



# SAFETY DATA SHEET

**MATERION**

Version #: 03

Issue date: 09-June-2017

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Supersedes date: 11-January-2018

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

Registration number	-
Synonyms	Lithium nitride (Li <sub>3</sub> N) * Trilithium nitride
Materion Code	1MT
1.1. Product identifier	
Name of the substance	Lithium Nitride (Li <sub>3</sub> N)
Identification number	247-475-2 (EC number)
1.2. Relevant identified uses of the substance or mixture and uses advised against	
Identified uses	Not available.
Uses advised against	None known.
1.3. Details of the supplier of the safety data sheet	
Supplier	
Company name	Materion Electronic Materials
Address	6070 Parkland Blvd Mayfield Heights, OH 44124 United States
Division	
Telephone	1.216.383.4019
e-mail	Materion-PS@materion.com
Contact person	Product Stewardship Director
1.4. Emergency telephone number	
Document number	1MT

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Regulation (EC) No 1272/2008 as amended

##### Physical hazards

Substances and mixtures which, in contact with water, emit flammable gases Category 1

H260 - In contact with water releases flammable gases which may ignite spontaneously.

### 2.2. Label elements

#### Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Lithium nitride

##### Hazard pictograms



Signal word Danger

##### Hazard statements

H260 In contact with water releases flammable gases which may ignite spontaneously.

#### Precautionary statements

##### Prevention

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P223 Do not allow contact with water.

P223	Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P231 + P232	Handle under inert gas. Protect from moisture.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

#### Response

P302 + P352	If skin irritation occurs, seek medical advice/attention.
P363	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	Wash contaminated clothing before reuse.
P308 + P313	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
	IF exposed or concerned: Get medical advice/attention.

#### Storage

P402 + P404	Store away from incompatible materials.
	Store in a dry place. Store in a closed container.

#### Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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#### Supplemental label information

EUH014 - Reacts violently with water.

**2.3. Other hazards** None known.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

##### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Lithium nitride	100	26134-62-3 247-475-2	-	-	
<b>Classification:</b> Water-React. 1;H260					

#### List of abbreviations and symbols that may be used above

DSD: Directive 67/548/EEC.  
 CLP: Regulation No. 1272/2008.  
 M: M-factor  
 vPvB: very persistent and very bioaccumulative substance.  
 PBT: persistent, bioaccumulative and toxic substance.  
 #: This substance has been assigned Community workplace exposure limit(s).  
 \*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

**Composition comments** The full text for all R- and H-phrases is displayed in section 16.

### SECTION 4: First aid measures

**General information** If you feel unwell, seek medical advice (show the label where possible).

#### 4.1. Description of first aid measures

<b>Inhalation</b>	Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Get medical attention if irritation develops and persists.
<b>Ingestion</b>	If ingestion of a large amount does occur, call a poison control centre immediately.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	Direct contact with eyes may cause temporary irritation.

**4.3. Indication of any immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically.

### SECTION 5: Firefighting measures

**General fire hazards** In contact with water releases flammable gases which may ignite spontaneously.

#### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Dry powder.
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<b>Unsuitable extinguishing media</b>	Water. Do not use a solid water stream as it may scatter and spread fire.
<b>5.2. Special hazards arising from the substance or mixture</b>	Water reactive material. In contact with water releases flammable gases which may ignite spontaneously.
<b>5.3. Advice for firefighters</b>	
<b>Special protective equipment for firefighters</b>	Wear suitable protective equipment.
<b>Special firefighting procedures</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	Wear appropriate personal protective equipment.
<b>For emergency responders</b>	Keep unnecessary personnel away.

