

Australian statement of hazardous nature: Classified as hazardous according to criteria of Safe Work Australia

Section 1 - Identification

Product Name TNTplus LR, HR, ULR COD vials

Product Code HACTNT82106, HACTNT821, HACTNT82306, HACTNT823, HACTNT82006,

HACTNT820, HACTNT82206, HACTNT822

Address ThermoFisher Scientific Australia Pty Ltd

5 Caribbean Drive, Scoresby VICTORIA 3179, Australia

Emergency Tel. CHEMTREC®

03 9757 4559 or +613 9757 4559

Telephone / Fax Numbers Tel: 1300 735 292

Fax: 1800 067 639

E-mail address ANZinfo@thermofisher.com

Recommended Use Laboratory chemicals.

Uses advised against

This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list.

Verify requirements related to using, handling and storing these substances. This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction. This product contains one or more substance(s) listed on the voluntary National Code of

Practice for Chemicals of Security Concern.

Section 2 - Hazard(s) Identification

Classification under Safe Work Australia

Classified as hazardous according to criteria of Safe Work Australia

Physical hazards

No hazards identified

Health hazards

Acute Dermal Toxicity
Acute Inhalation Toxicity - Vapors
Category 4
Skin Corrosion/Irritation
Category 1 A
Serious Eye Damage/Eye Irritation
Category 1
Germ Cell Mutagenicity
Category 1B
Specific target organ toxicity - (repeated exposure)
Category 2

Environmental hazards

Chronic aquatic toxicity Category 3

Label Elements

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Skull and Crossbones

Health Hazard

Signal Word

Danger

Hazard Statements

H311 - Toxic in contact with skin

H314 - Causes severe skin burns and eye damage

H332 - Harmful if inhaled

H340 - May cause genetic defects

H373 - May cause damage to organs through prolonged or repeated exposure

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P264 - Wash face, hands and any exposed skin thoroughly after handling

P271 - Use only outdoors or in a well-ventilated area

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

P363 - Wash contaminated clothing before reuse

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P501 - Dispose of contents/ container to an approved waste disposal plant

Other information

This product does not contain any known or suspected endocrine disruptors

Section 3 - Composition and Information on Ingredients

Component	CAS No	Weight %
Sulfuric acid	7664-93-9	80-90
Water	7732-18-5	15-25
Silver sulfate	10294-26-5	0.5-3
Mercuric sulfate	7783-35-9	0.1-1
Chromium trioxide (CrO3)	1333-82-0	0.01-0.1

Section 4 - First Aid Measures

Inhalation

If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove to fresh air. Immediate medical attention is required.

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Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical

attention is required.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In

the case of contact with eyes, rinse immediately with plenty of water and seek medical

advice.

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination.

First Aid Facilities Eyewash, safety shower and washroom.

Most important symptoms and

effects

Causes burns by all exposure routes. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Notes to Physician Treat symptomatically.

Section 5 - Fire Fighting Measures

Suitable Extinguishing Media

Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes.

Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

Section 6 - Accidental Release Measures

Emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental Precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up

Clean-up methods - small spillage

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

Clean-up methods - large spillage

Typically only supplied is small quantiites as packaged goods.

If extremely toxic or used in larger quantities ensure a spillage action plan is in place. Evacuate area. Control the source and/or contain the spill if safe and able to do so. Use temporary diking, sand bags, dry sand, earth or proprietary booms/absorbent pads if available. Obtain advice on containment, neutralisation and clean-up from local emergency responders.

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Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

Section 7 - Handling and Storage

Precautions for Safe Handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance.

Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

Section 8 - Exposure Controls and Personal Protection

Exposure limits

AUS - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] updated in August, 2005. Safe Work Australia

ACGIH - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace.

UK - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020.

DE - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

NZ - Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

Component	Australia	New Zealand WEL	ACGIH TLV	The United Kingdom	Germany
Sulfuric acid	STEL: 3 mg/m ³	TWA: 0.1 mg/m ³	TWA: 0.2 mg/m ³	STEL: 0.15 mg/m ³ 15	TWA: 0.1 mg/m ³ (8
	TWA: 1 mg/m ³			min	Stunden). AGW -
				TWA: 0.05 mg/m ³ 8 hr	exposure factor 1
					TWA: 0.1 mg/m ³ (8
					Stunden). MAK
					Höhepunkt: 0.1 mg/m ³
Silver sulfate	TWA: 0.01 mg/m ³		TWA: 0.01 mg/m ³	STEL: 0.03 mg/m ³ 15	TWA: 0.01 mg/m ³ (8
				min	Stunden). AGW -
				TWA: 0.01 mg/m ³ 8 hr	exposure factor 2
					TWA: 0.01 mg/m ³ (8
					Stunden). MAK
					Höhepunkt: 0.02 mg/m ³
Mercuric sulfate	TWA: 0.003 ppm		TWA: 0.025 mg/m ³	TWA: 0.02 mg/m ³ 8 hr	TWA: 0.02 mg/m ³ (8
	TWA: 0.025 mg/m ³		Skin		Stunden). AGW -
					exposure factor 8
					TWA: 0.02 mg/m ³ (8
					Stunden). MAK
					Höhepunkt: 0.16 mg/m ³
					Haut
Chromium trioxide	TWA: 0.05 mg/m ³		TWA: 0.0002 mg/m ³	STEL: 0.03 mg/m ³ 15	Haut
(CrO3)			STEL: 0.0005 mg/m ³	min	
			Skin	STEL: 0.065 mg/m ³ 15	
				min	
				TWA: 0.01 mg/m ³ 8 hr	
				TWA: 0.025 mg/m ³ 8 hr	
				Carc. as Cr	
				Resp. Sens.	

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Exposure Controls

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Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial

applications)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Disposable gloves	See manufacturers	-	AS/NZS 2161	(minimum requirement)
	recommendations			

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Skin and body protection Long sleeved clothing

Repiratory Protection Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or

other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use

and maintenance of repiratory protective devices (or AUS/NZ equivalent)

When RPE is used a face piece Fit Test should be conducted

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls Prevent product from entering drains.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance light orange Physical State Liquid

Odor
Odor Threshold
PH
No data available

Melting Point/RangeNo data availableSoftening PointNo data availableBoiling Point/RangeNo data availableFlack PointNot applied by

Flash Point Not applicable Method - No information available

Evaporation RateNo data availableFlammability (solid,gas)Not applicableLiquid

Explosion Limits No data available

Vapor Pressure No data available

Vapor Density No data available (Air = 1.0)

Specific Gravity / Density

Bulk Density

No data available

Not applicable

Liquid

Water Solubility Miscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

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Autoignition Temperature Decomposition Temperature

No data available **Viscosity** No data available No information available **Explosive Properties** No information available **Oxidizing Properties**

Other information

Section 10 - Stability and Reactivity

Reactivity None known, based on information available

No data available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products, Excess heat.

Incompatible Materials None known.

Hazardous Decomposition Products None under normal use conditions.

Hazardous Polymerization Hazardous polymerization does not occur.

Section 11 - Toxicological Information

Information on Toxicological Effects

Product Information

(a) acute toxicity;

Oral Category 4 Dermal Category 3 Inhalation Category 4

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sulfuric acid	2140 mg/kg (Rat)		LC50 = 0.375 mg/L (Rat) 4 h
Water	LD50 > 90 mL/kg (Rat)		
Mercuric sulfate	LD50 = 57 mg/kg (Rat)	LD50 = 625 mg/kg (Rat)	
Chromium trioxide (CrO3)	LD50 = 80 mg/kg (Rat)	LD50 = 57 mg/kg (Rabbit)	LC50 = 217 mg/m ³ (Rat) 4 h

(b) skin corrosion/irritation; Category 1 A

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory No data available No data available Skin

Category 1B (e) germ cell mutagenicity;

(f) carcinogenicity; Category 1A

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The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	Australia	New Zealand	New South	Western	IARC	EU	UK	Germany
			Wales	Australia				
Sulfuric acid		Confirmed			Group 1			
		carcinogen						
Chromium trioxide (CrO3)					Group 1	Carc Cat. 1A		

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; Category 2

Target Organs No information available.

(j) aspiration hazard; No data available

delayed

Symptoms / effects,both acute and Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Section 12 - Ecological Information

Ecotoxicity effects

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Sulfuric acid	LC50: > 500 mg/L, 96h static (Brachydanio rerio)	EC50: 29 mg/L/24h	-	-
Chromium trioxide (CrO3)	LC50: = 40 mg/L, 96h static (Colisa fasciatus)			

Persistence and Degradability

Persistence

Degradation in sewage treatment plant **Bioaccumulative Potential**

Miscible with water, Persistence is unlikely, based on information available.

Contains substances known to be hazardous to the environment or not degradable in waste

water treatment plants. Bioaccumulation is unlikely

Mobility

The product is water soluble, and may spread in water systems. Will likely be mobile in the

environment due to its water solubility Highly mobile in soils

Endocrine Disruptor Information Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected endocrine disruptors

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

Section 13 - Disposal Considerations

Waste from Residues/Unused **Products**

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

Other Information

Chemical wastes should be disposed through a licensed commercial waste collection service. Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment.

