

1. Identification

Product identifier Style 3300

Other means of identification

Product code 39003, 39013

Recommended use Gasket Material

Recommended restrictions Maximum Service Temperature should not exceed 700°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
FAX 315-597-3039

E-mail GSTSDS@garlock.com

Emergency phone number 315-597-4811

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 OSHA Hazard Communication Standard (29 CFR 1910.1200) requirements for Safety Data Sheets do not apply to the product(s) described in this document. This product is excluded in the regulation as an Article.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Kaolin		1332-58-7	- < 50
Nitrile Rubber		9003-18-3	< 20
p-Aramid Fiber		26125-61-1	- < 20
Barium Sulfate		7727-43-7	- < 10
Rubber, Natural		9006-04-6	- < 10
Stearic Acid		57-11-4	< 5
Carbon Black		1333-86-4	- < 1
Magnesium Oxide		1309-48-4	< 1

Chemical name	Common name and synonyms	CAS number	%
Titanium Dioxide		13463-67-7	< 1
Silica - Crystalline, Quartz		14808-60-7	< 0.5
Toluene		108-88-3	0< 0.5
Zinc Oxide		1314-13-2	- < 0.5
Other components below reportable levels			20 - < 30

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

4. First-aid measures

Inhalation	If exposed to fumes from overheating or combustion, move to fresh air.
Skin contact	Wash off immediately 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	Get medical attention if symptoms occur.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
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	Avoid grinding, abrading or other mechanical actions that could release airborne silica. Dust generated from this material must be managed by wet wiping or vacuuming with HEPA filtration equipped vacuum cleaners. Do not dry sweep or blow dust with compressed air. Avoid breathing dust. Avoid contamination of cigarettes or tobacco with dust from this material.
Conditions for safe storage, including any incompatibilities	Store away from incompatible materials (see Section 10 of the SDS). Room temperature - normal conditions.

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
Barium Sulfate (CAS 7727-43-7)	PEL	5 mg/m3	Respirable fraction.

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

Components	Type	Value	Form
Carbon Black (CAS 1333-86-4)	PEL	15 mg/m ³	Total dust.
		3.5 mg/m ³	
Kaolin (CAS 1332-58-7)	PEL	5 mg/m ³	Respirable fraction.
		15 mg/m ³	
Magnesium Oxide (CAS 1309-48-4)	PEL	15 mg/m ³	Total dust.
		15 mg/m ³	
Silica - Crystalline, Quartz (CAS 14808-60-7)	PEL	0.05 mg/m ³	Respirable dust.
Titanium Dioxide (CAS 13463-67-7)	PEL	15 mg/m ³	Total dust.
Zinc Oxide (CAS 1314-13-2)	PEL	5 mg/m ³	Respirable fraction.
		5 mg/m ³	Fume.
		15 mg/m ³	Total dust.

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

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

Components	Type	Value	Form
Kaolin (CAS 1332-58-7)	TWA	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Magnesium Oxide (CAS 1309-48-4)	TWA	5 mg/m ³	Respirable fraction.
Silica - Crystalline, Quartz (CAS 14808-60-7)	TWA	15 mg/m ³	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
		0.1 mg/m ³	Respirable.
Titanium Dioxide (CAS 13463-67-7)	TWA	2.4 mppcf	Respirable.
		5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Barium Sulfate (CAS 7727-43-7)	TWA	5 mg/m ³	Inhalable fraction.
Carbon Black (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable fraction.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m ³	Respirable fraction.
Magnesium Oxide (CAS 1309-48-4)	TWA	10 mg/m ³	Inhalable fraction.
Rubber, Natural (CAS 9006-04-6)	TWA	0.0001 mg/m ³	Inhalable fraction.
Silica - Crystalline, Quartz (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.
Stearic Acid (CAS 57-11-4)	TWA	10 mg/m ³	
Titanium Dioxide (CAS 13463-67-7)	TWA	10 mg/m ³	
Toluene (CAS 108-88-3)	TWA	20 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
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
Barium Sulfate (CAS 7727-43-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Carbon Black (CAS 1333-86-4)	TWA	0.1 mg/m3	
Kaolin (CAS 1332-58-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
p-Aramid Fiber (CAS 26125-61-1)	TWA	3 fibers/cm3	Dust.
		3 fibers/cm3	Fiber.
		5 mg/m3	fibers, total dust
		5 mg/m3	Fiber, total
Silica - Crystalline, Quartz (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.
Toluene (CAS 108-88-3)	STEL	560 mg/m3	
		150 ppm	
	TWA	375 mg/m3	
Zinc Oxide (CAS 1314-13-2)	Ceiling	100 ppm	
		15 mg/m3	Dust.
	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		5 mg/m3	Dust.

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

* - For sampling details, please see the source document.

