SAFETY DATA SHEET

1. Identification

Product identifier **GYLON® Style HP 3560**

Other means of identification

Product code 35600

Recommended use Gasket Material

Recommended restrictions Maximum Service Temperature should not exceed 500°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.

Heating PTFE to temperatures in excess of 500˚ F can evolve toxic fluorine compounds. Additional information concerning PTFE is available in the “Guide to the Safe Handling of Fluoropolymer Resins” published by the Fluoropolymers Division of the Society of the Plastics Industry, Inc.

This product contains Stainless Steel. Laser Cutting methods can generate toxic fumes containing Hexavalent Chromium.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Polytetrafluoroethylene (PTFE)		9002-84-0	30 - < 40
Silica - Crystalline, Quartz		14808-60-7	30 - < 40

Chemical name	Common name and synonyms	CAS number	%
Chromium (Component in 316 Stainless Steel)		7440-47-3	3 - < 5
Nickel (Component in 316 Stainless Steel)		7440-02-0	3 - < 5
Manganese (Component of 316 Stainless Steel)		7439-96-5	< 1
Molybdenum (Component of 316 Stainles Steel)		7439-98-7	< 1
Spinels, Iron Titanium Brown		68187-02-0	< 1
Silicon (Component in 316 Stainless Steel)		7440-21-3	< 0.2
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. Consult a physician if necessary. If exposed to fumes from overheating or combustion, move to fresh air. Consult physician if symptoms persist.

Skin contact The product is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable.

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

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

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

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 Hydrogen fluoride fumes emitted during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling refuse from fire

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
Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)	PEL	1 mg/m3	
Manganese (Component of 316 Stainless Steel) (CAS 7439-96-5)	Ceiling	5 mg/m3	Fume.
Molybdenum (Component of 316 Stainles Steel) (CAS 7439-98-7)	PEL	15 mg/m3	Total dust.
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)	PEL	1 mg/m3	
Silicon (Component in 316 Stainless Steel) (CAS 7440-21-3)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

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

Components	Type	Value	Form
Silica - Crystalline, Quartz (CAS 14808-60-7)	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)	TWA	0.5 mg/m3	
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)	TWA	1.5 mg/m3	Inhalable fraction.
Silica - Crystalline, Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)	TWA	0.5 mg/m3	
Manganese (Component of 316 Stainless Steel) (CAS 7439-96-5)	STEL	3 mg/m3	Fume.
	TWA	1 mg/m3	Fume.
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)	TWA	0.015 mg/m3	
Silica - Crystalline, Quartz (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.
Silicon (Component in 316 Stainless Steel) (CAS 7440-21-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total

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

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

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	When handling hot material, use heat resistant gloves. Edges maybe sharp. Wear suitable gloves to prevent hand lacerations.
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	Metal Inserted Sheet or Gaskets.
Color	Fawn
Odor	None.
Odor threshold	Not available.
pH	Not Applicable
Melting point/freezing point	620.6 °F (327 °C) / 2800.4 °F (1538 °C) estimated
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	968 - 1040 °F (520 - 560 °C)
Decomposition temperature	> 500 °F (> 260 °C)
Viscosity	Not Applicable

Other information

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	Incompatible or can react with finely divided metal powders (e.g. aluminum and magnesium), molten alkali metals, and potent oxidizers like fluorine and related compounds like chlorine trifluoride. Contact with incompatibles can cause fire or explosion.
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 possibly evolved include smoke, hydrogen fluoride, carbonyl fluoride, perfluorocarbon olefins,carbon monoxide, as well as metal or metal oxide fumes including those of chromium and nickel. 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	No adverse effects due to skin contact are expected.
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	No effects due to exposure to the product are anticipated. If exposed to thermal decomposition products of the PTFE, temporary symptoms of polymer fume fever, a temporary flu-like illness with chills, fever, and sometimes cough, of approximately 24 hours duration may arise. There are some reports in the literature of persistent pulmonary effects in individuals, especially smokers, who have repeated episodes of polymer fume fever. Because of complicating factors, such as mixed exposures and smoking history, these findings are uncertain. Small amounts of carbonyl fluoride and hydrogen fluoride may also be evolved when PTFE is overheated or burned.
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	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

Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)	3 Not classifiable as to carcinogenicity to humans.
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)	2B Possibly carcinogenic to humans.
Polytetrafluoroethylene (PTFE) (CAS 9002-84-0)	3 Not classifiable as to carcinogenicity to humans.
Silica - Crystalline, Quartz (CAS 14808-60-7)	1 Carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)	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
GYLON® Style HP 3560			
Aquatic			
Crustacea	EC50	Daphnia	0.2342 mg/l, 48 hours estimated
Fish	LC50	Fish	800.2733 mg/l, 96 hours estimated
Components		**Species**	**Test Results**
Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.01 - 0.7 mg/l, 48 hours
Fish	LC50	Carp (Cyprinus carpio)	14.3 mg/l, 96 hours
Manganese (Component of 316 Stainless Steel) (CAS 7439-96-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	40 mg/l, 48 hours
Molybdenum (Component of 316 Stainles Steel) (CAS 7439-98-7)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	800 mg/l, 96 hours
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	2.923 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.

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.

TSCA Chemical Action Plans, Chemicals of Concern

Polytetrafluoroethylene (PTFE) (CAS 9002-84-0)	Long-Chain Perfluorinated Chemicals (PFCs) Action Plan

CERCLA Hazardous Substance List (40 CFR 302.4)

Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)	Listed.
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Chromium (Component in 316 Stainless Steel)	7440-47-3	3 - < 5
Nickel (Component in 316 Stainless Steel)	7440-02-0	3 - < 5
Manganese (Component of 316 Stainless Steel)	7439-96-5	< 1

Other federal regulations

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

Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)
Manganese (Component of 316 Stainless Steel) (CAS 7439-96-5)
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)

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

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

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

Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)
Manganese (Component of 316 Stainless Steel) (CAS 7439-96-5)
Molybdenum (Component of 316 Stainles Steel) (CAS 7439-98-7)
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)
Silica - Crystalline, Quartz (CAS 14808-60-7)

US. Massachusetts RTK - Substance List

Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)
Manganese (Component of 316 Stainless Steel) (CAS 7439-96-5)
Molybdenum (Component of 316 Stainles Steel) (CAS 7439-98-7)
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)
Silica - Crystalline, Quartz (CAS 14808-60-7)
Silicon (Component in 316 Stainless Steel) (CAS 7440-21-3)

US. New Jersey Worker and Community Right-to-Know Act

Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)
Manganese (Component of 316 Stainless Steel) (CAS 7439-96-5)
Molybdenum (Component of 316 Stainles Steel) (CAS 7439-98-7)
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)
Silica - Crystalline, Quartz (CAS 14808-60-7)
Silicon (Component in 316 Stainless Steel) (CAS 7440-21-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)
Manganese (Component of 316 Stainless Steel) (CAS 7439-96-5)
Molybdenum (Component of 316 Stainles Steel) (CAS 7439-98-7)
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)
Polytetrafluoroethylene (PTFE) (CAS 9002-84-0)
Silica - Crystalline, Quartz (CAS 14808-60-7)
Silicon (Component in 316 Stainless Steel) (CAS 7440-21-3)

US. Rhode Island RTK

Chromium (Component in 316 Stainless Steel) (CAS 7440-47-3)
Manganese (Component of 316 Stainless Steel) (CAS 7439-96-5)
Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

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

Nickel (Component in 316 Stainless Steel) (CAS 7440-02-0)	Listed: October 1, 1989
Silica - Crystalline, Quartz (CAS 14808-60-7)	Listed: October 1, 1988

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
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)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	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, including date of preparation or last revision

Issue date 05-06-2015

Version # 01

Further information This SDS supersedes the SDS dated: April 5, 2007

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.