

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION


Product name : Lithium Cobalt(II) Phosphate
Product code : LM4630
Company : Stanford Advanced Materials
Address : 23661 Birtcher Dr. Lake Forest, CA 92630 USA
Telephone : (949) 407-8904
E-mail : sales@samaterials.com
Recommended use : For laboratory research purposes.
Restrictions on use : Not for drug or household use.
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:
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2. HAZARDS IDENTIFICATION

GHS classification of chemical product

Carcinogenicity : Category 2

GHS label elements

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : Suspected of causing cancer.

Precautionary Statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF exposed or concerned: Get medical advice/ attention.
Storage:
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Components

Chemical name	CAS RN	Concentration (% w/w)	ENCS/ISHL number
Lithium Cobalt(II) Phosphate	13824-63-0	>= 99.5 - <= 100	-

4. FIRST AID MEASURES

If inhaled	:	Remove person to fresh air and keep comfortable for breathing. Get medical advice/ attention.
In case of skin contact	:	Take off all contaminated clothing immediately. If on skin, rinse well with water. Get medical advice/ attention.
In case of eye contact	:	Rinse with plenty of water. If easy to do, remove contact lens, if worn. Get medical advice/ attention.
If swallowed	:	Get medical advice/ attention. Rinse mouth.
Most important symptoms and effects, both acute and delayed	:	None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Dry powder, Foam, Water spray, Carbon dioxide (CO2)
Specific hazards during fire fighting	:	No information available.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Remove undamaged containers from fire area if it is safe to do so.
Special protective equipment for fire-fighters	:	Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Wear suitable protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions	:	Prevent product from entering drains.
Methods and materials for containment and cleaning up	:	Pick up and arrange disposal without creating dust.

7. HANDLING AND STORAGE

Handling

Technical measures	:	Prevent dispersion of dust.
Local/Total ventilation	:	Ensure adequate ventilation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Use a local exhaust ventilation.
Advice on safe handling	:	Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Wash hands and face thoroughly after handling.
Avoidance of contact	:	Oxidizing agents

Storage

Conditions for safe storage	:	Keep container tightly closed. Store in a cool and shaded area. Protect from moisture. Keep under inert gas.
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Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Threshold limit value and permissible exposure limits for each component in the work environment

Components	CAS RN	Value type (Form of exposure)	Control parameters / Concentration standard / Permissible concentration	Basis
Lithium Cobalt(II) Phosphate	13824-63-0	ACL	0.02 mg/m ³ (Cobalt)	JP OEL ISHL
		OEL-M	0.05 mg/m ³ (Cobalt)	JP OEL JSOH
	Further information: Sensitizing evaluation does not necessarily apply to all individual chemicals within the group, Carcinogenic evaluation does not necessarily apply to all individual chemicals within the group, Airway sensitizing agent; Group 1 substances which induce allergic reactions in humans, Skin sensitizing agent; Group 1 substances which induce allergic reactions in humans, Group 2B: possibly carcinogenic to humans			
		TWA	0.02 mg/m ³ (Cobalt)	ACGIH

Engineering measures : Install a closed system or local exhaust.
Also install safety shower and eye bath.

Personal protective equipment

Respiratory protection : Dustproof gas mask
Self-contained breathing apparatus

Hand protection : Impervious gloves

Eye protection : Safety glasses
Safety goggles
Face-shield

Skin and body protection : Impervious protective clothing

*Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : solid

Color : violet

Odor : No data available

Odor Threshold : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flammability : No data available

Lower explosion limit and upper explosion limit / flammability limit

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Flash point	:	No data available
Decomposition temperature	:	No data available
pH	:	No data available
Autoignition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water (log value)	:	No data available
Vapor pressure	:	No data available
Relative density	:	No data available
Relative vapor density	:	No data available
Molecular weight	:	160.84 g/mol

10. STABILITY AND REACTIVITY

Reactivity	:	No data available
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	None under normal processing.
Conditions to avoid	:	Exposure to moisture.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	Oxides of phosphorus, Metal oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity	:	No information available.
Skin corrosion/irritation	:	No information available.
Serious eye damage/eye irritation	:	No information available.
Respiratory or skin sensitization	:	No information available.
Germ cell mutagenicity	:	No information available.

Carcinogenicity

Product:

Carcinogenicity - Assessment	:	Suspected human carcinogens
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Components:**Lithium Cobalt(II) Phosphate:**

Carcinogenicity - Assessment	:	Suspected human carcinogens
Reproductive toxicity	:	No information available.
STOT-single exposure	:	No information available.
STOT-repeated exposure	:	No information available.
Repeated dose toxicity	:	No information available.
Aspiration toxicity	:	No information available.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Hazardous to the ozone layer

Not applicable

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues	:	Disposal in accordance with local and national regulations. Entrust disposal to a licensed waste disposal company.
Contaminated packaging	:	Disposal in accordance with local and national regulations. Before disposal of used container, remove contents completely.

14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

UN/ID No.	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable

IMDG-Code

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
EmS Code	:	Not applicable

15. REGULATORY INFORMATION

Related Regulations

Fire Service Law

Not applicable

Chemical Substance Control Law

Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.

Industrial Safety and Health Law

Harmful Substances Prohibited from Manufacture

Not applicable

Harmful Substances Required Permission for Manufacture

Not applicable

Substances Prevented From Impairment of Health

Not applicable

Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity

Not applicable

Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity

Not applicable

Substances Subject to be Notified Names

Article 57-2 (Enforcement Order Table 9)

Chemical name	Concentration (%)	Remarks
Cobalt and its compounds	$\geq 99.5 - \leq 100$	-

Substances Subject to be Indicated Names

Article 57 (Enforcement Order Article 18)

Chemical name	Remarks
Cobalt and its compounds	-

Skin and Eye Damage Substances for PPE Requirements (ISHL MO Art. 594-2)

Chemical name
Cobalt and its compounds

Carcinogenic Substances (Article 577-2 of the Occupational Health and Safety Regulations)

Not applicable

Ordinance on Prevention of Hazards Due to Specified Chemical Substances - Group 2 Substance

Chemical name
Cobalt and its inorganic compounds

Ordinance on Prevention of Lead Poisoning

Not applicable

Ordinance on Prevention of Tetraalkyl Lead Poisoning

Not applicable

Ordinance on Prevention of Organic Solvent Poisoning

Not applicable

Poisonous and Deleterious Substances Control Law

Not applicable

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Class I Designated Chemical Substances

Chemical name	Administration number	Concentration (%)
Cobalt compounds / Cobalt	132	100

Narcotics and Psychotropics Control Act

Not applicable

Law on the Prohibition of Chemical Weapons and the Regulation of Specific Chemicals

Not applicable

16. OTHER INFORMATION

In this SDS, if the concentration of substances subject to notification under the Industrial Safety and Health Law is indicated as a range, it includes cases where it is a trade secret.

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This SDS was prepared sincerely based on the information obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling operations, sufficient care should be taken, in addition to the safety measures suitable for the given situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.