



# PRODUCT INFORMATION SHEET

**MATERION**

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

### 1.1. Product identifier

<b>Trade name or designation of the mixture</b>	Silicon Targets Doped with Phosphorus
<b>Registration number</b>	-
<b>Document number</b>	G58
<b>Synonyms</b>	None.
<b>Issue date</b>	17-June-2019
<b>Version number</b>	03
<b>Revision date</b>	22-September-2021
<b>Supersedes date</b>	24-February-2021

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

<b>Identified uses</b>	Manufacture of computer, electronic and optical products, electrical equipment Scientific research and development Other: Manufacture of medical and defense equipment
<b>Uses advised against</b>	Professional uses: Public domain (administration, education, entertainment, services, craftsmen) Consumer uses: Private households (= general public = consumers)

### 1.3. Details of the supplier of the safety data sheet

#### Supplier

<b>Company name</b>	Materion Advanced Materials
<b>Address</b>	6070 Parkland Boulevard Mayfield Heights, OH 44124 United States
<b>Division</b>	
<b>Telephone</b>	1.216.383.4019
<b>e-mail</b>	ehs@materion.com
<b>Contact person</b>	Theodore Knudson

### 1.4. Emergency telephone number

See Section 16.

## 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

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

<b>Hazard summary</b>	The products are classified as articles and, as such, do not present a physical or health hazard in the present form. If the products are processed or handled in ways that generate particles (dust, fume, particles or powder) and/or chemical compounds, a potential health hazard could exist and risk management measures must be taken to minimize risk.
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### 2.2. Label elements

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

<b>Contains:</b>	Phosphorus (mixed), Silicon
<b>Hazard pictograms</b>	None.
<b>Signal word</b>	None.
<b>Hazard statements</b>	The material as sold in solid form is generally not considered hazardous. However, if the process involves grinding, melting, cutting or any other process that causes a release of dust or fumes, hazardous levels of airborne particulate could be generated.

#### Precautionary statements

<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Wash hands after handling.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.

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

**2.3. Other hazards** Not a PBT or vPvB substance or mixture.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Silicon	99 - 100	7440-21-3 231-130-8	-	-	
<b>Classification:</b> -					
Phosphorus (mixed)	0 - 0,3	Not applicable	-	-	
<b>Classification:</b> -					

### SECTION 4: First aid measures

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 4.1. Description of first aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.  
**Skin contact** Wash off immediately with plenty of water. Get medical attention if irritation develops and persists.  
**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if irritation develops and persists.

**Ingestion** Drink plenty of water.

**4.2. Most important symptoms and effects, both acute and delayed** None known.

**4.3. Indication of any immediate medical attention and special treatment needed** Treat symptomatically.

### SECTION 5: Firefighting measures

**General fire hazards** No unusual fire or explosion hazards noted.

#### 5.1. Extinguishing media

**Suitable extinguishing media** Powder. Dry sand. Dry chemical or CO<sub>2</sub>.

**Unsuitable extinguishing media** Water.

**5.2. Special hazards arising from the substance or mixture** This product is not flammable.

#### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Wear suitable protective equipment.

**Special firefighting procedures** Move containers from fire area if you can do so without risk.

**Specific methods** 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

**For non-emergency personnel** In solid form this material poses no special clean-up problems. For personal protection, see section 8 of the PIS.

**For emergency responders** Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the PIS.

**6.2. Environmental precautions** Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up** Clean up in accordance with all applicable regulations. Pick up and arrange disposal without creating dust.

**6.4. Reference to other sections** Not available.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment.

**7.2. Conditions for safe storage, including any incompatibilities** Store in a dry place.

**7.3. Specific end use(s)** Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

**Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09**

Components	Type	Value	Form
Silicon (CAS 7440-21-3)	MAC	4 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Total dust.

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no effect levels (DNELs)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

### 8.2. Exposure controls

#### Appropriate engineering controls

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.

