Printing date 11/09/2020 Reviewed on 11/09/2020

1 Identification

- · Product identifier
- · Product Name: LITHIUM TETRABORATE PURE (1KG)
- **Part Name:** FFB-1000-02
- · CAS Number: 12007-60-2
- · EC number: 234-514-3
- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: SPEX CertiPrep, LLC. 203 Norcross Ave, Metuchen, NJ 08840 USA
- · Information department: product safety department
- · Emergency telephone number:

Emergency Phone Number (24 hours)

CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

- · Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
- · GHS label elements Not Regulated
- · Hazard pictograms Not Regulated
- · Signal word Not Regulated
- · Hazard statements Not Regulated
- · Classification system:
- · NFPA ratings (scale 0 4)



· HMIS-ratings (scale 0 - 4)



- · Other hazards
- · Results of PBT and vPvB assessment
- · 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: No special measures required.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Generally the product does not irritate the skin.
- $\cdot \textit{After eye contact: } \textit{Rinse opened eye for several minutes under running water.} \\$
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.

(Contd. on page 2)

Printing date 11/09/2020 Reviewed on 11/09/2020

Product Name: LITHIUM TETRABORATE PURE (1KG)

(Contd. of page 1)

Indication of any immediate medical attention and special treatment needed No further relevant information available.

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: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up: Pick up mechanically.
- · 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

- · Handling:
- · Precautions for safe handling

No special measures required.

Follow good laboratory practices.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · 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.
- · Respiratory protection: Not required.
- · Protection of hands:

 $The \ glove \ material \ has \ to \ be \ impermeable \ and \ resistant \ to \ the \ product / \ the \ substance / \ the \ preparation.$

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.

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 3)

Printing date 11/09/2020 Reviewed on 11/09/2020

Product Name: LITHIUM TETRABORATE PURE (1KG)

(Contd. of page 2)

· 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: Not required.

9 Physical and chemical properti	es es			
· Information on basic physical and	chemical properties			
· General Information				
· Appearance:				
Form:	Solid			
Color: · Odor:	Not determined. Characteristic			
· Oaor: · Odour Threshold:	Not applicable.			
	**			
· pH-value:	Not applicable.			
· Change in condition				
Melting point/Melting range:	917 °C (1,682.6 °F)			
Boiling point/Boiling range:	Undetermined.			
· Flash point:	Not applicable.			
· Flammability (solid, gaseous):	Product is not flammable.			
· Decomposition temperature:	Not applicable.			
· Auto igniting:	Not determined.			
· Danger of explosion:	Product does not present an explosion hazard.			
· Explosion limits:				
Lower:	Not applicable.			
Upper:	Not applicable.			
· Vapor pressure:	Not applicable.			
· Density at 20 °C (68 °F)	0.34 g/cm³ (2.8373 lbs/gal)			
· Bulk density:	330 kg/m³			
· Relative density	Not applicable.			
· Vapor density	Not applicable.			
· Evaporation rate	Not applicable.			
· Solubility in / Miscibility with				
Water:	Soluble.			
· Partition coefficient (n-octanol/wa	ter): Not applicable.			
· 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.
- · 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 No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritating effect.

(Contd. on page 4)

Printing date 11/09/2020 Reviewed on 11/09/2020

Product Name: LITHIUM TETRABORATE PURE (1KG)

(Contd. of page 3)

- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The substance is not subject to classification.

- · 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.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · 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.

- · 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: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

	7.00		C	
14	Tranc	nort in	forma	tion
	I I WILLS	ווו עונעע	JUILLU	$\mu \nu \nu \mu \nu$

- · UN-Number
- · DOT, ADR, IMDG, IATA Not Regulated
- · UN proper shipping name
- · DOT, ADR, IMDG, IATA Not Regulated
- · Transport hazard class(es)
- · DOT, ADR, ADN, IMDG, IATA
- Not Regulated · Class
- · Packing group
- Not Regulated · DOT, ADR, IMDG, IATA
- · Environmental hazards: Not applicable.
- · Special precautions for user Not applicable.
- · Transport in bulk according to Annex II of MARPOL73/78 and the IBC
- Not applicable. Code
- · UN "Model Regulation": Not Regulated

Printing date 11/09/2020 Reviewed on 11/09/2020

Product Name: LITHIUM TETRABORATE PURE (1KG)

(Contd. of page 4)

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Section 313 (Specific toxic chemical listings):

Substance is not listed.

· TSCA (Toxic Substances Control Act):

ACTIVE

· 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 established by ACGIH)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

- · GHS label elements Not Regulated
- · Hazard pictograms Not Regulated
- · Signal word Not Regulated
- · Hazard statements Not Regulated
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

- · Department issuing SDS: product safety department
- · Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

- · Date of preparation / last revision 11/09/2020 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport 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

ACGIH: American Conference of Governmental Industrial Hygienists 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) PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit