

Safety Data Sheet (SDS)

According to Commission Regulation (EU) No 453/2010

Printing date 23.03.2012

Version number 1

Revision date 23.03.2012

1 SECTION 1: Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier

· **Product name:** LiNbO₃

· **Synonyms:** Lithium niobium trioxide

· **CAS number:**

12031-63-9

· **EC number:**

234-755-4

· **Registration number:** No registration number is given yet for this product.

· 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Used as SAW device.

Uses advised against: No information available.

· 1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**

HangZhou FreqControl Electronic Technology Ltd

Address: #1106.Crystal International Business Center (CIBC), No 198 Wu xing Rd,Qianjiang new city HangZhou, P.R.China Postcode: 310006

E-mail: sales@cqtgroup.com

Tel: +86-571-85803723

Fax: +86-571-85803724

· **1.4 Emergency telephone number** +86-571-85803723

2 SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· **Classification according to Regulation (EC) No 1272/2008 [CLP]**

The product is not classified as dangerous.

· **Classification according to Directive 67/548/EEC [DSD] or Directive 1999/45/EC [DPD]**

The product is not classified as dangerous.

· 2.2 Label elements

· **Labelling according to Regulation (EC) No 1272/2008 [CLP]** Void

· **Hazard pictogram(s):** Void

· **Signal word:** Void

· **Hazard statement(s):** Void

· **2.3 Other hazards** No information available.

· **Results of PBT and vPvB assessment:**

· **PBT:** Not applicable.

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· **vPvB:** Not applicable.

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3 SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterization: Substances**

· **Description:**

12031-63-9 Lithium niobium trioxide 99.995%

· **Other identification number of ingredients:**

· **EC number:** 234-755-4

4 SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:** In all cases of doubt, seek medical attention.

· **Following inhalation:**

Inhalation is unlikely under normal conditions. If inhaled dusts or fumes, remove the victim to fresh air.

· **Following skin contact:** Generally the product does not irritate the skin. Get medical attention if irritation persists.

· **Following eye contact:** Flush well with running water. Get medical attention if irritation persists.

· **Following ingestion:** Ingestion is unlikely under normal conditions. If ingested, seek medical attention.

· **Information for doctor:** Treat symptomatically and supportively.

· **4.2 Most important symptoms and effects, both acute and delayed** No information available.

· **4.3 Indication of any immediate medical attention and special treatment needed** No information available.

5 SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

According to the fire environment, select the appropriate fire extinguishing agent.

· **Unsuitable extinguishing agents:** No information available.

· **5.2 Special hazards arising from the substance or mixture**

Can be released in case of fire: Metal oxide.

· **5.3 Advice for firefighters**

· **Protective equipment:** Wear self-contained respiratory protective device.

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6 SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Refer to Section 8 for personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid breathing dust.

· 6.2 Environmental precautions

Do not allow material to be released to the environment.

· 6.3 Methods and material for containment and cleaning up

Pick up mechanically. Sweep up and shovel. Keep in suitable, closed containers for disposal.

· 6.4 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.

7 SECTION 7: Handling and storage

· 7.1 Handling

· Precautions for safe handling:

Provision of ventilation in the working area. Washing facility at the workplace required. Do not leave container open. Use leak-proof equipment with exhaust for refilling or transfer. Avoid spillage. Fill only into labelled container. Avoid rising dust.

· Information about fire - and explosion protection:

The product is not flammable.

· 7.2 Conditions for safe storage, including any incompatibilities

Store in cool, dry and well-ventilated place. Store away from incompatible materials.

· 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 SECTION 8: Exposure controls/personal protection

· Information about design of technical facilities:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

Not required.

· DNELs No information available.

· PNECs No information available.

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· 8.2 Exposure controls

· Appropriate engineering controls:

· General protective and hygienic measures:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

· **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.

· **Skin protection:** Wear appropriate gloves to prevent skin exposure.

· **Eye and face protection:** Safety glasses

· **Body protection:** Protective work clothing

· **Environmental exposure controls:** Prevent further leakage or spillage if safe to do so.

9 SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information:

· Appearance:	Solid
· Colour:	White
· Odour:	Odourless
· pH-value:	Not applicable.
· Melting point/Melting range:	1253°C
· Boiling point/Boiling range:	Not determined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Auto-Ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Vapour pressure:	Not applicable.
· Density:	4.464 kg/m ³
· Vapour density:	Not applicable.

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· **Solubility in/Miscibility with:**

Water: Insoluble.

· **Partition coefficient (n-octanol/water):** Inorganic material not expected to be soluble in octanol.

· **9.2 Additional information** No further relevant information available.

10 SECTION 10: Stability and reactivity

· **10.1 Reactivity** Stable under recommended storage and handling conditions (see section 7, handling and storage).

· **10.2 Chemical stability** Stable under normal conditions of use, storage and transport.

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

· **10.3 Possibility of hazardous reactions**

No dangerous reactions known.

· **10.4 Conditions to avoid** Incompatible materials.

· **10.5 Incompatible materials** No information available

· **10.6 Hazardous decomposition products** Metal oxide

11 SECTION 11: Toxicological information

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

12031-63-9 Lithium niobium trioxide(LiNbO₃)

Oral	LD50	>8000 mg/kg (rat)
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· **Skin corrosion/irritation:** No irritant effect.

· **Serious eye damage/irritation:** No irritating effect.

· **Respiratory or skin sensitization:** No sensitizing effects known.

· **Specific target organ system toxicity:** No information available.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):** No information available.

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12 SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

No further relevant information available.

· 12.2 Persistence and degradability

No further relevant information available.

· 12.3 Bioaccumulative potential

No further relevant information available.

· 12.4 Mobility in soil

No further relevant information available.

· 12.5 Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· 12.6 Other adverse effects

No information available.

13 SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

If there is no way of recycling it must be disposed of in compliance with the respective national and local regulations.

14 SECTION 14: Transport information

· 14.1 Land transport

· **ADR/RID class:** -

Not regulated.

· **UN-Number:** Not applicable.

· 14.2 Maritime transport

· **IMDG Class:** Not regulated.

· **UN Number:** Not applicable.

· **Marine pollutant:** No

· 14.3 Air transport

· **ICAO/IATA Class:** Not regulated.

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· **UN/ID Number:** Not applicable.

· **14.4 Environmental hazards:** Not applicable.

· **14.5 Special precautions for user:** Not applicable.

· **14.6 Transport/Additional information:** Not dangerous according to the above specifications.

15 SECTION 15: Regulatory information

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

EU Regulation:

Authorisations: No information available.

Restrictions on use: No information available.

EINECS: CAS#12031-63-9 is listed in.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 SECTION 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.

· **Relevant phrases:** Not applicable.

· **Training hints:** Provide adequate information, instruction and training for operators.

· **Department issuing SDS:** Centre Testing International

· **Contact us:** REACH@cti-cert.com

· **Date issuing SDS:** March 23, 2012

· **Sources:**

ESIS Dataset: European chemical Substances Information System.

Provided by company