SAFETY DATA SHEET

According to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR 1910.1200

1. Identification of the substance or mixture and of the supplier

1.1 Product identifier:

Product name: BLUESIL ESA 7244 B **Product No.:** PRCO90028498

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

Identified uses: Used for making joints, sealing and gluing.
Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet:

Manufacturer:
Elkem Silicones France SAS
1-55 rue des Frères Perret
F-69192 SAINT FONS Cedex
FRANCE

Telephone: +33 (0) 4 72 73 74 75
Fax: +33 (0) 4 72 73 75 99

E-mail: fds.sil@elkem.com

Supplier:
Elkem Silicones USA Corp.
Two Tower Blvd, Suite 1802
08816-1100 East Brunswick, NJ
USA

Telephone: +1 (732) 227-2060
Fax: +1 (732) 249-7000

1.4 Emergency telephone number:

+1 (800) 424-9300 CHEMTREC

2. Hazard identification

2.1 Classification of the substance or mixture:

The product has been classified according to the legislation in force.

Hazard Classification:

Health Hazards:

Serious eye irritation	Category 2A	H319: Causes serious eye irritation.
Skin sensitizer	Category 1	H317: May cause an allergic skin reaction.

2.2 Label Elements:

Hazard pictograms:

Signal Word: Warning

Hazard statements: H319: Causes serious eye irritation.

H317: May cause an allergic skin reaction.

Precautionary Statements:

Prevention: P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response: P302+P350+P332+P313: IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. P305+P351+P337+P313: IF IN EYES: Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

2.3 Other hazards which do not result in GHS classification:

Chemical compounds containing silicon - hydrogen bonds (SiH). This product may generate hydrogen gas. For further information, refer to section 10: "Stability and Reactivity".

3. Composition/information on ingredients

Mixtures:

General information:
Mixture of Polyorganosiloxanes, fillers, additives.

Hazardous Component(s):

Chemical name	Concentration *	Type	CAS number	Classification
(1) Quartz	20 - <50%	Component	14808-60-7	Carc. 1A H350i; STOT RE 1 H372;
Trimethoxyvinylsilane	1 - <5%	Component	2768-02-7	Flam. Liq. 3 H226; Acute Tox. 4 H332; Skin Sens. 1B H317;
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	1 - <3%	Component	2530-83-8	Eye Dam. 1 H318;

(1) The respirable particle(s) listed above are inextricably bound within the polymer matrix, and therefore does not present an inhalation hazard during normal use of this product. Tooling or machining of the cured product (sanding, cutting, milling) may release hazardous, respirable substances.

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The full text for all H-statements is displayed in section 16.

4. First-aid measures

General information:
Show this Safety Data Sheet to the attending physician.

4.1 Description of first aid measures:

Inhalation:
In case of inhalation: Move person into fresh air and keep at rest. Get medical attention if symptoms occur.

Skin Contact:
Wash skin thoroughly with soap and water. Get medical attention if symptoms occur.

Eye contact:
In the event of contact with the eyes, rinse thoroughly with clean water for at least 15 minutes. Get medical attention if symptoms persist.

Ingestion:
Do not induce vomiting. Rinse mouth thoroughly with water. Do not give victim anything to drink if he is unconscious. Get medical attention immediately.

Personal Protection for First-aid Responders:
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). Refer to sections 5 and 8 for information on emergency procedures and protective equipment.

4.2 Most important symptoms and effects, both acute and delayed:

Any important symptoms and effects are described in Section 11 (Toxicological information) of this SDS.

4.3 Indication of any immediate medical attention and special treatment needed:

Notes to the physician:
No specific recommendations.

5. Fire-fighting measures

5.1 Extinguishing media:

Suitable extinguishing media:
Alcohol resistant foam. Carbon dioxide (CO2). Dry sand. Water spray.

Unsuitable extinguishing media:
Alkaline powders. Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture:

Product will burn under fire conditions. This product may generate hydrogen gas. Vapors may form explosive mixtures with air. Thermal decomposition or combustion may liberate carbon oxides, silicon oxides and other toxic gases or vapors.

5.3 Advice for firefighters:

Special fire-fighting procedures:
Use standard firefighting procedures and consider the hazards of other involved materials. Remove undamaged containers from fire area if it is safe to do so. Evacuate to a safe location and contact the emergency services. Water spray should be used to cool containers.

