

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

Product Identifier

Product Description: 2,5-Dichlorothiophenol
Cat No. : L06945
CAS No 5858-18-4
Molecular Formula C6 H4 Cl2 S

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

Importer

Fisher Scientific Korea
D5,D6, Incheon Airport Logistics Complex
150, Gonghangdong-Ro 296 Beon-Gil
Jung-Gu, Incheon
Tel: +82-1661-9555
Fax: +82-2-2023-0603

Supplier

Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099

E-mail address Chem.KR@thermofisher.com

Emergency Telephone Number

Emergency telephone: Medical: +(82) 070-7686-0086 or + 1-703-741-5970
CHEMTREC: 080 822 1374 (Local), CHEMTREC: 1-800-424-9300 or + 1-703-527-3887
Korea: 00-308-13-2549 (24 hours a day, 7 days a week)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity - (single exposure)	Category 3

Environmental hazards

Based on available data, the classification criteria are not met

Label Elements

ALFAAL06945

SAFETY DATA SHEET

2,5-Dichlorothiophenol

Revision Date 08-Jun-2024



Signal Word

Warning

Hazard Statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

Precautionary Statements

Prevention

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

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

P264 - Wash hands and face thoroughly after handling

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

Response

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

P337 + P313 - If eye irritation persists: Get medical advice/attention

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

P312 - Call a POISON CENTER or doctor if you feel unwell

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P321 - Specific treatment (see supplemental first aid instructions on this label)

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 + P364 - Take off contaminated clothing and wash it before reuse

Storage

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

P405 - Store locked up

Disposal

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

Other Hazards

Stench

This product does not contain any known or suspected endocrine disruptors

Toxic to terrestrial vertebrates

NFPA

Health
2

Flammability
1

Instability
0

Physical hazards
N/A

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	Common Name	CAS No	Index No	Weight %
Benzenethiol, 2,5-dichloro-	No information available	5858-18-4	Not listed	99 - 100

SECTION 4: FIRST AID MEASURES

SAFETY DATA SHEET

2,5-Dichlorothiophenol

Revision Date 08-Jun-2024

Description of first aid measures

General Advice

If symptoms persist, call a physician.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Ingestion

Clean mouth with water and drink afterwards plenty of water.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

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

None reasonably foreseeable.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO₂). Dry chemical. Chemical foam.

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.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂), Sulfur oxides, Hydrogen chloride gas.

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

Ensure adequate ventilation. Use personal protective equipment as required.

Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods and Material for Containment and Cleaning Up

SAFETY DATA SHEET

2,5-Dichlorothiophenol

Revision Date 08-Jun-2024

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

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

Conditions for Safe Storage, Including any Incompatibilities

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

Specific End Uses

Use in laboratories.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Component	CAS No	Korea	ACGIH TLV	OSHA PEL
Benzenethiol, 2,5-dichloro-	5858-18-4	Not listed	Not listed	Not listed

Component	CAS No	European Union	The United Kingdom	Germany
Benzenethiol, 2,5-dichloro-	5858-18-4	Not listed	Not listed	Not listed

ACGIH - Biological Exposure Indices

Component	CAS No	ACGIH - Biological Exposure Indices
Benzenethiol, 2,5-dichloro-	5858-18-4	Not listed

Exposure Controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas. 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

Hand Protection

Protective gloves

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

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.

Personal protective equipment

Respiratory Protection

Use only those certified by the Korea Occupational Safety and Health Administration. No protective equipment is needed under normal use conditions

SAFETY DATA SHEET

2,5-Dichlorothiophenol

Revision Date 08-Jun-2024

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, Color, etc.) Colorless Liquid

Odor Stench

Odor Threshold No data available

pH No information available

Melting Point/Range No data available

Softening Point No data available

Boiling Point/Range 112 - 116 °C / 233.6 - 240.8 °F @ 50 mmHg

Flash Point 110 °C / 230 °F **Method -** No information available

Evaporation Rate No data available

Flammability (solid,gas) Not applicable Liquid

Explosion Limits No data available

Vapor Pressure No data available

Vapor Density No data available (Air = 1.0)