<b>6.2. Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
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<b>6.3. Methods and material for containment and cleaning up</b>	Do not get water on spilled substance or inside containers. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimise spreading or contact with rain.
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<b>6.4. Reference to other sections</b>	For personal protection, see section 8 of the SDS.
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## SECTION 7: Handling and storage

<b>7.1. Precautions for safe handling</b>	Keep away from any possible contact with water, because of violent reaction and possible flash fire. Handle under inert gas. All equipment used when handling the product must be grounded. Provide adequate ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
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<b>7.2. Conditions for safe storage, including any incompatibilities</b>	Keep away from heat and sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a dry place. Never allow product to get in contact with water during storage. Store in a building without sprinklers.
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<b>7.3. Specific end use(s)</b>	Not available.
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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

**Sweden. OELs (Annex 1). Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1), as amended**

Material	Type	Value	Form
Lithium nitride (CAS 26134-62-3)	Ceiling	0,02 mg/m <sup>3</sup>	Inhalable dust.

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
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<b>Recommended monitoring procedures</b>	Follow standard monitoring procedures.
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<b>Derived no effect levels (DNELs)</b>	Not available.
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<b>Predicted no effect concentrations (PNECs)</b>	Not available.
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### 8.2. Exposure controls

<b>Appropriate engineering controls</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide adequate general and local exhaust ventilation.
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## Individual protection measures, such as personal protective equipment

<b>General information</b>	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
- <b>Hand protection</b>	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
- <b>Other</b>	Wear suitable protective clothing. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
<b>Respiratory protection</b>	Wear positive pressure self-contained breathing apparatus (SCBA).
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>Hygiene measures</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
<b>Environmental exposure controls</b>	Environmental manager must be informed of all major releases.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Colour</b>	Red brown.
<b>Odour</b>	Not available.
<b>Melting point/freezing point</b>	> 840 - < 850 °C (> 1544 - < 1562 °F)
<b>Boiling point or initial boiling point and boiling range</b>	Not available.
<b>Flammability</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
Explosive limit - lower (%)	Not available.
Explosive limit – upper (%)	Not available.
<b>Flash point</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>pH</b>	Not available.
<b>Kinematic viscosity</b>	Not available.
<b>Solubility</b>	
Solubility (water)	Not available.
<b>Partition coefficient (n-octanol/water) (log value)</b>	Not available.
<b>Vapour pressure</b>	<0,0000001 kPa (25 °C (77 °F))
<b>Density and/or relative density</b>	
Density	1,30 g/cm <sup>3</sup> estimated
<b>Vapour density</b>	Not available.
<b>Particle characteristics</b>	Not available.

### 9.2. Other information

**9.2.1. Information with regard to physical hazard classes** No relevant additional information available.

### 9.2.2. Other safety characteristics

<b>Molecular formula</b>	Li <sub>3</sub> N
<b>Molecular weight</b>	36,84 g/mol
<b>Specific gravity</b>	1,3 gm/cc

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	In contact with water releases flammable gases. None known.
<b>10.2. Chemical stability</b>	Material reacts with water. Instability caused by excessive moisture.
<b>10.3. Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>10.4. Conditions to avoid</b>	Exposure to moisture. Contact with water liberates flammable gas. Exposure to water vapour. Contact with incompatible materials.
<b>10.5. Incompatible materials</b>	Reacts violently with water. None known.
<b>10.6. Hazardous decomposition products</b>	Ammonia. Nitrogen oxides (NOx). May include oxides of carbon or silicon .

## SECTION 11: Toxicological information

<b>General information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
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### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	Due to lack of data the classification is not possible.
<b>Eye contact</b>	Due to lack of data the classification is not possible.
<b>Ingestion</b>	Due to lack of data the classification is not possible.

<b>Symptoms</b>	Exposure may cause temporary irritation, redness, or discomfort.
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### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

<b>Acute toxicity</b>	No data available.
<b>Skin corrosion/irritation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Serious eye damage/eye irritation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Respiratory sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Skin sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Germ cell mutagenicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Reproductive toxicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - single exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - repeated exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Aspiration hazard</b>	Due to partial or complete lack of data the classification is not possible.
<b>Mixture versus substance information</b>	No information available.

