

1. Identification

Product identifier MILL-RIGHT® ES Blue Elastomer

Other means of identification

Product code Various

Recommended use Sealing Element

Recommended restrictions Maximum Service Temperature should not exceed 350°F

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Garlock Sealing Technologies, LLC

Address 1666 Division Street
Palmyra, NY 14522
United States

Telephone M-F 9:00AM-4:00PM 315-597-4811
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2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement In its manufactured and shipped state, this product is considered to present low hazard.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information

Based on available information; under normal conditions of use this product is not expected to release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical, and is not expected to pose a physical hazard or health risk to employees. Based on this and its form, the product meets the definition of an "Article". "Articles" are outside the scope of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Hydrogenated Butadiene/acrylonitrile Copolymer		88254-10-8	- < 50
Synthetic amorphous silica, pptd.		112926-00-8	- < 15
Graphite		7782-42-5	- < 10
Calcium Carbonate		471-34-1	- < 5

Chemical name	Common name and synonyms	CAS number	%
Magnesium Oxide		1309-48-4	- < 5
Titanium dioxide (TiO ₂)		13463-67-7	- < 5
Trimethylolpropane Trimethacrylate		3290-92-4	- < 2
Zinc Oxide		1314-13-2	- < 2
Calcium Metasilicate		1344-95-2	< 1
Stearic Acid		57-11-4	< 1
Other components below reportable levels			10 - < 20

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	No specific intervention is indicated as the product is not likely to be hazardous by inhalation. If exposed to fumes from overheating or combustion, move to fresh air. Consult physician if symptoms persist.
Skin contact	Wash off with soap and plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	No specific intervention is indicated, as product is not likely to be hazardous by ingestion. Consult a physician if necessary.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Following First Aid Instructions as outlined. If symptoms persist seek medical attention.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	No special methods normally required. If dust is generated see Section 7.
Environmental precautions	None known.

7. Handling and storage

Precautions for safe handling	Use personal protective equipment as required.
Conditions for safe storage, including any incompatibilities	For optimal shelf life store in cool and dry location. Prevent exposure to ultra-violet (UV) light, direct sunlight or strong fluorescent lights. Do not store near devices, which produce ozone (O ₃).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Calcium Carbonate (CAS 471-34-1)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Calcium Metasilicate (CAS 1344-95-2)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Graphite (CAS 7782-42-5)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Magnesium Oxide (CAS 1309-48-4)	PEL	15 mg/m3	Total particulate.
Titanium dioxide (TiO2) (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.
Zinc Oxide (CAS 1314-13-2)	PEL	5 mg/m3	Respirable fraction.
		5 mg/m3	Fume.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Graphite (CAS 7782-42-5)	TWA	15 mppcf	
Magnesium Oxide (CAS 1309-48-4)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Synthetic amorphous silica, pptd. (CAS 112926-00-8)	TWA	0.8 mg/m3	
		20 mppcf	
Titanium dioxide (TiO2) (CAS 13463-67-7)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Calcium Metasilicate (CAS 1344-95-2)	TWA	1 mg/m3	Inhalable fraction.
Graphite (CAS 7782-42-5)	TWA	2 mg/m3	Respirable fraction.
Magnesium Oxide (CAS 1309-48-4)	TWA	10 mg/m3	Inhalable fraction.
Stearic Acid (CAS 57-11-4)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.
Titanium dioxide (TiO2) (CAS 13463-67-7)	TWA	10 mg/m3	
Zinc Oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Calcium Carbonate (CAS 471-34-1)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Calcium Metasilicate (CAS 1344-95-2)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Graphite (CAS 7782-42-5)	TWA	2.5 mg/m3	Respirable.
Synthetic amorphous silica, pptd. (CAS 112926-00-8)	TWA	6 mg/m3	
Zinc Oxide (CAS 1314-13-2)	Ceiling	15 mg/m3	Dust.
	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		5 mg/m3	Dust.

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Trimethylolpropane Trimethacrylate (CAS 3290-92-4)	TWA	1 mg/m3

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

Exposure guidelines**US WEEL Guides: Skin designation**

Trimethylolpropane Trimethacrylate (CAS 3290-92-4) Can be absorbed through the skin.

Appropriate engineering controls General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

Eye/face protection As generally good practice, safety glasses with side shields are recommended when handling this product to prevent eye contact with particulate matter.

Skin protection

Hand protection For prolonged or repeated skin contact use suitable protective gloves.

Other Not normally needed.

Respiratory protection Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations 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**Appearance**

Physical state Solid.
Form Sealing Element
Color Blue.

Odor Slight.

