

# SAFETY DATA SHEET

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

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

### Product Identifier

Perihalan Produk: **Fluid Thio Medium with Beef Extract Base**  
Product Description: **Fluid Thio Medium with Beef Extract Base**  
Cat No. : R453472, R453474

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

Recommended Use Laboratory chemicals.  
Uses advised against No Information available

### Details of the supplier of the safety data sheet

Company Thermo Scientific Microbiology Sdn Bhd  
No.6, Jalan TTC 6, Taman Teknologi Cheng,  
Cheng, 75250 Melaka, Malaysia  
+606 334 0975 .

Supplier Remel  
12076 Santa Fe Drive Lenexa,  
KS 66215 United States  
Telephone: 1-800-255-6730  
Fax:1-800-621-8251

E-mail address mbd-sds@thermofisher.com

### Emergency Telephone Number

(603) 5122 8888  
CHEMTREC Malaysia **1-800-815-308** (Malay)  
CHEMTREC Malaysia (Kuala Lumpur) **+(60)-327884561** (Malay)

## SECTION 2: HAZARDS IDENTIFICATION

### Classification of the substance or mixture

### Label Elements

### Hazard Statements

### Precautionary Statements

### Other Hazards

This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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Component	CAS No	Weight %
Potassium chloride	7447-40-7	2.4
Sodium chloride	7647-14-5	10.63
L-Cystine dihydrochloride	30925-07-6	0.28
Cysteine hydrochloride, L-(+)-, monohydrate	7048-04-6	0.85
Calcium gluconate monohydrate	18016-24-5	0.12
Sodium pyruvate	113-24-6	5.68
Sodium thioglycolate	367-51-1	1.43
Sodium hydroxide	1310-73-2	0.66
Tris (hydroxymethyl) aminomethane	77-86-1	2.12
Meat extracts, beef	68990-09-0	17.39
1,2,3-Propanetriol, 1-(dihydrogen phosphate), magnesium salt (1:1)	927-20-8	0.23
Sand	14808-60-7	1.76
Sodium metabisulfite	7681-57-4	0.2
Pancreatin	8049-47-6	0.42
3H-Phenoxazin-3-one, 7-hydroxy-, 10-oxide, sodium salt	62758-13-8	0.003
Casein	9000-71-9	19.93
Dextrose monohydrate	5996-10-1	9.98
Yeast, ext.	8013-01-2	23.75

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

#### Eye Contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

#### Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

#### Ingestion

Clean mouth with water and drink afterwards plenty of water.

#### Inhalation

Remove to fresh air.

#### 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.

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

No information available.

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

#### Notes to Physician

Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### Extinguishing media

#### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Extinguishing media which must not be used for safety reasons

No information available.

### Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

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## Hazardous Combustion Products

None under normal use conditions.

## Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Avoid dust formation. Ensure adequate ventilation. Use personal protective equipment as required.

### Environmental precautions

See Section 12 for additional Ecological Information.

### Methods and Material for Containment and Cleaning Up

Provide adequate ventilation. Avoid dust formation. Sweep up and shovel into suitable containers for disposal.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

Ensure adequate ventilation.

### Conditions for Safe Storage, Including any Incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

### Specific End Uses

Use in laboratories.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Component	Malaysia	ACGIH TLV	OSHA PEL
Sodium thioglycolate		TWA: 1 ppm Skin	
Sodium hydroxide		Ceiling: 2 mg/m <sup>3</sup>	(Vacated) Ceiling: 2 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>
Sand		TWA: 0.025 mg/m <sup>3</sup>	(Vacated) TWA: 0.1 mg/m <sup>3</sup> TWA: 50 µg/m <sup>3</sup>
Sodium metabisulfite		TWA: 5 mg/m <sup>3</sup>	(Vacated) TWA: 5 mg/m <sup>3</sup>

Component	European Union	The United Kingdom	Germany
Sodium hydroxide		2 mg/m <sup>3</sup> STEL	2 mg/m <sup>3</sup> TWA (inhalable fraction)
Sand		STEL: 0.3 mg/m <sup>3</sup> 15 min TWA: 0.1 mg/m <sup>3</sup> 8 hr Carc. respirable fraction	

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Sodium metabisulfite		STEL: 15 mg/m <sup>3</sup> 15 min TWA: 5 mg/m <sup>3</sup> 8 hr	
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## Exposure Controls

### Engineering Measures

Ensure adequate ventilation, especially in confined areas.

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**

Wear safety glasses with side shields (or goggles)

#### **Hand Protection**

Protective gloves

#### **Skin and body protection**

Long sleeved clothing

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.

#### **Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

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

No information available

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

#### **Appearance**

#### **Physical State**

Solid

#### **Odor**

No information available

#### **Odor Threshold**

No data available

#### **pH**

No information available

#### **Melting Point/Range**

No data available

#### **Softening Point**

No data available

#### **Boiling Point/Range**

No information available

#### **Flash Point**

No information available

**Method -** No information available

#### **Evaporation Rate**

No data available

#### **Flammability (solid,gas)**

No information available

#### **Explosion Limits**

No data available

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Vapor Pressure	No data available	
Vapor Density	No data available	(Air = 1.0)
Specific Gravity / Density	No data available	
Bulk Density	No data available	
Water Solubility	No information available	
Solubility in other solvents	No information available	

## Partition Coefficient (n-octanol/water)

Component	log Pow
Sodium thioglycolate	-3.78
1,2,3-Propanetriol, 1-(dihydrogen phosphate), magnesium salt (1:1)	<-1.7
Sodium metabisulfite	-3.7
Pancreatin	-1.3

Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

## SECTION 10: STABILITY AND REACTIVITY

### Reactivity

None known, based on information available.