### 11.2. Information on other hazards

<b>Endocrine disrupting properties</b>	Not available.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>12.2. Persistence and degradability</b>	No data is available on the degradability of this product.
<b>12.3. Bioaccumulative potential</b>	No data available.
<b>Partition coefficient n-octanol/water (log Kow)</b>	Not available.
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>12.4. Mobility in soil</b>	No data available.
<b>12.5. Results of PBT and vPvB assessment</b>	Not a PBT or vPvB substance or mixture.
<b>12.6. Endocrine disrupting properties</b>	Not available.

**12.7. Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Residual waste</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Avoid discharge into water courses or onto the ground.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>EU waste code</b>	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company. The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Disposal methods/information</b>	Consult authorities before disposal. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Special precautions</b>	Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

### ADR

<b>14.1. UN number</b>	UN2806
<b>14.2. UN proper shipping name</b>	LITHIUM NITRIDE
<b>14.3. Transport hazard class(es)</b>	
Class	4.3
Subsidiary risk	-
Label(s)	4.3
Hazard No. (ADR)	Not assigned.
Tunnel restriction code	E
<b>14.4. Packing group</b>	I
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Not assigned.

### RID

<b>14.1. UN number</b>	UN2806
<b>14.2. UN proper shipping name</b>	LITHIUM NITRIDE
<b>14.3. Transport hazard class(es)</b>	
Class	4.3
Subsidiary risk	-
Label(s)	4.3
<b>14.4. Packing group</b>	I
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Not assigned.

### ADN

<b>14.1. UN number</b>	UN2806
<b>14.2. UN proper shipping name</b>	LITHIUM NITRIDE
<b>14.3. Transport hazard class(es)</b>	
Class	4.3
Subsidiary risk	-
Label(s)	4.3
<b>14.4. Packing group</b>	I
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Not assigned.

### IATA

<b>14.1. UN number</b>	UN2806
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**14.2. UN proper shipping name** Lithium nitride

**14.3. Transport hazard class(es)**

**Class** 4.3

**Subsidiary risk** -

**14.4. Packing group** I

**14.5. Environmental hazards** No.

**ERG Code** 4W

**14.6. Special precautions for user** Not assigned.

**Other information**

**Passenger and cargo aircraft** Forbidden

**Cargo aircraft only** Forbidden

**IMDG**

**14.1. UN number** UN2806

**14.2. UN proper shipping name** LITHIUM NITRIDE

**14.3. Transport hazard class(es)**

**Class** 4.3

**Subsidiary risk** -

**14.4. Packing group** I

**14.5. Environmental hazards**

**Marine pollutant** No.

**EmS** F-A, S-O

**14.6. Special precautions for user** Not assigned.

**ADN; ADR; IATA; IMDG; RID**



## SECTION 15: Regulatory information

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

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**  
Not listed.

**Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended**  
Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**  
Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**  
Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**  
Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**  
Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**  
Not listed.

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**  
Not listed.

## Authorisations

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

## Restrictions on use

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended - Conditions of restriction given for the associated entry number should be considered**

Not listed.

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.**

Not listed.

**Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex I, as amended**

Not listed.

**Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex II, as amended**

Not listed.

## Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws  
This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

## National regulations

Follow national regulation for work with chemical agents.

## France regulations

**France INRS Table of Occupational Diseases**

Not regulated.

## 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

### List of abbreviations

Not available.

### References

ACGIH  
EPA: AQUIRE database  
NLM: Hazardous Substances Data Base  
US. IARC Monographs on Occupational Exposures to Chemical Agents

### Information on evaluation method leading to the classification of mixture

Not applicable.

### Full text of any statements, which are not written out in full under sections 2 to 15

H260 In contact with water releases flammable gases which may ignite spontaneously.

### Revision information

SECTION 2: Hazards identification: Response  
SECTION 10: Stability and reactivity: 10,6. Hazardous decomposition products  
SECTION 16: Other information: Further information

### Training information

Follow training instructions when handling this material.

### Further information

Transportation Emergency  
Call Chemtrec at:  
US: 800.424.9300  
International: 703.741.5970  
Spain: 900.868.538  
Switzerland: 0800.564.402  
Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059  
South Korea Toll-free Number – 080-880-0468

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