

Total Organic Carbon Std

Novachem Pty Ltd

Chemwatch Hazard Alert Code: 2

Version No: 2.2 Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements Issue Date: **14/05/2023** Print Date: **14/05/2023** S.GHS.AUS.EN

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	Total Organic Carbon Std
Synonyms	Not Available
Other means of identification	WC-TOC-10X-1

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

Relevant identified uses	Laboratory Chemical Reference Material
Relevant luentineu uses	Laboratory Chemical Neicher materia

Details of the manufacturer or supplier of the safety data sheet

Registered company name	Novachem Pty Ltd	Novachem Pty Ltd
Address	25 Crissane Road, Heidelberg West Victoria 3081 Australia	25 Crissane Road, Heidelberg West Victoria 3081 Australia
Telephone	+61384151255	+61384151255
Fax	+61386250088	+61386250088
Website	www.novachem.com.au	www.novachem.com.au
Email	novachem@novachem.com.au	novachem@novachem.com.au

Emergency telephone number

Association / Organisatio	N Victorian Poisons Information Centre	Victorian Poisons Information Centre
Emergency telephor number	9 13 11 26	13 11 26
Other emergency telephor number	B Not Available	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification ^[1]	Not Applicable
Label elements	

Label elements

pictogram(s)	Not Applicable	

Signal word Not Applicable

Hazard statement(s)

Hazard

Not Applicable

 Precautionary statement(s) Prevention

 Not Applicable

 Precautionary statement(s) Response

 Not Applicable

 Precautionary statement(s) Storage

 Not Applicable

 Precautionary statement(s) Disposal

 Not Applicable

Continued...

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
877-24-7	0.212	potassium hydrogen phthalate
7664-93-9	<0.001	sulfuric acid
7732-18-5	99.787	water
Legend:	Legend: 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available	

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	 If this product comes in contact with eyes: Wash out immediately with water. If irritation continues, seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	 If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
 Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
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: metal oxides May emit poisonous fumes.
HAZCHEM	Not Applicable

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	 Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite.
Major Spills	Moderate hazard. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard.

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Wear breathing apparatus plus protective gloves.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. Other information Conditions for safe storage, including any incompatibilities

conditions for suite storage, motivating any moon pationness	
Suitable container	 Polyethylene or polypropylene container. Packing as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.
Storage incompatibility	None known

SECTION 8 Exposure controls / personal protection

Control parameters

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	sulfuric acid	Sulphuric acid	1 mg/m3	3 mg/m3	Not Available	Not Available
Emergency Limits						

Ingredient	TEEL-1	TEEL-2		TEEL-3	
potassium hydrogen phthalate	9.6 mg/m3	110 mg/m3		630 mg/m3	
sulfuric acid	Not Available	Not Available		Not Available	
Ingredient	Original IDLH		Revised IDLH		
potassium hydrogen phthalate	Not Available		Not Available		
sulfuric acid	15 mg/m3		Not Available		
water	Not Available	Not Available		Not Available	

Occupational Exposure Banding		
Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
potassium hydrogen phthalate	E	≤ 0.01 mg/m³
Notes:	Occupational exposure banding is a process of assigning chemicals into s adverse health outcomes associated with exposure. The output of this pro range of exposure concentrations that are expected to protect worker hea	cess is an occupational exposure band (OEB), which corresponds to a

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. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. 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.
Individual protection measures, such as personal protective equipment	
Eye and face protection	 Safety glasses with side shields Chemical goggles. 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. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.
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. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care.

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	 Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber
Body protection	See Other protection below
Other protection	 Overalls. P.V.C apron. Barrier cream. Skin cleansing cream.

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
NEOPRENE	A
BUTYL	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE/NATURAL	С
NITRILE	С
PE	С
PVA	С
PVC	С
SARANEX-23	С
VITON	С

* 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.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear liquid		
Physical state	Liquid	Relative density (Water = 1)	1
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	0	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	100	Molecular weight (g/mol)	Not Available
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 Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	2.33	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available

Respiratory protection

Type E-P 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	E-AUS P2	-	E-PAPR-AUS / Class 1 P2
up to 50 x ES	-	E-AUS / Class 1 P2	-
up to 100 x ES	-	E-2 P2	E-PAPR-2 P2 ^

^ - 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)

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Continued...

