


**1. Chemical product and company identification**

A. Product name	SISPA 10 w% 3N 300 x 108 x 25mm (Nut) Mono
Other means of identification	
SDS number	G27
B. Recommended use and Limitations on use	
Recommended use	Industrial uses: Uses of substances as such or in preparations at industrial sites
Limitations on use	Consumer uses: Private households (= general public = consumers)
C. Supplier information	
Company name	Materion Electronic Materials
Address	6070 Parkland Boulevard Mayfield Heights Ohio 44124 United States
Telephone	1.216.383.4019
Email	Materion-PS@materion.com
Contact person	Product Stewardship Director
Emergency telephone number	See Section 16.
Importer	
Company name	See above.
Contact person	Product Stewardship Director

2. Hazards identification

A. Hazard category/Classification		
Physical hazards	Not classified.	
Health hazards	Specific target organ toxicity, repeated exposure	Category 1 (Lung)
Environmental hazards	Not classified.	
B. Warning label items including precautionary statement		
• Pictogram		
• Signal word	Danger	
• Hazard statement		
H372	Causes damage to organs (Lung) through prolonged or repeated exposure.	
• Precautionary statement		
Prevention		
P260	Observe good industrial hygiene practices.	
P264	Do not breathe dust/fume/gas/mist/vapors/spray.	
P270	Wash thoroughly after handling.	
P270	Do not eat, drink or smoke when using this product.	
Response		
P314	Wash hands after handling.	
P314	Get medical advice/attention if you feel unwell.	
Storage	Store away from incompatible materials.	
Disposal		
P501	Dispose of waste and residues in accordance with local authority requirements.	
P501	Dispose of contents/container according to waste-related laws.	

C. Other hazards not included in the hazard category criteria (e.g. dust explosion hazard) None known.

Supplemental information For further information, please contact the Product Stewardship Department at +1.216.383.4019.

3. Composition/information on ingredients

Chemical identity	Common and alternative names	CAS number	ID number	Content in percent (%)
Silicon		7440-21-3	KE-31029	80 - 90
Aluminum		7429-90-5	KE-00881	10 - 20

4. First aid measures

A. In case of eye contact	Get medical attention if irritation develops and persists. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally.
B. In case of skin contact	Wash off immediately with plenty of water. Get medical attention if irritation develops and persists.
C. In case of inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
D. In case of swallowing	Drink plenty of water.
E. Note to physician	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
Most important symptoms/effects, acute and delayed	None known.
General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

A. Suitable (and unsuitable) extinguishing media	
Suitable extinguishing media	Powder. Dry sand. Dry chemical or CO2.
Unsuitable extinguishing media	Water. Do not use water jet as an extinguisher, as this will spread the fire.
B. Specific hazards arising from the chemical (example: hazardous combustion products)	This product is not flammable.
C. Specific methods of fire-fighting	
Special protective equipment for firefighters	Wear suitable protective equipment.
Special fire fighting procedures	Move containers from fire area if you can do so without risk.
General fire hazards	No unusual fire or explosion hazards noted.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency measures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS. In solid form this material poses no special clean-up problems.
B. Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Collect spillage.
C. Methods and materials for containment and cleaning up	Pick up and arrange disposal without creating dust. The product is immiscible with water and will spread on the water surface. Clean up in accordance with all applicable regulations. Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the MSDS. The product is insoluble in water.

7. Handling and storage

- A. Precautions for safe handling** Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
- B. Conditions for safe storage (including any incompatibilities)** Store in tightly closed container. Store in a dry place. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure controls/personal protection

A. Exposure limit values, biological limit values, etc

Korea. Exposure Limits for Chemicals and Physical Agents, Occupational Safety and Health Act "K-OSHA" Article 106

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m3	Fume.
		2 mg/m3	
		10 mg/m3	
Silicon (CAS 7440-21-3)	TWA	10 mg/m3	Dust.

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.

Biological limit values

No biological exposure limits noted for the ingredient(s).

B. Appropriate engineering controls

Good general ventilation 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.

C. Personal protective equipment

- **Respiratory protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- **Eye protection** If contact is likely, safety glasses with side shields are recommended.
- **Hand protection** Wear protective gloves.
- **Body protection** Wear suitable protective equipment.