Exposure guidelines

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

US - California OELs: Skin designation

Toluene (CAS 108-88-3)

Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Toluene (CAS 108-88-3)

Skin designation applies.

US ACGIH Threshold Limit Values: Skin designation

Rubber, Natural (CAS 9006-04-6)

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	Sheets or Gaskets
Color	Grey-black

Odor Slight fruity or hydrocarbon odor.

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

Density 100.00 lb/ft³

Explosive limit Not Applicable

Flash point class Not Applicable

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 oxidizing agents. Strong bases.
Hazardous decomposition products	Composition of by-products from the result of a fire will vary depending on the specific conditions. Potential hazardous products of combustion include smoke, carbon monoxide, hydrogen cyanide, ammonia, aldehydes, nitrogen oxides, aliphatic hydrocarbons, hydrogen chloride, and other chlorine bearing products. 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	May cause sensitization by skin contact. May be irritating to the skin.
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. This product contains constituents that can cause lung and respiratory tract disorders, including irritation, pneumoconiosis and cancer. These substances however are encapsulated in polymeric binders and therefore not bioavailable from the product as supplied. Physical actions such as cutting or grinding may disrupt the matrix producing dust and particulates.

Components	Species	Test Results
Stearic Acid (CAS 57-11-4)		
Acute		
Oral		
LD50	Rat	4.6 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

ACGIH sensitization

NATURAL RUBBER LATEX, AS INHALABLE ALLERGENIC PROTEINS (CAS 9006-04-6)	Dermal sensitization Respiratory sensitization
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Respiratory sensitization
Not a respiratory sensitizer.

Skin sensitization
This product is not expected to cause skin sensitization.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity
In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon Black (CAS 1333-86-4)	2B Possibly carcinogenic to humans.
p-Aramid Fiber (CAS 26125-61-1)	3 Not classifiable as to carcinogenicity to humans.

Silica - Crystalline, Quartz (CAS 14808-60-7)

Titanium Dioxide (CAS 13463-67-7)

Toluene (CAS 108-88-3)

1 Carcinogenic to humans.

2B Possibly carcinogenic to humans.

3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Silica - Crystalline, Quartz (CAS 14808-60-7)

Cancer

US. National Toxicology Program (NTP) Report on Carcinogens

p-Aramid Fiber (CAS 26125-61-1)

Reasonably Anticipated to be a Human Carcinogen.

Silica - Crystalline, Quartz (CAS 14808-60-7)

Known To Be Human Carcinogen.

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
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Style 3300

Aquatic

Crustacea	EC50	Daphnia	286.3559 mg/l, 48 hours estimated
Fish	LC50	Fish	1078.6709 mg/l, 96 hours estimated

Components	Species	Test Results
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Barium Sulfate (CAS 7727-43-7)

Aquatic

Crustacea	EC50	Tubificid worm (Tubifex tubifex)	28.61 - 38.03 mg/l, 48 hours
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Titanium Dioxide (CAS 13463-67-7)

Aquatic

Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours

Toluene (CAS 108-88-3)

Aquatic

Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon, silver salmon (Oncorhynchus kisutch)	8.11 mg/l, 96 hours

Zinc Oxide (CAS 1314-13-2)

Aquatic

Fish	LC50	Fathead minnow (Pimephales promelas)	2246 mg/l, 96 hours
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* 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
Toluene	2.73

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 Not available.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Not available.

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.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Barium Sulfate (CAS 7727-43-7)	Listed.
Toluene (CAS 108-88-3)	Listed.
Zinc Oxide (CAS 1314-13-2)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Silica - Crystalline, Quartz (CAS 14808-60-7)	Cancer lung effects immune system effects kidney effects
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Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Toluene (CAS 108-88-3)

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Toluene (CAS 108-88-3)	6594
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Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Toluene (CAS 108-88-3)	35 %WV
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DEA Exempt Chemical Mixtures Code Number

Toluene (CAS 108-88-3)	594
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US state regulations

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Carbon Black (CAS 1333-86-4)	Listed: February 21, 2003
p-Aramid Fiber (CAS 26125-61-1)	Listed: July 1, 1990
Silica - Crystalline, Quartz (CAS 14808-60-7)	Listed: October 1, 1988
Titanium Dioxide (CAS 13463-67-7)	Listed: September 2, 2011

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Toluene (CAS 108-88-3)	Listed: January 1, 1991
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US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Carbon Black (CAS 1333-86-4)
Magnesium Oxide (CAS 1309-48-4)
Silica - Crystalline, Quartz (CAS 14808-60-7)
Titanium Dioxide (CAS 13463-67-7)
Toluene (CAS 108-88-3)

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	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
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 10-24-2017

Version # 01

Further information This SDS supersedes the SDS dated: May 6, 2015

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.