Special protective equipment for fire-fighters:
Firefighters should wear standard protective equipment and a positive pressure self-contained breathing apparatus (SCBA).

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Wear appropriate personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Keep away from Alkalis and caustic products. Eliminate all sources of ignition. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Wear appropriate personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Stop leak if possible without risk. DO NOT touch spilled material! Avoid contact with alkalis and caustic products.

6.2 Environmental Precautions:

Collect spillage. Prevent entry into waterways, sewer, basements or confined areas. Mechanically ventilate the spillage area to prevent the formation of explosive concentrations.
Spills may be reportable to the National Response Center (800-424-8802), and to state and/or local agencies.

6.3 Methods and material for containment and cleaning up:

Absorb with sand or other inert absorbent. Avoid contact with bases. Use clean non-sparking tools to collect absorbed material. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labeled container. Suitable containers: equipped with a degassing device.

6.4 Reference to other sections:

Caution: Contaminated surfaces may be slippery. For waste disposal, see section 13 of the SDS.

7. Handling and storage

7.1 Precautions for safe handling:

Precautions:
This product may generate hydrogen gas. Keep away from ignition source. Empty container after use should be stored in separate area, and be disposed after degassing completely. Handle and open container with care. Take precautionary measures against static discharges. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Avoid inhalation of vapors/aerosols/dusts and contact with skin and eyes. Use mechanical ventilation in case of handling which causes formation of vapors. If ventilation is insufficient, suitable respiratory protection must be provided. See Section 8 of the SDS for Personal Protective Equipment. Do not mix with incompatible materials. For further information, refer to section 10: "Stability and Reactivity". Take care to prevent spills, waste and minimize release to the environment. In case of spills, beware of slippery floors and surfaces. Contact Elkem Silicones for additional publications on the safe handling of SiH Product.

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.

7.2 Conditions for safe storage, including any incompatibilities:

Store in accordance with local/regional/national regulations. Avoid discharge into drains, water courses or onto the ground. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures. For further information, refer to section 10: "Stability and Reactivity". Store in original tightly closed container, equipped with a degassing device. Product may evolve minute quantities of flammable hydrogen gas which can accumulate. Adequately ventilate to maintain vapors well below flammability limits and exposure guidelines. Do not repackage. Clogged container vents may increase pressure build up. Keep in properly labelled containers. Protect against physical damage and/or friction.

7.3 Specific end use(s):

See the technical data sheet on this product for further information.

8. Exposure controls/personal protection

8.1 Control Parameters:

Occupational Exposure Limits:
When encapsulated in a polymer, are not expected to pose a health hazard when processed under normal conditions of use.

8.2 Exposure controls:

Appropriate Engineering Controls:
Provide adequate ventilation. In case of inadequate ventilation: Use process enclosures, local exhaust ventilation, or other engineering controls to control 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:

Avoid inhalation of vapors/aerosols/dusts and contact with skin and eyes. Personal protective equipment should be chosen according to applicable standards, adapted to the conditions of use of the product and in discussion with the supplier of the personal protective equipment.

Eye/face protection:	Wear safety glasses with side shields (or goggles).
Hand Protection:	Impervious Protective Gloves
Skin and Body Protection:	Wear suitable protective clothing.
Respiratory Protection:	If ventilation is insufficient, suitable respiratory protection must be provided.

Environmental Controls:
See sections 7 and 13 of the Safety Data Sheet.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	
Physical state:	Liquid
Form:	Viscous
Color:	Blue
Odor:	Slightly ethereal
pH:	By definition, pH measurement consists in the determination of hydrogen ions concentration in solution, generally aqueous. Silicones products are hydrophobic and therefore, not soluble in water. By consequence, it is not possible to measure the pH value.
Melting point/freezing point:	No data available.
Boiling Point:	No data available.
Flash Point:	140 °C / 284 °F (Closed cup according to method Afnor T 60103.)
Flammability:	No data available.
Flammability Limit - Upper (%):	74 %(V) Hydrogen.
Flammability Limit - Lower (%):	4 %(V) Hydrogen.
Vapor pressure:	No data available.
Relative vapor density:	No data available.
Evaporation Rate:	No data available.
Density:	Approximate 1.25 kg/dm3 (20 °C)
Solubility(ies):	
Solubility in Water:	Practically Insoluble
Solubility (other):	Acetone: Very slightly soluble Ethanol: Very slightly soluble Diethylether: Dispersible Aliphatic hydrocarbons: Dispersible Aromatic hydrocarbons: Dispersible Chlorinated solvents: Dispersible
Partition coefficient (n-octanol/water):	No data available.
Self Ignition Temperature:	500 °C Hydrogen.
Decomposition Temperature:	No data available.
Kinematic viscosity:	Approximate 36,000 mm2/s (25 °C)

