

# SAFETY DATA SHEET

New Zealand

## Section 1. Identification

Product name

**1,4-Dithioerythritol (DTE); part of 'Thiol Coupling Kit'**

Catalogue Number

BR100557



Chemical name

(R\*,S\*)-1,4-dimercaptobutane-2,3-diol

Other means of identification

2,3-Butanediol, 1,4-dimercapto-, (2R,3S)-rel-; 2,3-Butanediol, 1,4-dimercapto-, (R,S)-; 2,3-Butanediol, 1,4-dimercapto-, (R\*,S\*)-; 1,4-Dithioerythritol; Erythritol, 1,4-dithio-; Dithioerythritol

Product type

Solid.

### Identified uses

Analytical chemistry.  
Laboratory chemicals  
Scientific research and development  
Consumer use

### Supplier

Cytiva  
Amersham Place  
Little Chalfont  
Buckinghamshire  
HP7 9NA United Kingdom  
+44 1494 508000

Cytiva New Zealand  
Buddle Findlay, Level 18, Pricewaterhousecooper Tower,  
188 Quay Street,  
Auckland, Auckland, 1010  
New Zealand

Person who prepared the SDS :

sds\_author@cytiva.com

Emergency telephone number (with hours of operation)

0800 733 893  
(10am - 7pm)

## Section 2. Hazards identification

HSNO Classification

Not classified.

This material is not classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

### GHS label elements

Signal word

No signal word.

Hazard statements

No known significant effects or critical hazards.

Precautionary statements

Prevention

Not applicable.

Response

Not applicable.

Storage

Not applicable.

Disposal

Not applicable.

Other hazards which do not result in classification

None known.



### Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	Substance		
<b>Chemical name</b>	(R*,S*)-1,4-dimercaptobutane-2,3-diol		
<b>Other means of identification</b>	2,3-Butanediol, 1,4-dimercapto-, (2R,3S)-rel-; 2,3-Butanediol, 1,4-dimercapto-, (R,S)-; 2,3-Butanediol, 1,4-dimercapto-, (R*,S*)-; 1,4-Dithioerythritol; Erythritol, 1,4-dithio-; Dithioerythritol		
<b>Ingredient name</b>	<b>% (w/w)</b>	<b>Identifiers</b>	
(R*,S*)-1,4-dimercaptobutane-2,3-diol	100	CAS: 6892-68-8 EC: 229-998-8	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

#### Description of necessary first aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Ingestion</b>	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Skin contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

#### Most important symptoms/effects, acute and delayed

##### Potential acute health effects

<b>Inhalation</b>	No known significant effects or critical hazards.
<b>Ingestion</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Eye contact</b>	No known significant effects or critical hazards.

##### Over-exposure signs/symptoms

<b>Inhalation</b>	No specific data.
<b>Ingestion</b>	No specific data.
<b>Skin</b>	No specific data.
<b>Eyes</b>	No specific data.

#### Indication of immediate medical attention and special treatment needed, if necessary

<b>Specific treatments</b>	Not available.
<b>Notes to physician</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

### Section 5. Firefighting measures

#### Extinguishing media

<b>Suitable</b>	Use an extinguishing agent suitable for the surrounding fire.
<b>Not suitable</b>	None known.

**Specific hazards arising from the chemical** No specific fire or explosion hazard.

**Hazardous thermal decomposition products** Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
sulfur oxides

**Hazchem code** Not available.

**Special precautions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.



## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
<b>Environmental precautions</b>	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and material for containment and cleaning up

<b>Small spill</b>	Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
<b>Large spill</b>	Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

None.

#### Biological exposure indices

No exposure indices known.

#### Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

##### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

##### Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

##### Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.



## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

Physical state	Solid.
Colour	White.
Odour	Unpleasant.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	82 to 84°C (179.6 to 183.2°F)
Boiling point or initial boiling point and boiling range	Not available.
Flash point	[Product does not sustain combustion.]
Burning time	Not available.
Burning rate	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Lower and upper explosive (flammable) limits	Not applicable.
Vapour pressure	Not available.
Relative vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	

Media	Result
cold water	Easily soluble
hot water	Easily soluble

Solubility in water	Not available.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
SADT	Not available.
Viscosity	Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available.
Flow time (ISO 2431)	Not available.
Molecular weight	154.26 g/mole

### Particle characteristics

Median particle size	Not available.
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## Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	No specific data.
Incompatible materials	No specific data.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on likely routes of exposure

Inhalation	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	No specific data.
Ingestion	No specific data.
Skin contact	No specific data.
Eye contact	No specific data.



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

Not available.

**Conclusion/Summary[Product]** Not available.**Skin corrosion/irritation**

Not available.

**Conclusion/Summary[Product]** Not available.**Serious eye damage/eye irritation**

Not available.

**Conclusion/Summary[Product]** Not available.**Respiratory corrosion/irritation**

Not available.

**Conclusion/Summary[Product]** Not available.**Respiratory or skin sensitization**

Not available.

**Skin****Conclusion/Summary[Product]** Not available.**Respiratory****Conclusion/Summary[Product]** Not available.**Potential chronic health effects**

<b>General</b>	No known significant effects or critical hazards.
<b>Inhalation</b>	No known significant effects or critical hazards.
<b>Ingestion</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

**Chronic toxicity**

Not available.

**Conclusion/Summary[Product]** Not available.**Carcinogenicity**

Not available.

**Conclusion/Summary[Product]** Not available.**Germ cell mutagenicity**

Not available.

**Conclusion/Summary[Product]** Not available.

**Reproductive toxicity**

Not available.

**Conclusion/Summary[Product]** Not available.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Numerical measures of toxicity**

**Acute toxicity estimates**

N/A

**Other information** Adverse symptoms may include the following: diarrhoea nausea or vomiting

**Section 12. Ecological information**

**Ecotoxicity** No known significant effects or critical hazards.

**Aquatic and terrestrial toxicity**

Not available.

**Conclusion/Summary[Product]** Not available.

**Persistence/degradability**

Not available.

**Conclusion/Summary[Product]** Not available.

**Bioaccumulative potential**

Not available.

**Mobility in soil**

**Soil/water partition coefficient** 42.4122 Koc

**Other adverse effects** No known significant effects or critical hazards.

**Section 13. Disposal considerations**

**Disposal methods** The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

Regulatory information	UN number	Proper shipping name	Classes	PG*
New Zealand Class	Not regulated.	-	-	-
		No.		
IATA Class	Not regulated.	-	-	-
		-		
		No.		



IMDG Class	Not regulated.	-	-	-
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No.

PG\* : Packing group

<b>Special precautions for user</b>	<b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
<b>Transport in bulk according to IMO instruments</b>	Not available.

## Section 15. Regulatory information

<b>HSNO Approval Number</b>	HSR002596
<b>HSNO Group Standard</b>	Laboratory Chemicals and Reagent Kits
<b>HSNO Classification</b>	Not classified.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>New Zealand</b>	This material is listed or exempted.
<b>Australia</b>	This material is listed or exempted.
<b>United States</b>	This material is active or exempted.
<b>Canada inventory</b>	This material is listed or exempted.
<b>China</b>	This material is listed or exempted.
<b>Japan</b>	<b>Japan inventory (CSCL):</b> Not determined. <b>Japan inventory (ISHL):</b> Not determined.

## Section 16. Other information

### History

<b>Date of printing</b>	12 February 2026
<b>Date of issue/ Date of revision</b>	12 February 2026
<b>Date of previous issue</b>	2/5/2024
<b>Version</b>	11

### **Key to abbreviations**

ADG = Australian Dangerous Goods  
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
 ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 UN = United Nations

### **References**

Not available.

 Indicates information that has changed from previously issued version.

### Notice to reader



To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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