Odor threshold Not available.

pH Not Applicable

Melting point/freezing point Not available.

Initial boiling point and boiling range Not Applicable

Flash point Not Applicable

Evaporation rate Not Applicable

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not Applicable

Flammability limit - lower (%) temperature Not Applicable

Flammability limit - upper (%) Not Applicable

Flammability limit - upper (%) temperature Not Applicable

Explosive limit - lower (%) Not Applicable

Explosive limit - lower (%) temperature Not Applicable

Explosive limit - upper (%) Not Applicable

Explosive limit - upper (%) temperature Not Applicable

Vapor pressure Not Applicable

Vapor density Not Applicable

Relative density Not available.

Solubility(ies)

Solubility (water) Not Soluble

Partition coefficient (n-octanol/water) Not Applicable

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not Applicable

Other information

Explosive limit Not Applicable

Flash point class Not Applicable

Specific gravity 1.37

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Keep away from heat, sparks and open flame.

Incompatible materials Strong mineral acids. Strong oxidising agents. Strong bases.

Hazardous decomposition products Composition of by-products from the result of a fire or thermal decomposition will vary depending on the specific conditions. Hazardous gases/vapors include smoke, hydrogen fluoride, carbonyl fluoride, perfluorocarbon olefins, small amounts of nitrogen oxides, hydrogen cyanide, and acrylonitrile monomer and carbon monoxide. There may be others unknown to us.

11. Toxicological information

Information on likely routes of exposure

Inhalation No adverse effects due to inhalation are expected.

Skin contact Not available.

Eye contact Direct contact with eyes may cause temporary irritation.

Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Harmful and / or toxic vapors may be produced in the event of thermal decomposition.

Components	Species	Test Results
Calcium Carbonate (CAS 471-34-1)		
<u>Acute</u>		
Oral		
LD50	Rat	6450 mg/kg
Graphite (CAS 7782-42-5)		
<u>Acute</u>		
Oral		
LD50	Rat	> 10000 mg/kg
Stearic Acid (CAS 57-11-4)		
<u>Acute</u>		
Oral		
LD50	Rat	4.6 g/kg
Synthetic amorphous silica, pptd. (CAS 112926-00-8)		
<u>Acute</u>		
Oral		
LD50	Rat	> 22500 mg/kg
Zinc Oxide (CAS 1314-13-2)		
<u>Acute</u>		
Inhalation		
LC50	Mouse	> 5.7 mg/l, 4 Hours
Oral		
LD50	Rat	> 5 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Knowledge about mutagenicity is incomplete.

Carcinogenicity Carcinogenic effects are not expected as a result of occupational exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Synthetic amorphous silica, pptd. (CAS 112926-00-8) 3 Not classifiable as to carcinogenicity to humans.

Titanium dioxide (TiO₂) (CAS 13463-67-7) 2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

12. Ecological information

Ecotoxicity 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.

Product		Species	Test Results
MILL-RIGHT® ES Blue Elastomer			
Aquatic			
Crustacea	EC50	Daphnia	22587.1289 mg/l, 48 hours estimated
Fish	LC50	Fish	19680.5586 mg/l, 96 hours estimated
Components		Species	Test Results
Calcium Carbonate (CAS 471-34-1)			
Aquatic			
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>)	> 56000 mg/l, 96 hours
Titanium dioxide (TiO2) (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (<i>Fundulus heteroclitus</i>)	> 1000 mg/l, 96 hours
Zinc Oxide (CAS 1314-13-2)			
Aquatic			
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	2246 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Stearic Acid 8.23

Mobility in soil No data available.

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

Disposal instructions Review federal, state/provincial, and local government requirements prior to disposal.

Local disposal regulations Dispose in accordance with all applicable regulations.

Waste from residues / unused products Dispose in accordance with all applicable regulations.

Contaminated packaging Not applicable.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Zinc Oxide (CAS 1314-13-2) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical No (Exempt)**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Zinc Oxide	1314-13-2	- < 2

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.**US state regulations**

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

California Proposition 65

WARNING: WARNING: This product can expose you to the following chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. The Titanium Dioxide in this product are bound in a rubber matrix and therefore poses low risk of exposure to airborne particles of respirable size.

California Proposition 65 - CRT: Listed date/Carcinogenic substanceTitanium dioxide (TiO₂) (CAS 13463-67-7)

Listed: September 2, 2011

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Magnesium Oxide (CAS 1309-48-4)

Titanium dioxide (TiO₂) (CAS 13463-67-7)**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*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, including date of preparation or last revision**Issue date** 05-07-2020**Version #** 01**Further information** This SDS supersedes the SDS dated: December 28, 2009

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.