Specific Gravity / Density No data available

Bulk Density Not applicable Liquid

Water Solubility No information available

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Component	CAS No	log Pow
Benzenethiol, 2,5-dichloro-	5858-18-4	No data available

Autoignition Temperature No data available

Decomposition Temperature No data available

Viscosity No data available

Explosive Properties No information available

Oxidizing Properties No information available

Molecular Formula C6 H4 Cl2 S

Molecular Weight 179.07

SECTION 10: STABILITY AND REACTIVITY

Reactivity None known, based on information available

SAFETY DATA SHEET

2,5-Dichlorothiophenol

Revision Date 08-Jun-2024

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization No information available.
Hazardous Reactions None under normal processing.

Conditions to Avoid

Incompatible products.

Incompatible Materials

Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Sulfur oxides. Hydrogen chloride gas.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

No acute toxicity information is available for this product

Information on expected route of exposure

Inhalation Not an expected route of exposure.
Ingestion May be harmful if swallowed.
Eyes Avoid contact with eyes. Irritating to eyes.
Skin Avoid contact with skin. May cause irritation.

Information on Health Hazards

(a) acute toxicity;

Oral No data available
Dermal No data available
Inhalation No data available

Component	CAS No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Benzenethiol, 2,5-dichloro-	5858-18-4	No data available	No data available	No data available

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

Respiratory No data available
Skin No data available

Component	CAS No	Test method	Test species	Study result
Benzenethiol, 2,5-dichloro-	5858-18-4	No data available	No data available	No data available

(e) germ cell mutagenicity; No data available

Component	CAS No	Test method	Test species	Study result
Benzenethiol, 2,5-dichloro-	5858-18-4	No data available	No data available	No data available

SAFETY DATA SHEET

2,5-Dichlorothiophenol

Revision Date 08-Jun-2024

(f) carcinogenicity; No data available

Component	CAS No	Test method	Test species / Duration	Study result
Benzenethiol, 2,5-dichloro-	5858-18-4	No data available	No data available	No data available

There are no known carcinogenic chemicals in this product

Component	CAS No	IARC	NTP	ACGIH	OSHA	UK
Benzenethiol, 2,5-dichloro-	5858-18-4	Not listed	Not listed	Not listed	Not listed	Not listed

(g) reproductive toxicity; No data available

Component	CAS No	Test method	Test species / Duration	Study result
Benzenethiol, 2,5-dichloro-	5858-18-4	No data available	No data available	No data available

(h) STOT-single exposure; Category 3
Results / Target organs Respiratory system.

(i) STOT-repeated exposure; No data available
Target Organs None known.

(j) aspiration hazard; No data available

Other Adverse Effects
No information available.

Component	CAS No	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable

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	CAS No	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Benzenethiol, 2,5-dichloro-	5858-18-4	No data available	No data available	No data available	No data available

Persistence and degradability No information available

Bioaccumulative potential No information available

Mobility in soil No information available

Ozone Depletion Potential

Component	CAS No	Ozone Depletion Potential
Benzenethiol, 2,5-dichloro-	5858-18-4	Not listed

Other adverse effects No information available

SECTION 13: DISPOSAL CONSIDERATIONS

SAFETY DATA SHEET

2,5-Dichlorothiophenol

Revision Date 08-Jun-2024

Waste treatment methods

Waste from Residues/Unused Products	Waste is classified as hazardous. Dispose in accordance with the Wastes Control Act (폐기물관리법).
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport

UN-No	UN3335
Proper Shipping Name	AVIATION REGULATED SOLID, N.O.S.
Technical Shipping Name	2,5-Dichlorothiophenol
Hazard Class	9

IATA

UN-No	UN3335
Proper Shipping Name	AVIATION REGULATED SOLID, N.O.S.
Technical Shipping Name	2,5-Dichlorothiophenol
Hazard Class	9
Packing Group	III

