International Silicone Technologies

11019 Greenstone Ave.
Santa Fe Springs, CA 90670
(562) 946-2405
Fax: (562) 946-2409
Email: sales@inter-sil.com
www.inter-sil.com

Silicone Types

General Purpose
Medium Strength
Fluorosilicone
Conductive
Extreme Low Compression Set
High Temperature resistant
Tear Resistant
High Strength
Lightweight material
FDA Approved Ingredients
Conductive Silicone
Low Temperature Resistant

- ***PEROXIDE CURE***

  We handle peroxide cure systems compounds with excellent properties.

- ***PLATINUM CURE***

  We offer platinum cure systems compounds with excellent properties at an affordable price.

- ***SILICONE SPONGE***

  Our lightweight silicone sponge compounds are FDA & designed to meet the most sophisticated specification in the market. We also offer Commercial Grade sponge compound.

- ***SILICONE FOAM***

  We produce silicone foam compounds designed to meet the most sophisticated specifications in the market.

- ***20-90 DUROMETER***

  We manufacture solid silicone from an extremely soft 20 up to a very firm 90 ShoreA duro.

- ***COLOR MATCH TO ANY COLOR***

  We manage a very extensive color system, from commercial to Aerospace.

We guarantee you will be very pleased with our products and with our great customer service.

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SILICONE COMPOUNDS

INTRODUCTION

We are an engineered silicone compound manufacturer, with over 20 years of experience formulating compounds for molders, hose makers, extruders, and many others. Compounds that are catalyzed and pigmented specifically for your processes and end applications. We can design or customize any compound to fulfill your requirements and/or specific needs. You can also choose from our many existing formulated items to meet Military, Federal, ASTM, AMS, BMS, PWA, 3A, FDA, NSF and many more specifications. Material can be supplied in uncured calendered rolls and preformed sheets.
We have a 2 day turnaround on all compounds but we can respond to extreme emergencies in 1 day.

WHY USE SILICONE?

Silicone is a unique elastomer with characteristics that provide high & low temperature stability, inertness, compression set resistance, weather resistance, 20-100 hardness range, easiness to color, and it contains electrical properties.

Please see the following for a list and a brief description of **some** of the compounds we offer.

Commercial Grade Compound- Provides temperature resistance. Most commonly used where physical properties are not critical.

General Purpose Grade Compound- Provides an excellent balance of physical, electrical and chemical properties over a wide range of temperatures. Most commonly used for its economical cost unless a special property of another class is needed. It is available in a 20-100 durometer and in any color needed. It has a temperature range resistance of -75ºF to +500ºF in vented systems and is capable of meeting A-A-59588-CL2A/B.

Medium Strength Compound- Similar to General Purpose but it provides a lower specific gravity and the typical physical properties are improved. It is commonly used where better physical properties are required such as tear and tensile strength.

Fluorosilicone Grade Compound- Provides resistance to solvents, chemicals, and fuels. It is commonly used where extreme conditions exist and fuel & solvent resistance is required. It is available in a 20-80 durometer and in any color needed. It has a temperature range resistance of -65ºF to +450ºF and is capable of meeting AMS-R-25988 specification and many more.

Conductive Grade Compound- Provides protection against electrostatic discharges. It is a carbon black filled silicone that acts as low amperage conductor in electronic applications. It is most commonly used where electrical conductivity is required.

Tear Resistant Grade Compound – Provides high tear resistance when required. It can also be FDA for specific applications.

High Strength Grade Compound- Provides high elasticity, resiliency, and toughness. It is a strong, resilient and stretchable material. It is commonly used in seals and gaskets for the automotive and aerospace industries and is capable of meeting
A-A-59588A CL3B.

High Temperature Resistant Grade Compound- This material provides temperature resistance up to 650ºf. It also provides high temperature stability and excellent compression set. It is available in a 40-70 durometer and in any color.

FDA Grade Compound -This material complies with the Food & Drug Administration 21 CFR 177.2600 code therefore; it is commonly used on applications where parts are exposed to food. It can be made to almost any color needed and in a durometer from 20-100 durometer.

Extreme Low Comp Set Grade Compound- This material provides very low compression set on high-temperature applications. It is commonly used where compression set is vital. It is available in a 40-80 durometer and in any color.

Low Temperature Resistant Grade Compound- This material provides extreme low temperature flexibility over all rubbers at a sub zero temperature and it has excellent processing characteristics for a wide variety of molded, extruded and calendered parts where extreme low temperature flexibility is desirable. It is available in a 30-80 durometer in any color.

