ▶ Not considered a significant fire risk, however containers may burn.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	<ul style="list-style-type: none"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately.
Major Spills	<p>Moderate hazard.</p> <ul style="list-style-type: none"> ▶ CAUTION: Advise personnel in area.

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"> ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs.
Other information	<ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed.

Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> ▶ Glass container is suitable for laboratory quantities ▶ Polyethylene or polypropylene container. ▶ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	<ul style="list-style-type: none"> ▶ Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride. ▶ These trifluorides are hypergolic oxidisers. <p>[Avoid reaction with bromine trifluoride; potassium permanganate, plus sulfuric acid.</p>

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PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA


Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
potassium chloride	Potassium chloride	1.1 mg/m3	12 mg/m3	22 mg/m3
potassium chloride	Potassium chloride	1.1 mg/m3	12 mg/m3	22 mg/m3

Ingredient	Original IDLH	Revised IDLH
potassium chloride	Not Available	Not Available
potassium chloride	Not Available	Not Available
water	Not Available	Not Available

Exposure controls

Appropriate engineering controls	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.
Personal protection	
Eye and face protection	<ul style="list-style-type: none"> Safety glasses with side shields Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.
Skin protection	See Hand protection below
Hands/feet protection	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> Overalls. P.V.C.
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:

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Material	CPI
BUTYL	A
NEOPRENE	A
VITON	A
NATURAL RUBBER	C
PVA	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. -

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1 Air-line*	- -	PAPR-P1 -
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3 Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow

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)

* 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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Colourless or white, odourless crystals or crystalline powder with a strong saline taste. Soluble in water (26%), slightly soluble in alcohol.		
Physical state	Divided Solid	Relative density (Water = 1)	1.987
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Applicable	Decomposition temperature	Sublimes @ 1500
Melting point / freezing point (°C)	773	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Sublimes at 1500	Molecular weight (g/mol)	74.55
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Applicable
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution(1%)	7
Vapour density (Air = 1)	Not Applicable	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.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	<p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Use as a food additive indicates good tolerance of small amounts, but excessive amounts or overuse may bring irritant and/or harmful effects</p> <p>Acute potassium poisoning after swallowing is rare, because vomiting usually occurs and renal excretion is fast.</p> <p>[The material is generally regarded as being of very low toxicity and is used routinely as a food additive. Ingestion of large quantities of the material may produce weakness and circulatory problems.</p>

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Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
Eye	Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result.
Chronic	Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

potassium chloride	TOXICITY	IRRITATION
	Oral (rat) LD50: 2600 mg/kg	Eye (rabbit): 500 mg/24h - mild
	Not Available	Not Available
potassium chloride	TOXICITY	IRRITATION
	Oral (rat) LD50: 2600 mg/kg	Eye (rabbit): 500 mg/24h - mild
	Not Available	Not Available
water	TOXICITY	IRRITATION
	Not Available	Not Available
	Not Available	Not Available

* Value obtained from manufacturer's msds
unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

WATER	No significant acute toxicological data identified in literature search.
POTASSIUM CHLORIDE	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

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

Not Applicable

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

For Chloride: Although inorganic chloride ions are not normally considered toxic they can exist in effluents at acutely toxic levels. Incidental exposure to inorganic chloride may occur in occupational settings where chemicals management policies are improperly applied.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
potassium chloride	HIGH	HIGH
potassium chloride	HIGH	HIGH
water	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
potassium chloride	LOW (LogKOW = -0.4608)

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potassium chloride	LOW (LogKOW = -0.4608)
water	LOW (LogKOW = -1.38)

Mobility in soil

Ingredient	Mobility
potassium chloride	LOW (KOC = 14.3)
potassium chloride	LOW (KOC = 14.3)
water	LOW (KOC = 14.3)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.
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SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	potassium chloride	Z
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	potassium chloride	Z

SECTION 15 REGULATORY INFORMATION

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

potassium chloride(7447-40-7) is found on the following regulatory lists	"Australia Inventory of Chemical Substances (AICS)"
potassium chloride(7447-40-7) is found on the following regulatory lists	"Australia Inventory of Chemical Substances (AICS)"
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:

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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.

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