Vapour density (Air = 1)

Not Available

VOC g/L Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	 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

Acute Toxicity	×	Carcinogenicity	×	
POTASSIUM HYDROGEN PHTHALATE & SULFURIC ACID	Asthma-like symptoms may continue for months or even year known as reactive airways dysfunction syndrome (RADS) wh criteria for diagnosing RADS include the absence of previous asthma-like symptoms within minutes to hours of a documer airflow pattern on lung function tests, moderate to severe bro lymphocytic inflammation, without eosinophilia.	nich can occur after exposure to s airways disease in a non-atop ted exposure to the irritant. Oth	o high levels of highly irritating compound. Main bic individual, with sudden onset of persistent her criteria for diagnosis of RADS include a reversible	
WATER	No significant acute toxicological data identified in literature	search.		
SULFURIC ACID	Occupational exposures to strong inorganic acid mists of sul WARNING: For inhalation exposure <u>ONLY</u> : This substance h		C as Group 1: CARCINOGENIC TO HUMANS	
POTASSIUM HYDROGEN PHTHALATE	Laboratory (in vitro) and animal studies show, exposure to th producing mutation.	e material may result in a poss	ible risk of irreversible effects, with the possibility of	
Legend:	 Value obtained from Europe ECHA Registered Substance specified data extracted from RTECS - Register of Toxic Effective specified data extracted from RTECS - Register of Toxic Effective specified data extracted from RTECS - Registered Substance 		ined from manufacturer's SDS. Unless otherwise	
	Oral (Rat) LD50: >90000 mg/kg ^[2]	Not Available		
water		IRRITATION		
	Urai (rrai) LDDU. 2 140 Mg/kgr ^{−2}	Lye (rabbit). 5 h	INFOSCO DE VEINE	
sulfuric acid	Inhalation(Mouse) LC50; 0.85 mg/l4h ^[1] Oral (Rat) LD50: 2140 mg/kg ^[2]	Eye (rabbit): 1.3	a mg SEVERE	
		Eve (rabbit): 1.3	8 mg SEV/EDE	
potassium nyuroyen phinidiate	Oral (Rat) LD50: >3200 mg/kg ^[2]		e effect observed (not irritating) ^[1]	
potassium hydrogen phthalate	dermal (guinea pig) LD50: >1000 mg/kg ^[2]	Eve: no adverse	effect observed (not irritating) ^[1]	
		IDDITATION		
Total Organic Carbon Std	Not Available	Not Available		
	ΤΟΧΙΟΙΤΥ	IRRITATION		
Chronic	Ample evidence from experiments exists that there is a susp	icion this material directly redu	ces tertility.	
	characterised by tearing or conjunctival redness (as with win			
Eye	Although the liquid is not thought to be an irritant (as classified		ntact with the eye may produce transient discomfort	
Skin Contact	The material is not thought to produce adverse health effects models). Nevertheless, good hygiene practice requires that a setting. Open cuts, abraded or irritated skin should not be exposed t Entry into the blood-stream, through, for example, cuts, abra prior to the use of the material and ensure that any external	exposure be kept to a minimurr o this material sions or lesions, may produce	and that suitable gloves be used in an occupational	
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.			
	Not normally a hazard due to non-volatile nature of product			
Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.			

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Skin Irritation/Corrosion × × Reproductivity Serious Eye Damage/Irritation X STOT - Single Exposure X Respiratory or Skin × STOT - Repeated Exposure × sensitisation Mutagenicity X Aspiration Hazard × X – Data either not available or does not fill the criteria for classification Legend:

X – Data either not available or does not full the criteria for classi

 Data available to make classification

SECTION 12 Ecological information

Ioxicity

	Endpoint	Test Duration (hr)	Species	Value	Source
Total Organic Carbon Std	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50(ECx)	72h	Algae or other aquatic plants	19.885mg/l	2
otassium hydrogen phthalate	EC50	72h	Algae or other aquatic plants	19.885mg/l	2
	LC50	96h	Fish	>100mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	ErC50	72h	Algae or other aquatic plants	>100mg/l	2
a la contra de la co	NOEC(ECx)	1560h	Fish	0.025mg/l	2
sulfuric acid	EC50	72h	Algae or other aquatic plants	>100mg/l	2
	LC50	96h	Fish	8mg/l	1
	EC50	48h	Crustacea	42.5mg/l	1
	Endpoint	Test Duration (hr)	Species	Value	Source
water	Not Available	Not Available	Not Available	Not Available	Not Available

- Bioconcentration Data 8. Vendor Data

For Metal:

Atmospheric Fate - Metal-containing inorganic substances generally have negligible vapour pressure and are not expected to partition to air.