Silicone Sponge Compound- This material is a **lightweight** silicone rubber sponge that will provide uniform unicellular cross-sections. It withstands temperatures from a very low -120ºf to a +500ºf temperature. It is a available in a soft, medium, firm and x-tra firm grade and in any color. It is also FDA Approved Title 21CFR 177.2600(a) approved, Flame Resistant and meets specification AMS3195, AMS3196 and UL94 VI FAR 25.853(a).

Depending on application requirements, most compounds can be made from a very soft 20 durometer to a very firm 90 durometer and they can be made in a Peroxide Cure System or Platinum Cure System

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12000 SERIES
Commercial Grade

30, 40, 50, 60, 70 SHORE

12000 Series is a compound designed for commercial grade applications, where physical properties are not important but high temperature resistance is required. It is excellent gasketing material, UV/Ozone Resistant, non-toxic and high to low temperature resistant. It is available in all basic colors and it is available in a molding grade, extrusion grade, or calender grade. It can be shipped in calendered uncured rolls or preformed sheets.

TYPICAL PHYSICAL PROPERTIES

Property	**Test Method**	**Value**	**Value**	**Value**	**Value**	**Value**
Specific Gravity	ASTM D-297	1.20	1.30	1.40	1.45	1.50
Durometer Shore-A	ASTM D-2240	**30+/-5**	**40 +/-5**	**50+/-5**	**60+/-5**	**70+/-5**
Tensile Strength	ASTM D-412	500	500	500	550	600
Elongation	ASTM D-412	800	700	200	150	100
Tear Resistance	ASTM D-624	75	75	85	85	85
Temperature Range	(ºF)	-75º to 450º +480º (intermittent)	-75º to 450º +480º (intermittent)	-75º to 450º +480º (intermittent)	-75º to 450º +480º (intermittent)	-75º to 450º +480º (intermittent)

SPECIFICATIONS

* N/A

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2000 SERIES
General Purpose Grade

30, 40, 50, 60, 70 SHORE

2000 Series is a compound designed to provide an excellent balance of physical, electrical, and chemical properties over a wide range of temperatures. It is most commonly used for its economical cost unless a special property of another class is needed. It is available in a 20-90 durometer and in any color needed. It has a temperature range resistance of -75ºF to +500ºF in vented systems. It is excellent gasketing material, UV/Ozone Resistant, non-toxic and high to low temperature resistant. It is available in a molding grade, extrusion grade, or calender grade. It can be shipped in calendered uncured rolls or preformed sheets.

TYPICAL PHYSICAL PROPERTIES

Property	**Test Method**	**Value**	**Value**	**Value**	**Value**	**Value**
Specific Gravity	ASTM D-297	1.15	1.30	1.35	1.40	1.45
Durometer Shore-A	ASTM D-2240	**30+/-5**	**40+/-5**	**50+/-5**	**60+/-5**	**70+/-5**
Tensile Strength	ASTM D-412	700	700	800	800	800
Elongation	ASTM D-412	500	500	500	200	200
Tear Resistance	ASTM D-624	100	100	100	100	100
Temperature Range	(ºF)	-75º to 480ºF +500º (intermittent)	-75º to 480ºF +500º (intermittent)	-75º to 480ºF +500º (intermittent)	-75º to 480ºF +500º (intermittent)	-75º to 480ºF +500º (intermittent)

ABLE TO MEET SPECIFICATIONS:

FDA TITLE 21CFR 177.2600
A-A-59588-CL2A/B
AMS

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4000 SERIES
Medium Strength Grade
30, 40, 50, 60, 70 SHORE

4000 Series is a compound designed similar to General Purpose but it provides a lower specific gravity and the typical physical properties are improved. It is commonly used where better physical properties are required such as tear and tensile strength. It is available in a 30-70 durometer. It has a temperature range resistance of -75ºF to +500ºF in vented systems. It is excellent gasketing material, UV/Ozone Resistant, non-toxic and high to low temperature resistant. It is available in all basic colors and it is available in a molding grade, extrusion grade, or calender grade. It can be shipped in calendered uncured rolls or preformed sheets.

TYPICAL PHYSICAL PROPERTIES

Property	**Test Method**	**Value**	**Value**	**Value**	**Value**	**Value**
Specific Gravity	ASTM D-297	1.12	1.13	1.15	1.17	1.19
Durometer Shore-A	ASTM D-2240	**30+/-5**	**40+/-5**	**50+/-5**	**60+/-5**	**70+/-5**
Tensile Strength	ASTM D-412	900	900	1000	1100	1100
Elongation	ASTM D-412	500	500	500	400	400
Tear Resistance	ASTM D-624	125	125	125	125	135
Temperature Range	(ºF)	-75º to +500º (intermittent)	-75º to +500º (intermittent)	-75º to +500º (intermittent)	-75º to +500º (intermittent)	-75º to +500º (intermittent)

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6000 SERIES
Fluorosilicone Grade
40, 50, 60, 70,801 SHORE

6000 Series is a compound designed to provide resistance to solvents, chemicals, and fuels. It is commonly used where extreme conditions exist and fuel & solvent resistance is required. It is available in a 20-80 durometer and in any color needed. It has a temperature range resistance of -65ºF to +500ºF and is capable of meeting AMS-R-25988 specification and many more. It is available in a molding grade, extrusion grade, or calender grade. It can be shipped in calendered uncured rolls or preformed sheets.

