



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Canadian WHMIS 2015

Revision date 07-Aug-2023

Supersedes Date: 07-Feb-2019

Revision Number 2

1. Identification

Product identifier

Product Name HALOX® 350, HALOX® 650

Other means of identification

Product Code(s) 3091

Synonyms (2-Benzothiazolylthio) butanedioic acid

Recommended use of the chemical and restrictions on use

Recommended use Corrosion inhibitor
Metal adhesion promoter

Restrictions on use No information available

Details of the supplier of the safety data sheet

Initial Supplier Identifier

ICL
6530 Schneider Ave
Tel.: +1-219-933-1560
Fax: +1-219-933-1570
Hammond IN 46322, USA
e-mail: msdsinfo@icl-group.com

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300
Outside the USA, including ships at sea, call CHEMTREC's international and maritime
telephone number (collect calls accepted): +1 (703) 527-3887

2. Hazard(s) identification

Classification

Skin sensitization	Category 1
Combustible dust	Yes

Label elements



Signal word

Warning

Hazard statements

May cause an allergic skin reaction
May form combustible dust concentrations in air

Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Skin

IF ON SKIN: Wash with plenty of water and soap
If skin irritation or rash occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other information

No information available

3. Composition/information on ingredients**Substance**

Chemical name	CAS No	Weight-%
(2-Benzothiazolylthio) butanedioic acid	95154-01-1	100

4. First-aid measures**Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	If swallowed, wash mouth thoroughly with plenty of water. Get medical attention immediately. NOTE: Never give an unconscious person anything to drink

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards arising from the chemical	Avoid generation of dust. Fine dust dispersed in air may ignite. Product is or contains a sensitizer. May cause sensitization by skin contact.
Hazardous combustion products	Nitrogen oxides (NOx). Carbon monoxide. Carbon dioxide (CO2). Oxides of sulfur.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	Yes.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Cool containers with water spray. Contain runoff to prevent entry into water or drainage systems.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Avoid generation of dust. Avoid contact with eyes. Use personal protective equipment as required. Do not breathe dust. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions	Should not be released into the environment. See Section 12 for additional Ecological Information.
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Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so. Prevent dust cloud.
Methods for cleaning up	Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Pick up and transfer to properly labeled containers.
Reference to other sections	See section 8 for more information. See section 13 for more information.

7. Handling and storage

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.
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Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up.

8. Exposure controls/personal protection**Control parameters**

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	Alberta	British Columbia	Ontario	Quebec
(2-Benzothiazolylthio) butanedioic acid 95154-01-1	-	-	-	-

Appropriate engineering controls

Engineering controls Eyewash stations
Showers
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves
Leather gloves
Rubber gloves

Skin and body protection Wear suitable protective clothing.

Respiratory protection Dust proof mask - particle filter, mask filter
Filter P2

General hygiene considerations Do not breathe dust. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state Solid
Appearance Powder
Color yellowish
Odor Odorless
Odor threshold Not available

Property	Values
Melting point / freezing point	170 - 172°C (338 - 342°F)
Boiling point / boiling range	No data available
Flammability (solid, gas)	No data available
Flammability Limit in Air	
Upper flammability or explosive limits	Not Determined
Lower flammability or explosive	100 - 120 g/m ³

Remarks • Method
Decomposes before melting
None known
None known
None known

limits		
Flash point	No data available	Not applicable
Autoignition temperature	460°C (860°F)	Not self-ignitable
Decomposition temperature		
pH	3.3	(disp.) (100 g/l) 20°C (68°F)
pH (as aqueous solution)	No data available	No information available
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	
Water solubility	0.27 g/l	20°C (68°F)
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapor pressure	23 µPa	@ 25 °C (77 °F)
Relative density	1.52 g/cm³ (12.684 lbs/gal)	20°C (68°F)
Bulk density	No data available	
Liquid Density	No data available	
Vapor density	-	Not determined
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

Other information

Oxidizing properties	Not oxidising
Explosive properties	Not explosive. During processing, dust may form explosive mixture in air.

10. Stability and reactivity

Reactivity	No reactive hazards known/expected.
Stability	Can decompose slowly with localized heating above 150°C.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	Yes.
Possibility of hazardous reactions	Dust can form an explosive mixture with air.
Conditions to avoid	Excessive heat. Heat, sparks, open flame and light. Avoid dust formation.
Incompatible materials	Alkaline products. Ammonia. Strong oxidizing agents.
Hazardous decomposition products	Nitrogen oxides (NOx). Carbon monoxide and carbon dioxide. Sulfur oxides.

11. Toxicological information**Product Information****Information on likely routes of exposure**

Inhalation	May cause irritation of respiratory tract.
Skin contact	May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity**Numerical measures of toxicity**

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
(2-Benzothiazolylthio) butanedioic acid 95154-01-1	>5000 (mg/kg)	-	-

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

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity Based on available data, the classification criteria are not met

Carcinogenicity Based on available data, the classification criteria are not met. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
(2-Benzothiazolylthio) butanedioic acid 95154-01-1	-	-	-	-

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Not expected.

12. Ecological information

Ecotoxicity Based on available data, the classification criteria are not met.

Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea	Toxicity to microorganisms
(2-Benzothiazolylthio) butanedioic acid 95154-01-1	-	LC50: >100 mg/l (96h, zebra fish (danio rerio))	EC50: >180 mg/l (24h, Daphnia)	IC50: > 100 mg/L (3h)

Persistence and degradability Expected to biodegrade.

Bioaccumulation**Component information**

Chemical name	Partition coefficient
(2-Benzothiazolylthio) butanedioic acid 95154-01-1	1

Mobility in soil No data available

Other adverse effects Do not allow undiluted product or large quantities of it to reach ground water, water bodies

or sewage system.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Empty containers should be disposed of in accordance with all applicable laws and regulations.

14. Transport information

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>ADR/RID/ADN</u>	Not regulated

15. Regulatory information

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

National regulations

Canada - Significant New Activity Notices Not applicable

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

GHS hazardous component CAS registry numbers appearing in section 3 may differ from substances appearing in section 15 due to country or regional chemical inventory coverage requirements, however, remain in compliance with the inventory
Products that are used as food additives are exempt from listing in international chemical inventories

For further details on the regulatory status for this product in a specific country, please send your inquiry to the following email address: msdsinfo@icl-group.com

TSCA Listed or exempted

DSL	Listed or exempted
ENCS	Listed or exempted
IECSC	Listed or exempted
KECL	Listed or exempted
PICCS	Listed or exempted
AIIC	Listed or exempted
NZIoC	Listed or exempted
TCSI	Listed or exempted
NCI	Listed or exempted
TECI	Not Listed
NSQ	Not Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL - Canadian Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory
NCI - Vietnam National Chemicals Inventory
TECI - Thailand Inventory FDA Existing Chemicals
NSQ - Mexico National Inventory of Chemical Substances

16. Other information

NFPA	Health hazards 2	Flammability 1	Instability 0	Special hazards -
HMIS	Health hazards 2	Flammability 1	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AELG(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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Revision date 07-Aug-2023

Revision Note The symbol (***) in the margin of this SDS indicates that this line has been revised.
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End of Safety Data Sheet