Safety Data Sheet

According to OSHA HazCom Standard [2012]

Version 1 Reviewed on 03/08/2024

1 Identification

Product identifier

Trade name: Lithium tetraborate Claisse Flux
CAS Number:
12007-60-2
EC number:
234-514-3

Application of the substance / the mixture:
Laboratory chemicals
Professional use only

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Alpha Resources LLC

Address: 3090 Johnson Rd. Stevensville, MI, USA

Telephone: (269) 465-5559
Website: www.alpharesources.com
Email: info@alpharesources.com

Emergency telephone number:
CHEMTREC: 1-800-424-9300

2 Hazard(s) identification

Classification of the substance or mixture

Acute Toxicity - Oral 4	H302 Harmful if swallowed.
Eye Damage 1	H318 Causes serious eye damage.
Toxic to Reproduction 2	H361 Suspected of damaging fertility or the unborn child.

Label elements

GHS label elements
The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS05 GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling:
dilithium tetraborate

Hazard statements
Harmful if swallowed.
Causes serious eye damage.
Suspected of damaging fertility or the unborn child.

Precautionary statements:
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
IF exposed or concerned: Get medical advice/attention.

Trade name: Lithium tetraborate Claisse Flux

Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:
NFPA ratings (scale 0 - 4)

Health = 3
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *3
Fire = 0
Reactivity = 0

Other hazards
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description
12007-60-2 dilithium tetraborate

Identification number(s)
EC number: 234-514-3

4 First-aid measures

Description of first aid measures

General information:
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: Move patient to fresh air, if symptom arise consult a doctor.

After skin contact:
Remove/ Take off immediately all contaminated clothing.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:
Call for a doctor immediately.
Rinse out mouth and then drink plenty of water.

Most important symptoms and effects, both acute and delayed
Ingestion:
Nausea
Vomiting
Diarrhea

Indication of any immediate medical attention and special treatment needed
Wear the appropriate personal protective equipment according to the incident, injury and surroundings.
Treat symptomatically.
Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture No further relevant information available.

Advice for firefighters

Protective equipment:
Wear fully protective suit.
Wear self-contained respiratory protective device.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid contact with spilled material.
Observe the relevant local and international regulations.
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources

Environmental precautions:
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.
Do not empty into drains or the aquatic environment.

Methods and material for containment and cleaning up:
Use neutralizing agent.
Shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.
Dispose contaminated material as waste according to section 13.

Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:
4.3 mg/m³

PAC-2:
47 mg/m³

PAC-3:
280 mg/m³

7 Handling and storage

Precautions for safe handling
Thorough dedusting.
Open and handle receptacle with care.
Provide suction extractors if dust is formed.
Avoid breathing vapours.
Avoid close or long term contact with the skin.
Wear personal protective equipment when handling.

Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

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Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:
Keep container tightly closed.
Store in a dry, cool and well-ventilated area.
Do not store in unlabelled containers.
Store only in the original receptacle.

Information about storage in one common storage facility: Store away from foodstuffs.

Further information about storage conditions:
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.
Store in cool, dry conditions in well sealed receptacles.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Control parameters

Components with limit values that require monitoring at the workplace: Not required.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment

General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Ensure good ventilation/exhaustion at the workplace.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Store protective clothing separately.
Avoid contact with the eyes and skin.

Breathing equipment: Use suitable respiratory protective device in case of insufficient ventilation.

Protection of hands:

Protective gloves

The glove material must be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

Body protection: Protective work clothing

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9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:	
Form:	Powder
Color:	White
Odor threshold:	Not determined.
pH-value:	Not applicable.
Melting point/Melting range:	917 °C (1,682.6 °F)
Boiling point/Boiling range:	Not determined. The substance is a solid which melts above 300°C
Flash point:	Not applicable. Substance is inorganic
Flammability (solid, gaseous):	Product is not flammable.
Auto-ignition temperature:	Substance is not a self-heating solid.
Decomposition temperature:	Not determined.
Danger of explosion:	Product does not present an explosion hazard. Not determined.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Oxidizing properties	Not determined.
Vapor pressure:	Not determined. Melting point is above 300 °C
Vapor pressure:	
Density at 20 °C (68 °F):	2.349 g/cm³ (19.60241 lbs/gal) (OECD 109)
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water at 20 °C (68 °F):	141.2 g/l (OECD 105) Very soluble.
Partition coefficient (n-octanol/water):	Not determined. Substance is inorganic
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
VOC content:	0.00 %
Solids content:	100.0 %
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.