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Section 14 - Transport Information

IMDG/IMO

UN-No UN1830

Proper Shipping Name SULPHURIC ACID

Hazard Class 8
Packing Group ||

Component	IMDG Marine Pollutant
Mercuric sulfate	IMDG regulated marine pollutant (Listed in the index) IMDG
7783-35-9 (0.1-1)	regulated marine pollutant (UN2025)

ADG

UN-No UN1830

Proper Shipping Name SULPHURIC ACID

Hazard Class 8
Packing Group ||

Component	Hazchem Code
Sulfuric acid	2P
7664-93-9 (80-90)	4WE
	2W
	2R
Mercuric sulfate	2X
7783-35-9 (0.1-1)	
Chromium trioxide (CrO3)	1W
1333-82-0 (0.01-0.1)	

<u>IATA</u>

UN-No UN1830

Proper Shipping Name SULPHURIC ACID

Hazard Class 8
Packing Group ||

Environmental hazards No hazards identified

Special Precautions No special precautions required

Additional information None known

Section 15 - Regulatory Information

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

National Regulations Australia

See section 8 for national exposure control parameters.

Component	Health Surveillance
Mercuric sulfate	Listed
7783-35-9 (0.1-1)	Demographic, medical and occupational history
	Physical examination with emphasis on dermatological,
	gastrointestinal, neurological and renal systems
	Urinary inorganic Mercury
Chromium trioxide (CrO3)	Listed
1333-82-0 (0.01-0.1)	Demographic, medical and occupational history
	Physical examination with emphasis on the respiratory system

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and skin Weekly skin inspection of hands and forearms by a competent
person

Standard for the Uniform Scheduling of Medicines and Poisons

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

Component	Standard for the Uniform Scheduling of Medicines and Poisons
Sulfuric acid - 7664-93-9	Schedule 6 listed - except its salts and derivatives; except in fire extinguishers, or in preparations
	containing <=0.5% of Sulfuric acid
Silver sulfate - 10294-26-5	Schedule 2 listed
Mercuric sulfate - 7783-35-9	Schedule -7 listed
Chromium trioxide (CrO3) - 1333-82-0	Schedule 6 listed - except its salts and derivatives Schedule 6 listed - except in paints or tinters
	containing <=5% of Chromium as the Ammonium, Barium, Calcium, Iron, Potassium, Sodium,
	Strontium or Zinc chromate calculated on the non-volatile content of the paint or tinter

Australian Industrial Chemicals Introduction Scheme (AICIS)

Component	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Sulfuric acid - 7664-93-9	Present	-
Water - 7732-18-5	Present	÷
Silver sulfate - 10294-26-5	Present	-
Mercuric sulfate - 7783-35-9	Present	-
Chromium trioxide (CrO3) - 1333-82-0	Present	-

Australian - Illicit Drug Precursors/Reagents Substance List

This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling and storing these substances.

Chemicals of Security Concern

This product contains one or more substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern

Component		Australian - Illicit Drug Precursors/Reagents Substance List	Chemicals of Security Concern	
	Sulfuric acid - 7664-93-9	Category 3	Listed in Appendix A	
Ī	Chromium trioxide (CrO3) - 1333-82-0	Category 2		

Legend

Category 2 - Chemicals and apparatus that require an End User Declaration when sold to non-account customers

Category 3 - Chemicals and apparatus that may be used in the illicit production of drugs. Purchases from this list should alert companies or organizations to seek further indicators of any suspicious orders or enquiries. No official reporting is required for items on this list unless considered warranted

Chemicals of Security Concern - for further information see http://www.chemicalsecurity.gov.au/securityconcerns

National pollutant inventory Subject to reporting requirements

Component	National pollutant inventory
Sulfuric acid - 7664-93-9	10 tonne/vr. Threshold category 1

Prohibition or notification/licensing requirements

Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction.