Hygiene measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. 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.

9. Physical and chemical properties

A. Appearance

- Physical state** Solid.
- Form** Solid.
- Color** Dark grey.

B. Odor

None.

C. Odor threshold

Not applicable.

D. pH

Not applicable.

E. Melting point/freezing point

- Melting point** 1220 °F (660 °C) estimated
- Freezing point** Not applicable.

F. Boiling point, initial boiling point, and boiling range

Not applicable.

G. Flash point

Not applicable.

H. Evaporation rate

Not applicable.

I. Flammability (solid, gas)

None known.

J. Upper/lower limit on flammability or explosive limits

- Explosive limit - lower (%)** Not applicable.

	Not applicable.
Explosive limit - lower (%) temperature	Not applicable.
Explosive limit - upper (%)	Not applicable.
	Not applicable.
Explosive limit - upper (%) temperature	Not applicable.
K. Vapor pressure	Not applicable.
L. Solubility	
Solubility (water)	Insoluble.
M. Vapor density	Not applicable.
N. Specific gravity	Not applicable.
O. n-octanol/water partition coefficient	Not applicable.
P. Auto-ignition temperature	Not applicable.
Q. Decomposition temperature	Not applicable.
R. Viscosity	Not applicable.
S. Molecular weight	Not available.
Other data	
Density	2.40 g/cm3 estimated
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
A. Stability and hazardous reaction potential	
Stability	Material is stable under normal conditions.
Hazardous reaction potential	No dangerous reaction known under conditions of normal use.
B. Conditions to avoid (e.g. static discharge, shock or vibration, etc)	None under normal conditions.
C. Incompatible materials	None known.
D. Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

A. Information on likely routes of exposure	
• Respiratory organs	Not likely, due to the form of the product.
• Skin	Not relevant, due to the form of the product.
• Eyes	Not relevant, due to the form of the product.
• Mouth	Expected to be a low ingestion hazard.
B. Information on health hazards	
• Acute toxicity (list all possible routes of exposure)	Not known.

Components	Species	Test Results
Silicon (CAS 7440-21-3)		
<u>Acute</u>		
Oral		
LD50	Rat	3160 mg/kg

• Corrosivity or irritation to the skin	Not relevant, due to the form of the product.
• Serious eye damage/eye irritation	Not likely, due to the form of the product.
• Respiratory sensitization	Not a respiratory sensitizer.
• Skin sensitization	Not a skin sensitizer.
• Carcinogenic properties /Carcinogenicity	Not classifiable as to carcinogenicity to humans.
• Mutagenic properties /Mutagenicity	Not classified.
• Reproductive toxicity	Not classified.
• Specific target organ toxicity - single exposure	Not classified.
• Specific target organ toxicity - repeated exposure	May cause damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.
• Aspiration hazard	Not an aspiration hazard.

12. Ecological information

A. Ecotoxicity The product is not classified as environmentally hazardous.

Product	Species	Test Results
SISPA 10 w% 3N 300 x 108 x 25mm (Nut) Mono		
Aquatic		
<i>Acute</i>		
Fish	LC50	1.3 mg/l, 96 hours estimated
Components	Species	Test Results

Aluminum (CAS 7429-90-5)		
Aquatic		
<i>Acute</i>		
Fish	LC50	0.21 - 0.31 mg/l, 96 hours

Hazardous to the aquatic environment, acute hazard	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.
Hazardous to the aquatic environment, long-term hazard	Not expected to be harmful to aquatic organisms.

B. Persistence/degradability	No data is available on the degradability of any ingredients in the mixture.
C. Bioaccumulative potential	No data available.
D. Mobility in soil	The product is immiscible with water and will spread on the water surface.
E. 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.

13. Disposal considerations

A. Method of disposal	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container (in accordance with related regulations).
B. Disposal considerations (including disposal of contaminated containers or packaging)	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.
Waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

14. Transport information

National regulations

KSSTDG

A. UN number	Not regulated as dangerous goods.
B. UN proper shipping name	Not regulated as dangerous goods.
C. Transport hazard class(es)	
Class	Not assigned.
Subsidiary risk	-
D. Packing group	-
E. Environmental hazards	
Marine pollutant	No.
EmS	Not assigned.
F. Special precautions for user	Not assigned.