9.2 Other information:

Dynamic viscosity:	Approximate 45,000 mPa.s (25 °C)
Oxidizing properties:	According to the data on the components Not considered as oxidizing. (evaluation by structure-activity relationship)
Particle Size:	Not applicable

10. Stability and reactivity

10.1 Reactivity:

No other information noted.

10.2 Chemical Stability:

Material is stable under normal conditions.

10.3 Possibility of hazardous reactions:

This product may generate hydrogen gas.

10.4 Conditions to avoid:

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible Materials:

A fire or explosion hazard arises because highly flammable gas (hydrogen) is released when this product is in contact with : Strong oxidizers, strong bases and chemical compounds with mobile hydrogen, in the presence of metal salts and complexes.

10.6 Hazardous Decomposition Products:

This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air. Thermal decomposition or combustion may liberate carbon oxides, other toxic gases or vapors and amorphous silica.
Quantity of hydrogen potentially released (l/kg of product): < 12

11. Toxicological information

11.1 Information on toxicological effects:

Acute toxicity:

Oral:
Not classified for acute toxicity based on available data.

Dermal:
Not classified for acute toxicity based on available data.

Inhalation:
Not classified for acute toxicity based on available data.

Repeated dose toxicity:

Based on our knowledge of the composition information:
TRIMETHOXYVINYLSILANE (*2768-02-7*):
NOAEL: < 62.5 mg/kg ; LOAEL: 62.5 mg/kg ; (Rat ; Female, Male ; Gavage (Oral)) ; Method: OECD 422 ; Subacute exposure.
NOAEL: 0.0605 mg/l ; (Rat ; Female, Male ; Inhalation - vapour) ; Subchronic exposure.

[3-(2,3-EPOXYPROPOXY)PROPYL] TRIMETHOXYSILANE (*2530-83-8*):

NOAEL: >= 1,000 mg/kg ; (Rat ; Oral) ; Method: OECD 407 ; Subacute exposure.
NOAEL: < 0.119 mg/l ; (Rat ; Inhalation) ; Method: OECD 412 ; Aerosol

Skin Corrosion/Irritation:

Based on our knowledge of the composition information:
TRIMETHOXYVINYLSILANE (*2768-02-7*):
Not irritating (Rabbit ; 24 h) ; Method: Occluded (Dermal)

[3-(2,3-EPOXYPROPOXY)PROPYL] TRIMETHOXYSILANE (*2530-83-8*):
Not irritating (Rabbit) ; Method: OECD 404

Serious Eye Damage/Eye Irritation:

Based on our knowledge of the composition information: Causes serious eye irritation.
TRIMETHOXYVINYLSILANE (*2768-02-7*):
Not irritating (Rabbit ; 24 h) ; Method: OECD 405

[3-(2,3-EPOXYPROPOXY)PROPYL] TRIMETHOXYSILANE (*2530-83-8*):
Causes serious eye damage. (Rabbit) ; Method: OECD 405

Respiratory or Skin Sensitization:

Based on our knowledge of the composition information: May cause an allergic skin reaction.
TRIMETHOXYVINYLSILANE (*2768-02-7*):
Skin sensitization: May cause an allergic skin reaction.