TYPICAL PHYSICAL PROPERTIES

Property	**Test Method**	**Value**	**Value**	**Value**	**Value**	**Value**
Specific Gravity	ASTM D-297	1.45	1.48	1.52	1.54	1.55
Durometer Shore-A	ASTM D-2240	**40+/-5**	**50+/-5**	**60+/-5**	**70+/-5**	**80+/-5**
Tensile Strength	ASTM D-412	900	900	1000	1000	1000
Elongation	ASTM D-412	300	200	150	100	100
Tear Resistance	ASTM D-624	125	125	150	150	175
Temperature Range	(ºF)	-65º to +450º (intermittent)	-65º to +450º (intermittent)	-65º to +450º (intermittent))	-65º to +450º (intermittent)	-65º to +450º (intermittent)

ABLE TO MEET SPECIFICATIONS:

AMS-R-25988
BMS153
ES1457

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10000 SERIES
Conductive Grade
40, 50, 60, 70 SHORE

10000 Series is a compound designed to provide protection against electrostatic discharges. It is a carbon black filled silicone that acts as low amperage conductor in electronic applications. It is most commonly used where electrical conductivity is required. It is available in a 40-70 durometer in black color. It has a temperature range resistance of -65ºF to +450ºF. It is available in a molding grade, extrusion grade, or calender grade. It can be shipped in calendered uncured rolls or preformed sheets.

TYPICAL PHYSICAL PROPERTIES

Property	**Test Method**	**Value**	**Value**	**Value**	**Value**
Specific Gravity	ASTM D-297	1.25	1.27	1.30	1.30
Durometer Shore-A	ASTM D-2240	**40+/-5**	**50+/-5**	**60+/-5**	**70+/-5**
Tensile Strength	ASTM D-412	600	600	600	600
Elongation	ASTM D-412	200	150	100	100
Tear Resistance	ASTM D-624	100	100	100	100
Temperature Range	(ºF)	-65º to +450º (intermittent)	-65º to +450º (intermittent)	-65º to +450º (intermittent)	-65º to +450º (intermittent)
Volume Resistivity	oHms	5-10	1-5	1-5	1-5

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5000 SERIES
Tear Resistant Grade
50, 70 SHORE

5000 Series is a compound designed to provide high tear resistance when required. It can also be FDA for specific applications It is available in a 50 & 70 durometer. It has a temperature range resistance of -65ºF to +450ºF. It is available in all basic colors and it is available in a molding grade, extrusion grade, or calender grade. It can be shipped in calendered uncured rolls or preformed sheets.

TYPICAL PHYSICAL PROPERTIES

Property	**Test Method**	**Value**	**Value**
Specific Gravity	ASTM D-297	1.15	1.19
Durometer Shore-A	ASTM D-2240	**50+/-5**	**70+/-5**
Tensile Strength	ASTM D-412	1200	1200
Elongation	ASTM D-412	500	400
Tear Resistance	ASTM D-624	250	250
Temperature Range	(ºF)	-65º to +450º (intermittent)	-65º to +450º (intermittent)

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3000 SERIES
High Strength Grade
30, 40, 50, 60, 70 SHORE

3000 Series is a compound designed to provide high elasticity, resiliency, and toughness. It is a strong, resilient and stretchable material. It is commonly used in seals and gaskets for the automotive and aerospace industries and is capable of meeting A-A-59588A CL3B. It is available in a 30-80 durometer and in any color needed. It is available in a molding grade, extrusion grade, or calender grade. It can be shipped in calendered uncured rolls or preformed sheets.