Environmental Fate: Environmental processes, such as oxidation, the presence of acids or bases and microbiological processes, may transform insoluble metals to more soluble ionic forms. Environmental processes may enhance bioavailability and may also be important in changing solubilities.

Aquatic/Terrestrial Fate: When released to dry soil, most metals will exhibit limited mobility and remain in the upper layer; some will leach locally into ground water and/ or surface water ecosystems when soaked by rain or melt ice. A metal ion is considered infinitely persistent because it cannot degrade further. **DO NOT** discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil Persistence: Air			
water	LOW			
Bioaccumulative potential				
Ingredient	Bioaccumulation			
	No Data available for all ingredients			
Mobility in soil				

Ingredient	Mobility		
	No Data available for all ingredients		

SECTION 13 Disposal considerations

Waste treatment methods	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: Reduction Reuse Recycling Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.
	This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.

DO NOT allow wash water from cleaning or process equipment to enter drains.
It may be necessary to collect all wash water for treatment before disposal.
In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
Where in doubt contact the responsible authority.
Recycle wherever possible.
Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
• Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed
apparatus (after admixture with suitable combustible material).
Decontaminate empty containers.

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 and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
potassium hydrogen phthalate	Not Available
sulfuric acid	Not Available
water	Not Available

Transport in bulk in accordance with the IGC Code

Product name	Ship Type
potassium hydrogen phthalate	Not Available
sulfuric acid	Not Available
water	Not Available

SECTION 15 Regulatory information

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

potassium hydrogen phthalate is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

sulfuric acid is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) -Schedule 6

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Australian Inventory of Industrial Chemicals (AIIC)

water is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

National Inventory Status

Australia - AIIC / Australia

National Inventory

Non-Industrial Use

Canada - DSL Canada - NDSL

China - IECSC

Japan - ENCS

Korea - KECI

USA - TSCA

Taiwan - TCSI

Mexico - INSQ

Vietnam - NCI

New Zealand - NZIoC

Philippines - PICCS

Status Yes Yes No (potassium hydrogen phthalate; sulfuric acid; water) Yes Europe - EINEC / ELINCS / NLP Yes

Monographs

Chemical Footprint Project - Chemicals of High Concern List

Monographs - Group 1: Carcinogenic to humans

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC

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National Inventory	Status
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	14/05/2023
Initial Date	03/10/2021

SDS Version Summary

Version	Date of Update	Sections Updated
1.2	14/05/2023	Hazards identification - Classification, Exposure controls / personal protection - Exposure Standard, Composition / information on ingredients - Ingredients

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.

The 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.

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average PC-STEL: Permissible Concentration-Short Term Exposure Limit IARC: International Agency for Research on Cancer ACGIH: American Conference of Governmental Industrial Hygienists STEL: Short Term Exposure Limit TEEL: Temporary Emergency Exposure Limit。 IDLH: Immediately Dangerous to Life or Health Concentrations ES: Exposure Standard OSF: Odour Safety Factor NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level TLV: Threshold Limit Value I OD: Limit Of Detection OTV: Odour Threshold Value BCF: BioConcentration Factors BEI: Biological Exposure Index AIIC: Australian Inventory of Industrial Chemicals DSL: Domestic Substances List NDSL: Non-Domestic Substances List IECSC: Inventory of Existing Chemical Substance in China EINECS: European INventory of Existing Commercial chemical Substances ELINCS: European List of Notified Chemical Substances NLP: No-Longer Polymers ENCS: Existing and New Chemical Substances Inventory KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals PICCS: Philippine Inventory of Chemicals and Chemical Substances TSCA: Toxic Substances Control Act TCSI: Taiwan Chemical Substance Inventory INSQ: Inventario Nacional de Sustancias Químicas NCI: National Chemical Inventory FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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