#### Individual protection measures, such as personal protective equipment

**General information** Use personal protective equipment as required.

**Eye/face protection** If contact is likely, safety glasses with side shields are recommended.

#### Skin protection

**- Hand protection** Wear protective gloves.

**- Other** Wear suitable protective equipment.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** None known.

#### Hygiene measures

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.

#### Environmental exposure controls

Inform appropriate managerial or supervisory personnel of all environmental releases.

## SECTION 9: Physical and chemical properties

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

#### Appearance

**Physical state** Solid.

**Form** Solid.

**Colour** Grey.

**Odour** None.

**Odour threshold** Not applicable.

**pH** Not applicable.

**Melting point/freezing point** 1410 °C (2570 °F) estimated / Not applicable.

**Initial boiling point and boiling range** Not applicable.

<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	None known.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - lower (%) temperature</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Flammability limit - upper (%) temperature</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit - lower (%) temperature</b>	Not applicable.
<b>Explosive limit – upper (%)</b>	Not applicable.

<b>Explosive limit - upper (%) temperature</b>	Not applicable.
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<b>Vapour pressure</b>	Not applicable.
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<b>Vapour density</b>	Not applicable.
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<b>Relative density</b>	Not applicable.
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**Solubility(ies)**

<b>Solubility (water)</b>	Insoluble.
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<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
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<b>Auto-ignition temperature</b>	Not applicable.
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<b>Decomposition temperature</b>	Not applicable.
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<b>Viscosity</b>	Not applicable.
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<b>Explosive properties</b>	Not explosive.
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<b>Oxidising properties</b>	Not oxidising.
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## 9.2. Other information

<b>Density</b>	2,33 g/cm <sup>3</sup> estimated
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## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
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<b>10.2. Chemical stability</b>	Material is stable under normal conditions.
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<b>10.3. Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
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<b>10.4. Conditions to avoid</b>	Contact with incompatible materials.
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<b>10.5. Incompatible materials</b>	Chlorine. Fluorine.
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<b>10.6. Hazardous decomposition products</b>	No hazardous decomposition products are known.
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## 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>	Not likely, due to the form of the product.
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<b>Skin contact</b>	Not relevant, due to the form of the product.
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<b>Eye contact</b>	Not relevant, due to the form of the product.
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<b>Ingestion</b>	Expected to be a low ingestion hazard.
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<b>Symptoms</b>	None known.
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### 11.1. Information on toxicological effects

<b>Acute toxicity</b>	None known.
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<b>Skin corrosion/irritation</b>	Not relevant, due to the form of the product.
<b>Serious eye damage/eye irritation</b>	Not likely, due to the form of the product.
<b>Respiratory sensitisation</b>	Not a respiratory sensitizer.
<b>Skin sensitisation</b>	Not a skin sensitiser.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
<b>Reproductive toxicity</b>	Not classified.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Mixture versus substance information</b>	No information available.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	No toxicity data noted for the ingredient(s).
<b>12.2. Persistence and degradability</b>	
<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. Other adverse effects</b>	Not available.

## 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).
<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.
<b>Disposal methods/information</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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

14.1. - 14.6.: Not regulated as dangerous goods.

### RID

14.1. - 14.6.: Not regulated as dangerous goods.

### ADN

14.1. - 14.6.: Not regulated as dangerous goods.

### IATA

14.1. - 14.6.: Not regulated as dangerous goods.

### IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

## 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**

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.

#### Other EU regulations

**Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended**

Not listed.

#### Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended.

#### National regulations

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

#### List of abbreviations

Not available.

#### References

Not available.

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

The classification for health and environmental hazards is derived by a combination of calculator methods and test data, if available.

#### Training information

Follow training instructions when handling this material.

#### Further information

Transportation Emergency  
Call Chemtrec at:  
International: 703.741.5970  
Spain: 900.868.538  
Switzerland: 0800.564.402  
Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059

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