TYPICAL PHYSICAL PROPERTIES

Property	**Test Method**	**Value**	**Value**	**Value**	**Value**	**Value**
Specific Gravity	ASTM D-297	1.12	1.13	1.15	1.17	1.19
Durometer Shore-A	ASTM D-2240	**30+/-5**	**40+/-5**	**50+/-5**	**60+/-5**	**70+/-5**
Tensile Strength	ASTM D-412	1000	1000	1200	1200	1200
Elongation	ASTM D-412	500	500	500	400	300
Tear Resistance	ASTM D-624	150	150	150	165	175
Temperature Range	(ºF)	-65º to +450º (intermittent)	-65º to +450º (intermittent)	-65º to +450º (intermittent)	-65º to +450º (intermittent)	-65º to +450º (intermittent)

ABLE TO MEET SPECIFICATIONS:

A-A-59588A CL3B
AMS 3347

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14000 SERIES
High Temperature Grade
40, 50, 60, 70 SHORE

14000 Series is a compound designed to provide temperature resistance up to 600ºf. It is available in a 40-70 durometer in most colors. It can be made in molding grade, extrusion grade, or calendar grade and shipped as calendered uncured rolls or preformed sheets.

TYPICAL PHYSICAL PROPERTIES

Property	**Test Method**	**Value**	**Value**	**Value**	**Value**
Specific Gravity	ASTM D-297	1.35	1.35	1.40	1.40
Durometer Shore-A	ASTM D-2240	**40+/-5**	**50+/-5**	**60+/-5**	**70+/-5**
Tensile Strength	ASTM D-412	700	800	800	800
Elongation	ASTM D-412	400	200	200	150
Tear Resistance	ASTM D-624	100	100	100	100
Temperature Range	(ºF)	-70º to 600º +650º (intermittent)	-70º to 600º +650º (intermittent)	-70º to 600º +650º (intermittent)	-70º to 600º +650º (intermittent)

ABLE TO MEET SPECIFICATIONS:

PWA 36453
AMS 3352
BMS 154

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1000 SERIES
Low Temperature Resistant Grade
30, 40, 50, 60, 70 SHORE

1000 Series is a compound designed to provide extreme low temperature flexibility over all rubbers at a sub zero temperature, -170ºf-+500ºf, and has excellent processing characteristics for a wide variety of molded, extruded and calendered parts where extreme low temperature flexibility is desirable. It is available in a 30-70 durometer in any color and it is available in a molding grade, extrusion grade, or calender grade. It can be shipped in calendered uncured rolls or preformed sheets.

PHYSICAL PROPERTIES

Property	**Test Method**	**Value**	**Value**	**Value**	**Value**	**Value**
Specific Gravity	ASTM D-297	1.13	1.15	1.19	1.22	1.25
Durometer Shore-A	ASTM D-2240	**30+/-5**	**40+/-5**	**50+/-5**	**60+/-5**	**70+/-5**
Tensile Strength	ASTM D-412	800	800	1000	100	1100
Elongation	ASTM D-412	500	500	500	400	400
Tear Resistance	ASTM D-624	150	150	175	175	175
Temperature Range	(ºF)	-170º to +500º (intermittent)	-170º to +500º (intermittent)	-170º to +500º (intermittent)	-170º to +500º (intermittent)	-170º to +500º (intermittent)

ABLE TO MEET SPECIFICATIONS:

A-A-59588 CL3A
A-A-59588 CL1A

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IST8000 SERIES

NON-FLAMMABLE SILICONE SPONGE/FOAM

IST8000 is a **lightweight** sponge/foam compound. It provides uniform unicellular cross-sections. It withstands temperatures from a very low -120ºf to a +500ºf. It is available in an x-soft to a firm grade in any color. It could be supplied in an extrusion or molding grade, calendered uncured rolls, or preformed sheets.

This compound could be utilized in a broad range of applications such as the following:

Insulation
Absorption
Sealing
Sound Barrier
Isolation…. And much more

TYPICAL PHYSICAL PROPERTIES

		Extra Soft	Soft	Medium	Firm
Property	**Test Method**	**Value**	**Value**	**Value**	**Value**
Density	ASTM D-1056	20lbs/ft3	22lbs/ft3	24lbs/ft3	28lbs/ft3
Compression Deflection	ASTM D-1056	2-4 psi @ 25%	4-6 psi @ 25%	6-14 psi @ 25%	12-20 psi @ 25%
Compression Set	ASTM D-1056	<5%	<5%	<5%	<5%
	50%, 22 hrs @ 100ºC				
Tensile Strength	ASTM D-412	150	180	200	300
Elongation	ASTM D-412	150	170	190	200
Water Absorption	ASTM D471	<5%	<5%	<5%	<5%
Flame Resistance*	UL-94	V1	V1	V1	V1
Vertical Fame	FAR 25.853 (a)	PASS	PASS	PASS	PASS

*Varies by thickness

ABLE TO MEET SPECIFICATIONS:

AMS3195
AMS3196
UL94V1
FAR 25.853(a)
FDA TITLE 21CFR 177.2600
MEDICAL GRADE