[3-(2,3-EPOXYPROPOXY)PROPYL] TRIMETHOXYSILANE (*2530-83-8*):
Skin sensitization: Not a skin sensitizer. (Guinea Pig) ; Method: OECD 406

Germ Cell Mutagenicity:

In vitro: Based on our knowledge of the composition information:
TRIMETHOXYVINYLSILANE (*2768-02-7*):
Bacterial reverse mutation test: negative (Salmonella typhimurium and Escherichia coli ; with and without metabolic activation) ; Method: OECD 471
Chromosomal aberration: positive (Chinese hamster lung cells ; With metabolic activation) ; Method: OECD 473
In vitro gene mutations test on mammalian cells: negative (Chinese hamster ovary cells ; with and without metabolic activation) ; Method: OECD 476

[3-(2,3-EPOXYPROPOXY)PROPYL] TRIMETHOXYSILANE (*2530-83-8*):
Bacterial reverse mutation test: Mutagen. (Salmonella typhimurium ; with and without metabolic activation) ; Method: OECD 471
In vitro mammalian cell micronucleus test: No mutagenic effect. (Mammalian liver cells ; with and without metabolic activation) ; Method: OECD 487 ; Results obtained on a similar product.
In vitro gene mutations test on mammalian cells: Mutagen. (Mouse lymphoma cells ; with and without metabolic activation) ; Method: OECD 476

In vivo: Based on our knowledge of the composition information:
TRIMETHOXYVINYLSILANE (*2768-02-7*):
Mammalian erythrocyte micronucleus test: No mutagenic effect. (Mouse ; Female, Male ; Intraperitoneal) ; Method: OECD 474

[3-(2,3-EPOXYPROPOXY)PROPYL] TRIMETHOXYSILANE (*2530-83-8*):
Mammalian erythrocyte micronucleus test: Mutagen. (Mouse ; Female, Male ; Intraperitoneal) ; Method: OECD 474
Mammalian erythrocyte micronucleus test: No mutagenic effect. (Mouse ; Female, Male ; Gavage (Oral)) ; Method: OECD 474

Carcinogenicity:

Contains a component(s) that is/are not expected to be bioavailable due to the physical state of the material under normal handling and processing conditions.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogens present or none present in regulated quantities
Quartz Overall evaluation: 1. Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogens present or none present in regulated quantities
Quartz Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:
Quartz Cancer

Reproductive toxicity:

Fertility: Based on our knowledge of the composition information:
TRIMETHOXYVINYLSILANE (*2768-02-7*):
Not classified
Reproduction/developmental toxicity screening test: NOAEL (parent): 250 mg/kg ; NOAEL (F1): None. ; NOAEL (F2): None. (Rat ; Female ; Gavage (Oral)) ; Method: OECD 422 ; The product is not considered to affect fertility.
Reproduction/developmental toxicity screening test: NOAEL (parent): 1,000 mg/kg NOAEL (F1): None. ; NOAEL (F2): None. (Rat ; Male ; Gavage (Oral)) ; Method: OECD 422 ; The product is not considered to affect fertility.

[3-(2,3-EPOXYPROPOXY)PROPYL] TRIMETHOXYSILANE (*2530-83-8*):
Not classified
Fertility study 1 generation: NOAEL (parent): >= 1,000 mg/kg ; NOAEL (F1): None. ; NOAEL (F2): None. (Rat ; Female, Male ; Ingestion) ; Method: OECD 415 ; The product is not considered to affect fertility.

Teratogenicity: Based on our knowledge of the composition information:
TRIMETHOXYVINYLSILANE (*2768-02-7*):
Not classified
NOAEL (terato): 0.6 mg/l ; NOAEL (mater): 0.15 mg/l (Rat ; Inhalation - vapor) ; Method: According to a standardised method. ; The product is not considered to be toxic for development.

[3-(2,3-EPOXYPROPOXY)PROPYL] TRIMETHOXYSILANE (*2530-83-8*):
Not classified
NOAEL (terato): >= 400 mg/kg ; NOAEL (mater): 200 mg/kg (Rabbit ; Ingestion) ; Method: OECD 414 ; No embryo-foetotoxic or teratogenic effects have been observed.

Specific Target Organ Toxicity - Single Exposure:

Based on our knowledge of the composition information:
TRIMETHOXYVINYLSILANE (*2768-02-7*):
Based on available data, the classification criteria are not met.

[3-(2,3-EPOXYPROPOXY)PROPYL] TRIMETHOXYSILANE (*2530-83-8*):
Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Repeated Exposure:

Contains a component(s) that is/are not expected to be bioavailable due to the physical state of the material under normal handling and processing conditions.

Aspiration Hazard:

Based on our knowledge of the composition information:
TRIMETHOXYVINYLSILANE (*2768-02-7*):
Based on available data, the classification criteria are not met.

[3-(2,3-EPOXYPROPOXY)PROPYL] TRIMETHOXYSILANE (*2530-83-8*):
Based on available data, the classification criteria are not met.