### Chemical Stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

Hazardous Polymerization	No information available.
Hazardous Reactions	No information available.

### Conditions to Avoid

None known.

### Incompatible Materials

None known.

### Hazardous Decomposition Products

None under normal use conditions.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

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## Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium chloride	LD50 = 2600 mg/kg ( Rat )		
Sodium chloride	LD50 = 3 g/kg ( Rat )	LD50 > 10000 mg/kg ( Rabbit )	LC50 > 42 mg/L ( Rat ) 1 h
Sodium thioglycolate	504 mg/kg (Mouse) 50-200 mg/kg (Rat)	293 mg/kg (Mouse) 1000-2000 mg/kg (female Rat)	
Sodium hydroxide	LD50 = 325 mg/kg ( Rat )	LD50 = 1350 mg/kg ( Rabbit )	
Tris (hydroxymethyl) aminomethane	LD50 = 5900 mg/kg ( Rat )	LD50 > 5000 mg/kg ( Rat )	
Sodium metabisulfite	LD50 = 1310 mg/kg ( Rat )	LD50 > 2000 mg/kg ( Rat )	
Pancreatin	LD50 > 10 g/kg ( Rat )		

## Chronic Toxicity

### Carcinogenicity

This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B)

Component	IARC	UK
Sand	Group 1	

### Legend:

X - Listed 'I' - Not Listed XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B))

### Sensitization

### Mutagenic Effects

### Reproductive Effects

### Developmental Effects

### Target Organs

No information available

No information available

No information available

No information available

No information available.

## SECTION 12: ECOLOGICAL INFORMATION

### Ecotoxicity effects

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Potassium chloride	Lepomis macrochirus: LC50: 1060 mg/L /96h Pimephales promelas: LC50: 750 - 1020 mg/L /96h	EC50: 825 mg/L/48h	EC50: 2500 mg/L/72h	
Sodium chloride	Pimephals prome: LC50: 7650 mg/L/96h	EC50: 1000 mg/L/48h		
Sodium thioglycolate		EC50: 38 mg/L/48h		
Sodium hydroxide	LC50: = 45.4 mg/L, 96h static (Oncorhynchus mykiss)	-	-	-

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Sodium metabisulfite	LC50: = 32 mg/L, 96h static (Lepomis macrochirus)		EC50: = 40 mg/L, 96h (Desmodesmus subspicatus) EC50: = 48 mg/L, 72h (Desmodesmus subspicatus)	EC50 = 56 mg/L 17 h
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**Persistence and degradability** No information available

**Bioaccumulative potential** No information available

Component	log Pow	Bioconcentration factor (BCF)
Sodium thioglycolate	-3.78	No data available
1,2,3-Propanetriol, 1-(dihydrogen phosphate), magnesium salt (1:1)	<-1.7	No data available
Sodium metabisulfite	-3.7	No data available
Pancreatin	-1.3	No data available

**Mobility in soil** No information available.

**Other adverse effects** No information available

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Waste from Residues/Unused Products** Dispose of in accordance with local regulations

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

## SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO** Not regulated

**Road and Rail Transport** Not regulated

**IATA** Not regulated

**Special Precautions for User** No special precautions required

## SECTION 15: REGULATORY INFORMATION

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

**International Inventories** X = listed

Component	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	IECSC	AICS	KECL
Potassium chloride	-	X	X	X	X	X	X	X	KE-29086

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Sodium chloride	-	X	X	X	X	X	X	X	KE-31387
L-Cystine dihydrochloride	250-391-9	-	-	-	-	X	-	-	-
Cysteine hydrochloride, L-(+)-, monohydrate	-	-	-	X	X		X	X	KE-01430
Calcium gluconate monohydrate	-	-	-	-	-		X	-	-
Sodium pyruvate	204-024-4	X	X	X	X	X	X	X	KE-27653
Sodium thioglycolate	206-696-4	X	X	X	X	X	X	X	KE-33787
Sodium hydroxide	215-185-5	X	X	X	X	X	X	X	KE-31487
Tris (hydroxymethyl) aminomethane	-	X	X	X	X	X	X	X	KE-01403
Meat extracts, beef	-	X	X	X	-		X	X	KE-23065
1,2,3-Propanetriol, 1-(dihydrogen phosphate), magnesium salt (1:1)	-	X	X	X	X	X	-	X	KE-18028
Sand	238-878-4	X	X	X	X	X	X	X	KE-29983
Sodium metabisulfite	-	X	X	X	-	X	X	X	KE-12701
Pancreatin	-	X	-	X	-		X	X	KE-27762
3H-Phenoxazin-3-one, 7-hydroxy-, 10-oxide, sodium salt	-	X	X	X	-		X	X	-
Casein	-	X	X	X	-		X	X	KE-04893
Dextrose monohydrate	-	-	-	-	X		X	-	-
Yeast, ext.	-	X	X	X	-		X	X	KE-05-1355

Component	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Sodium hydroxide				Annex I - Y35

## National Regulations

**Persistent Organic Pollutant**  
**Ozone Depletion Potential**

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

## SECTION 16: OTHER INFORMATION

### Legend

**CAS** - Chemical Abstracts Service

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

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

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

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

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

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

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

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**POW** - Partition coefficient Octanol:Water

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

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

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)



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## Key literature references and sources for data

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

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

Revision Date 29-Mar-2023  
Revision Summary Not applicable.

**In accordance with local and national regulations: Occupational Safety and Health  
(Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013**

## Disclaimer

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**