Trade name: Lithium tetraborate Claisse Flux

Chemical stability

Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid Avoid all sources of ignition: heat, sparks, open flames.

Incompatible materials:
Avoid strong acids and bases.
Oxidizing agents.
Reducing agents.

Hazardous decomposition products:
Formation of toxic gases (fumes) is possible during heating or in case fire.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:		
12007-60-2 dilithium tetraborate		
Oral	LD50	500 mg/kg (Rat) (OECD 423)
Dermal	LD50	>2,000 mg/kg (Rat) (OECD 402)

Primary irritant effect:
on the skin:
Not corrosive (OECD 431)
Non irritant (OECD 439)
on the eye:
Strong irritant with the danger of severe eye injury.
(OECD 405)

Sensitization:
No sensitizing effects known.
Read-across with analogous substances.
Other information (about experimental toxicology):
Toxicokinetics, metabolism and distribution
Bioaccumulation potential: no bioaccumulation potential
Absorption rate - oral (%): 100
Absorption rate - dermal (%): 0.5
Absorption rate - inhalation (%): 100

Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer)
Substance is not listed.

NTP (National Toxicology Program)
Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)
Substance is not listed.

Germ cell mutagenicity Negative (OECD 473, 490)
Reproductive toxicity
Repr.2
NOAEL(fertility) (oral) 150 mg/kg bw/day (Rat) (OECD 422)
NOAEL(development) (oral) 50 mg/kg bw/day (Rat) (OECD 422)

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12 Ecological information

Toxicity

Aquatic toxicity:	
12007-60-2 dilithium tetraborate	
LC50/96h	>100 mg/L (Cyprinus Carpio) (OECD 203)
EC50/48h	>100 mg/L (Daphnia Magna) (OECD 202)
EC50/72h	>100 mg/L (Pseudokirchneriella Subcapitata) (OECD 201)
NOEC	32 mg/L (Pseudokirchneriella Subcapitata) (OECD 201)

Persistence and degradability No further relevant information available.

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information

General notes:
Water hazard class 1 (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal must be made in accordance with official regulations.
Do not allow product to reach sewage system.

Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

UN-Number
DOT, ADR, IMDG, IATA Not applicable.

UN proper shipping name
DOT, ADR, IMDG, IATA Not applicable.

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA
Class Not applicable.

Packing group
DOT, ADR, IMDG, IATA Not applicable.

Environmental hazards: Not applicable.

Special precautions for user Not applicable.

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Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
No further relevant information available.
Sara

Section 355 (extremely hazardous substances):
Substance is not listed.

Section 313 (Specific toxic chemical listings):
Substance is not listed.

Hazardous Air Pollutants
Substance is not listed.

Proposition 65

Chemicals known to cause cancer:
Substance is not listed.

Chemicals known to cause reproductive toxicity for females:
Substance is not listed.

Chemicals known to cause reproductive toxicity for males:
Substance is not listed.

Chemicals known to cause developmental toxicity:
Substance is not listed.

Carcinogenic categories

EPA (Environmental Protection Agency)
I (oral)

TLV (Threshold Limit Value)
Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
Substance is not listed.

GHS label elements
The substance is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms

GHS05 GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling:
dilithium tetraborate
Hazard statements
Harmful if swallowed.
Causes serious eye damage.
Suspected of damaging fertility or the unborn child.
Precautionary statements
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.

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Rinse mouth.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Contact: info@alpharesources.com
Date of preparation / last revision 03/08/2024

Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Acute Toxicity - Oral 4: Acute toxicity – Category 4
Eye Damage 1: Serious eye damage/eye irritation – Category 1
Toxic to Reproduction 2: Reproductive toxicity – Category 2