12. Ecological information

12.1 Ecotoxicity:

Acute toxicity:

Fish:
No data available.

Aquatic Invertebrates:
No data available.

Aquatic plants:
No data available.

Toxicity to microorganisms: No data available.

Chronic Toxicity:

Fish:
No data available.

Aquatic Invertebrates:
No data available.

12.2 Persistence and Degradability:

Biodegradation: Based on our knowledge of the composition information:
TRIMETHOXYVINYLSILANE (*2768-02-7*):
51 % (activated sludge, domestic (adaptation not specified) ; 28 d ; Oxygen depletion) ; Method: OECD 301 F ; The product is not readily biodegradable.

[3-(2,3-EPOXYPROPOXY)PROPYL] TRIMETHOXYSILANE (*2530-83-8*):
37 % (activated sludge, domestic (adaptation not specified) ; 28 d ; Dissolved organic carbon (DOC)) ; Method: According to a standardised method. ; The product is not readily biodegradable.

BOD/COD Ratio: No data available.

12.3 Bioaccumulative potential:

Bioconcentration Factor (BCF): No data available.

Partition coefficient (n-octanol/water): Based on our knowledge of the composition information:
TRIMETHOXYVINYLSILANE (*2768-02-7*):
Log Kow: -2 (20 °C) ; Method: estimated ; at pH 7, Results obtained on a similar product.

12.4 Mobility in soil:

No data available.

12.5 Other adverse effects:

None known.

13. Disposal considerations

13.1 Waste treatment methods:

The user's attention is drawn to the possible existence of local regulations regarding disposal.

Disposal methods:
Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Waste of this material should not be mixed with other waste. Provide measures such as vented bungs to ensure pressure relief in the waste container.

Contaminated Packaging:
Contaminated packages should be as empty as possible and equipped with a degassing device. Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Recycle following cleaning or dispose of at an authorised site.

14. Transport information

DOT

Not regulated.

IMDG / IMO

Not regulated.

IATA

Not regulated.

Other information:
Warning
Packaging with a breathing/venting bung are FORBIDDEN for transport by air.

15. Regulatory information

US Federal Regulations:

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4): None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA):

Hazard categories:
Serious eye damage or eye irritation, Respiratory or Skin Sensitization

SARA 304 Emergency Release Notification: None present or none present in regulated quantities.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required: None present or none present in regulated quantities.

US State Regulations:

US. California Proposition 65: No ingredient requiring a warning under CA Prop 65.

US. New Jersey Worker and Community Right-to-Know Act: No ingredient regulated by NJ Right-to-Know Law present.

Chemical Identity:
Quartz

US. Massachusetts RTK - Substance List: No ingredient regulated by MA Right-to-Know Law present.

Chemical Identity:
Quartz

US. Pennsylvania RTK - Hazardous Substances: No ingredient regulated by PA Right-to-Know Law present.

Chemical Identity:
Quartz

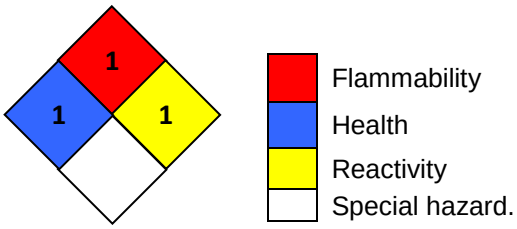
US. Rhode Island RTK: No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

Australia Industrial Chem. Act (AIIC):	On or in compliance with the inventory.
Canada DSL Inventory List:	On or in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory.
Japan (ENCS) List:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory.
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory.
US TSCA Inventory:	On or in compliance with the inventory.
EINECS, ELINCS or NLP:	On or in compliance with the inventory.

16. Other information, including date of preparation or last revision

NFPA Hazard ID:



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Wording of the H-statements in section 2 and 3:

H226	Flammable liquid and vapor.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H350i	May cause cancer by inhalation.
H372	Causes damage to organs through prolonged or repeated exposure.

Issue Date: 09/30/2022

Version #: 4.0

Further Information:

No data available.

Disclaimer:

The information given is based on data available for the material, the components of the material, and similar materials. The information is believed to be correct. It is given in good faith. This information should be used to make an independent determination of the methods to safeguard workers and the environment.