International regulations

IATA

A. UN number	Not regulated as dangerous goods.
B. UN proper shipping name	Not regulated as dangerous goods.
C. Transport hazard class(es)	
Class	Not assigned.
Subsidiary risk	-
D. Packing group	-
E. Environmental hazards	No.
F. Special precautions for user	Not assigned.

IMDG

A. UN number	Not regulated as dangerous goods.
B. UN proper shipping name	Not regulated as dangerous goods.
C. Transport hazard class(es)	
Class	Not assigned.
Subsidiary risk	-
D. Packing group	-
E. Environmental hazards	
Marine pollutant	No.
EmS	Not assigned.
F. Special precautions for user	Not assigned.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15. Regulatory information

A. Restrictions under the Industrial Safety and Health Law

Harmful Substances Prohibited from Manufacturing

Not regulated.

Harmful Substances Requiring Permission for Manufacture or Use

Not regulated.

Controlled Hazardous Substances

Aluminum (CAS 7429-90-5)

Harmful Substances Requiring Special Medical Examination

Aluminum (CAS 7429-90-5)

Mineral dusts (CAS 7440-21-3) Dust

Workplace Environmental Monitoring Harmful Materials

Aluminum (CAS 7429-90-5)

Mineral dusts (CAS 7440-21-3) Dust

Occupational Exposure Limit

Aluminum (CAS 7429-90-5)

Silicon (CAS 7440-21-3)

B. Restrictions under the Chemicals Control Law (Previously Toxic Chemicals Control Law)

Accidental Release Prevention Substances

Not regulated.

Act on the Registration and Evaluation of Chemicals

Banned Toxic Chemicals

Not regulated.

Designated Existing Chemicals Subject to Registration (PEC) (MoE No. 2015-92)

Not listed.

Restricted Chemical Substances

Not regulated.

Toxic Chemicals

Not regulated.

C. Restrictions under the Dangerous Substance Safety Management Act

D. Restrictions under the Wastes Control Act

Halogenated Materials in Waste Organic Solvents

Not regulated.

Hazardous Substances

Not regulated.

E. Restrictions under other foreign or domestic laws

Clean Air Conservation Act

Air Pollutants

Aluminum (CAS 7429-90-5)

Silicon (CAS 7440-21-3)

Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides (Rules on PIC, MoE No. 2014-252, Dec. 31, 2014; Standards for Pesticides, RDA No. 2014-26), as amended

Not listed.

Specific Air Pollutants

Not regulated.

Further information

This material safety data sheet was prepared in accordance with Ministry of Employment and Labor Notice No 2020-130.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Korea	Existing Chemicals List (ECL)	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

A. Source of information

ACGIH

EPA: AQUIRE database

Korea. Dangerous Substances Threshold Quantity (Presidential Decree of Dangerous Substances Safety Management Act No. 18406, Schedule 1)

Korea. Regulated volatile organic compounds (VOCs) (MOE Notice No. 2001-36, March 8, 2001, as amended)

NLM: Hazardous Substances Data Base

US. IARC Monographs on Occupational Exposures to Chemical Agents

Korea. GHS Labeling Requirements. Standards for Classification and Labeling of Chemical Substances and Material Safety Data Sheets (MSDS), as amended

Korea. KOSHA GHS Classifications List (Korea Occupational Safety & Health Agency)

Korea. NEMA GHS Classification List (National Emergency Management Agency GHS Guidance for Classification and Labeling for Dangerous Goods)

Toxic Release Inventory (TRI) Chemicals (MOE Public Notice No. 2002-166, Nov. 8, 2002), as amended

B. Issue date

10-18-2019

C. Number of revisions and date of most recent revision

09-10-2024 (03 revision)

D. Other	Revised information in Section 16.
Further information	<p>Transportation Emergency</p> <p>Call Chemtrec at:</p> <p>US: 800.424.9300</p> <p>International: 703.741.5970</p> <p>Spain: 900.868.538</p> <p>Switzerland: 0800.564.402</p> <p>Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059</p> <p>South Korea Toll-free Number – 080-880-0468</p>
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Revision information	This document has undergone significant changes and should be reviewed in its entirety.