Component	Australia	New South Wales	Western Australia	New Zealand
Sulfuric acid - 7664-93-9				Confirmed carcinogen

International Inventories

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Component	AICS	NZIoC	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	ISHL	IECSC	KECL
Sulfuric acid	Х	X	231-639-5	-	X	Х	-	Х	Χ	Х	Х	KE-32570
Water	Х	Х	231-791-2	-	X	Х	-	Х	Х		Х	KE-35400
Silver sulfate	Х	Х	233-653-7	-	Х	Х	-	Х	Х	Х	Х	KE-12273
Mercuric sulfate	Х	Х	231-992-5	-	X	Х	-	Х	Х	Х	Х	KE-23132
Chromium trioxide (CrO3)	Х	X	215-607-8	-	Х	Х	-	Х	Х	Х	Х	KE-06020

Legend: X - Listed. '-' - Not Listed. R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA. **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

International Regulations

Ozone Depletion Potential This product does not contain any known or suspected substance

Persistent Organic Pollutant This product does not contain any known or suspected substance

Rotterdam Convention (PIC)	Chemicals Subject to Prior Informed Consent (PIC)
Component	Rotterdam Convention (PIC)
	X

MARPOL - International Convention for the

Prevention of Pollution from Ships

Component IMDG Marine Pollutant		IMDG Marine Pollutant
	Mercuric sulfate - 7783-35-9	IMDG regulated marine pollutant (Listed in the index) IMDG regulated marine pollutant (UN2025)

Basel convention on the control of transboundary movements of hazardous wastes and their dispoal

Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

Component	Basel Convention (Hazardous Waste)	Australian Hazardous Waste Act - Categories
		of Wastes to Be Controlled
Sulfuric acid - 7664-93-9	Annex I - Y34	Y34 solid or solution
Mercuric sulfate - 7783-35-9	Annex I - Y29	Y29
Chromium trioxide (CrO3) - 1333-82-0	Annex I - Y21	Y21

Component	CAS No	OECD HPV	Restriction of Hazardous Substances (RoHS)	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Sulfuric acid	7664-93-9	Listed	Not applicable	Not applicable	Not applicable
Water	7732-18-5	Listed	Not applicable	Not applicable	Not applicable
Silver sulfate	10294-26-5	Not applicable	Not applicable	Not applicable	Not applicable
Mercuric sulfate	7783-35-9	Not applicable	Not applicable	Not applicable	Not applicable
Chromium trioxide (CrO3)	1333-82-0	Listed	Not applicable	Not applicable	Not applicable

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Sulfuric acid	-	Use restricted. See item 75. (see link for restriction details)	-
Mercuric sulfate	-	Use restricted. See item 18. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-

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	Chromium trioxide (CrO3)	Carcinogenic Category 1B, Mutagenic Category 1B Article 57 Application date: March 21, 2016 Sunset date: September 21, 2017 Exemption - None	Use restricted. See item 72. (see link for restriction details) Use restricted. See item 28. (see link for restriction details) Use restricted. See item 29. (see link for restriction details) Use restricted. See item 75. (see link for restriction details) Use restricted. See item 47. (see link for restriction details)	SVHC Candidate list - 215-607-8 - Carcinogenic, Article 57a;Mutagenic, Article 57b
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After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

https://echa.europa.eu/authorisation-list https://echa.europa.eu/candidate-list-table

https://echa.europa.eu/substances-restricted-under-reach

Section 16 - Other Information

Legend

AICS - Australian Inventory of Chemical Substances

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

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

IECSC - Chinese Inventory of Existing Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Shins

NZS 5433:2020 - Transport of Dangerous Goods on Land

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%
WEL - Workplace Exposure Limit
DNEL - Derived No Effect Level

POW - Partition coefficient Octanol:Water **vPvB** - very Persistent, very Bioaccumulative

VOC - (Volatile Organic Compound)

NZIoC - New Zealand Inventory of Chemicals

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

ENCS - Japanese Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

CAS - Chemical Abstracts Service

ACGIH - American Conference of Governmental Industrial Hygienists

Predicted No Effect Concentration (PNEC)

IMO/IMDG - International Maritime Organization/International Maritime

Dangerous Goods Code

 $\ensuremath{\mathbf{ADG}}$ - Australian Code for the Transport of Dangerous Goods by Road and Rail

OECD - Organisation for Economic Co-operation and Development

LC50 - Lethal Concentration 50%
ATE - Acute Toxicity Estimate

RPE - Respiratory Protective Equipment NOEC - No Observed Effect Concentration

BCF - Bioconcentration factor

PBT - Persistent, Bioaccumulative, Toxic

Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards

Health Hazards

Calculation method

Environmental hazards

On basis of test data

Calculation method

Calculation method

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Revision Date 14-Jul-2023

Revision Summary Update to GHS format.

This Safety Data Sheet (SDS) is prepared in accordance to and complies with the requirements of Safe Work Australia - Work Health and Safety Regulations (WHS Regulations).

Disclaimer

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

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