IMDG/IMO

UN-No	UN3335
Proper Shipping Name	AVIATION REGULATED SOLID, N.O.S.
Technical Shipping Name	2,5-Dichlorothiophenol
Hazard Class	9
Marine Pollutant	No hazards identified

Special Precautions for User No special precautions required

SECTION 15: REGULATORY INFORMATION

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

Legend: X - Listed '-' - Not Listed

International Inventories

Component	CAS No	KECL	TSCA	EINECS	IECSC	DSL	NDSL	PICCS	ENCS	ISHL	AICS
Benzenethiol, 2,5-dichloro-	5858-18-4	-	X	227-486-9	X	-	X	-	X	X	-

Component	CAS No	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)
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable

Korean National Regulations

ALFAAL06945

SAFETY DATA SHEET

2,5-Dichlorothiophenol

Revision Date 08-Jun-2024

Component	CAS No	Act on Registration and Evaluation of Chemical Substances (K-REACH)	Authorised Chemicals	Existing Substances Subject to Registration
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable

Component	CAS No	Chemical Control Act - Toxic Chemicals	Chemical Control Act - Prohibited Chemicals	Chemical Control Act - Use Restricted Chemicals
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable

Component	CAS No	Chemical Control Act - Accident Precaution Chemicals (% in mixtures)	Chemical Control Act - Accident Precaution Chemicals - Quantity limits Storage (% in mixtures)	Chemical Control Act - Accident Precaution Chemicals - Quantity limits Manufacture/Use (% in mixtures)
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable

Component	CAS No	Waste Control Law	Ministry of Environment - CMR risk	Ministry of Environment - Critically Controlled Substance
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Harmful Agents Subject to Work Environment Monitoring	ISHA - Prohibited substances	ISHA - Substances requiring permission
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Substances subject to control	ISHA - Harmful Agents Requiring Health Examination	ISHA - Permissible Exposure Limits
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Subject to Process Safety Reports (minimum quantity)	ISHA - Threshold Limit Values (TLVs) Chemicals	ISHA - Special management materials
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable

National Fire Association - Dangerous Substances Minimum quantity requiring a permit

Component	CAS No	Class 1 - Oxidising solids	Class 2 - Flammable solid	Class 3 - Spontaneously Combustible Substances and Dangerous Substances When Wet	Class 4 - Flammable liquids	Class 5 - Self-reactive substances	Class 6 - Oxidising liquids
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

NFA Dangerous Substances Classification

Class 4.5 (Group 3 petroleum, insoluble) - 2000 L

Control Parameters

Component	CAS No	Korea	ACGIH - Biological Exposure Indices
Benzenethiol, 2,5-dichloro-	5858-18-4	Not listed	Not listed

US Management Information

OSHA - Occupational Safety and Health Administration

Not applicable

Component	CAS No	Specifically Regulated	Highly Hazardous Chemicals
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ALFAAL06945

SAFETY DATA SHEET

2,5-Dichlorothiophenol

Revision Date 08-Jun-2024

		Chemicals	
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable

CERCLA

Not applicable

Component	CAS No	CERCLA Extremely Hazardous Substances RQs	Hazardous Substances RQs	SARA 313 - Threshold Values %
Benzenethiol, 2,5-dichloro-	5858-18-4	Not applicable	Not applicable	Not applicable

GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Warning.

H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.

P280 - Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. 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. P312 - Call a POISON CENTER or doctor if you feel unwell.

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)

Key literature references and sources for data

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

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

Training Advice

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

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Prepared By

Health, Safety and Environmental Department

Creation Date

16-Oct-2010

Revision Date

08-Jun-2024

SAFETY DATA SHEET

2,5-Dichlorothiophenol

Revision Date 08-Jun-2024

Revision Number
Revision Summary

6
New emergency telephone response service provider.

MOEL's Public Notice No. 2023-9 (Standards for Classification and Labeling of Chemical Substances and Safety Data Sheets)

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