SERVICE Rubber Group, Inc 740 F Avenue

Plano, Texas 75074
TOLL FREE: 800-292-2606

Phone: 972-881-2606 Fax: 972-881-2605 Note: | ◀ ◀ CLICK ▶ ▶ | @ VERY BOTTOM FOR EACH POLYMER'S PROPERTIES

							MITONIO
BASIC CHARACTERISTICS	EPDM	NEOPRENE	SBR	BUNA-N	SILICONE	NATURAL RUBBER	VITON®
Durometer Range (Shore A)		20 -95	30 - 100		30 - 90		60 - 90
Tensile Range (P.S.I.)	500 - 2500	500 - 3000	500 - 3000	200 - 3000	200 - 1500	500 - 3500	500 - 2000
Elongation (Max %)	600	600	600	600	700	700	300
Compression Set	Good	Good	Good	Good	Good	Excellent	Excellent
Resilience - Rebound	Good	Excellent	Good	Good	Good	Excellent	Fair
Abrasion - Resistance	Good	Excellent	Excellent	Excellent	Fair to Poor	Excellent	Good
Tear Resistance	Fair	Good	Fair	Good	Poor	Excellent	Good
Solvent Resistance	Poor	Fair	Poor	Good to Excellent	Poor	Poor	Excellent
Oil Resistance	Poor	Fair	Poor	Good to Excellent	Fair to Poor	Poor	Excellent
Low Temperature Usage (F deg)	(-20° to -60°)	(+10° to -50°)	(0° to -50°)	(+30° to -40°)	(-60° to 150°)	(-20° to -60°)	(0° to -10 deg)
High Temperature Usage (F deg)	to +350°	to +250°	to +225°	to +250°	to +450°	to +175°	+400° to +600°
Aging Weather - Sunlight	Excellent	Good	Poor	Poor	Excellent	Poor	Excellent
Adhesion to Metals	Fair to Good	Good to Excellent	Excellent	Good to Excellent	Good	Excellent	Good
At SERVICE Rubber Group we:	EPDM	NEOPRENE	SBR	BUNA-N	SILICONE	NATURAL RUBBER	VITON®
MOLD, EXTRUDE and FABRICATE	Ethylene Propylene	Polychloroprene	Styrene Butadiene	Butadiene Acrylonitrile	Polysiloxane	Polyisoprene	Fluoro Elastomer
Rubber, Polyurethane and	Diene Monomer				-		
Thermoplastics							
	weather seals	Wetsuits	Car Tires	automotive transmission	cookware	door and window profiles	seals, hoses, o-rings
Industries SRG supplies:	door window seal	Laptop Sleeves	(blend w/natural rubber)	belts	medical applications	hoses	shaft seals
	trunk seals	Orthopedic braces	(hoses		belts	expansion joints and
* Medical	face Seal of Industrial	(wrist, knee, etc)	Gaskets	oil seals		matting	gaskets
* Agriculture	Respirators	Electrical Insulation	Chewing gum	V belts	lubricants		automotive
* Physical Fitness	solar heat collector for	Car Fan belts		synthetic leather	insulation		appliance
* Military	swimming pool	Gaskets	94.431111000 W4011013	printer's roller	create rubber molds		chemical and fluid
* High Speed Mail Handling	0 1	Hoses	can use non marking	cable jacketing	ordato rabbol filolas	and industrial	power industries
* Automotive: (parts on)	EPT Terpolymer	110303	can ase non marking	odbic jacketing		used in adhesives	power madatiles
* Mitsubishi / Acura / Mercedes	Li i i cipolyinei					used iii adiiesives	
intodoisin / Addid / McTecucs	AGING WEATHER-SUN	FLAME RESISTANT	LOW COST NON OIL	ABRASION RESISTANT	HEAT RESISTANT	ABRASION-TEAR RESISTANT	HEAT RESISTANT
	STEAM	REBOUND		SOLVENT-OIL RESIST		REBOUND	SOLVENT-OIL RESI
	NO FOOD APPS.	NO ACIDS	NO OILS, GREASES	NO SOLVENTS	NO OILS, SOLVENTS	NO OILS, SOLVENTS	NO KETONES
	CHEM-OIL, SOLVENT	NO NOIDO	ACIDS-OZONE	110 COLVENTO	ACIDS-TEAR	ACIDS	ESTERS AND NITE
	CHEW-OIL, SOLVENT		ACIDS-OZUNE		AGIDG-TEAK	AOIDO	LOTENS AND NITK

EPDM

Common Name

Common Name					
ASTM D-2000 Classification	_CA				
Military (MIL-STD 417)	_RS				
Chemical Definition	_ Ethylene Propylene				
BASIC CHARACTERISTICS					
Durometer Range (Shore A)	_ 30 - 90				
Tensile Range (P.S.I.)	_ 500 - 2500				
Elongation (Max %)	_600				
Compression Set	_ Good				
Resilience - Rebound	_ Good				
Abrasion - Resistance	_ Good				
Tear Resistance	_ Fair				
Solvent Resistance	_ Poor				
Oil Resistance	_ Poor				
Low Temperature Usage (F deg)	_ (-20º to -60º)				
High Temperature Usage (F deg)_	_to +350º				
Aging Weather - Sunlight	_ Excellent				
Adhesion to Metals	_ Fair to Good				
ENGINEERING COMMENT:					
FDD is an extraordinary polymer used in a wide range of applic					

EPDM. EPT. EPR

EPR is an extraordinary polymer used in a wide range of applications. Outstanding heat, ozone and weather resistance. The resistance to polar substances and steam are also good. Compatible with fireproof hydraulic fluids, ketones, hot and cold water and alkalis. EPDM is especially used in cooling system circuit hoses in an automobile. Ethylene Propylene is a polymer where oil and solvent resistance is poor, however, it is fairly good in ketones and alcohols. It is not recommended for food applications or exposure to aromatic hydrocarbons.

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Applications

Ethylene Propylene

- * weather seals
- * door window seal
- * trunk seals
- * face seal of industrial respirators
- * solar heat collector for swimming pools.
- * solar water heating systems
- * coating for electric wire
- * vapor rubber hose
- * conveyor belt

Automotive:

Weather Seals----Door, Window, Trunk Seals

Military Vehicles:

Weather Seals----Door, Window, Trunk Seals

Solar Pool Panels:

Solar Heat Collector for Swimming Pool Solar Water Heating System

Roofing:

Used as a Covering to Water Proof Roofs

NEOPRENE

Common Name_____Neoprene

ASTM D-2000 Classification_____ BC, BE Military (MIL-STD 417) SC

Chemical Definition_____Polychloroprene

BASIC CHARACTERISTICS

Durometer Range (Shore A)_____ 20 -95

Tensile Range (P.S.I.)_____500 - 3000

Elongation (Max %)______600

Compression Set_____Good

Resilience - Rebound Excellent

Abrasion - Resistance Excellent

Tear Resistance Good

Solvent Resistance Fair

Oil Resistance Fair

Low Temperature Usage (F deg) (-10° to -50°)

High Temperature Usage (F deg)__ to +250°

Aging Weather - Sunlight_____ Good

Adhesion to Metals Good to Excellent

ENGINEERING COMMENT:

Neoprene's chemical inertness makes it well suited for a wide variety of industrial applications. It is flame resistant and self-extinguishing. Excellent resilience, rebound with low compression set. Not affected by animal and vegetable oils, fats and greases.

Very good adhesion to metals. Special compounding for vibration isolation mounts. Weather and sunlight resistance is good.

Some people are allergic to neoprene while others can get dermatitis from thiourea, a compound used to vulcanize rubber into neoprene.

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Applications

Polychloroprene

- ' iPod® holders
- * laptop sleeves
- orthopedic braces (wrist, knee, etc)
- * sports and defense training knives and swords
- * car fan belts
- * gaskets
- * hoses
- * wetsuits
- * fly fishing waders
- * guitar grommets
- * musical drum practice pads

SBR SBR, GRS Common Name ASTM D-2000 Classification AA, BA RS Military (MIL-STD 417)____ Chemical Definition **Styrene Butadiene** BASIC CHARACTERISTICS Durometer Range (Shore A) 30 - 100 Tensile Range (P.S.I.)_____ 500 - 3000 Elongation (Max %)_____ 600 Compression Set_____ Good Resilience - Rebound Good Abrasion - Resistance Excellent Tear Resistance Fair

ENGINEERING COMMENT:

Oil Resistance

Adhesion to Metals

Solvent Resistance

Aging Weather - Sunlight_____

Low Temperature Usage (F deg)___ (0º to -50º)

High Temperature Usage (F deg) to +225°

SBR is a basic cost effective synthetic copolymer used in a variety of military, industrial, and commercial applications. It is one of the most versatile rubber compounds in the world today. Excellent impact strength. Good abrasion resistance and good aging stability when protected by additives.

Poor

Poor

Poor

Excellent

Not suited for use with fuels, solvents, oils, or hydraulic fluids.

SERVICE Rubber Group, Inc.

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Applications

Styrene Butadiene

- * car tires (blended with natural rubber)
- * shoe heels and soles
- * gaskets
- * chewing gum
- * garden hose washers
- * adhesive plaster
- * sporting goods
- * mattress
- * battery cell case
- * adhesive tape

FOR: QUICK REF - EPDM - NEOPRENE - SBR - BUNA-N - SILICONE - NATURAL RUBBER - VITON®

SERVICE Rubber Group, Inc. **BUNA-N** 740 F Avenue Common Name_ Buna-N, Nitrile, NBR Plano, Texas, 75074 ASTM D-2000 Classification SB TOLL FREE: 800-292-2606 Military (MIL-STD 417)_ Phone: 972-881-2606 SB Chemical Definition_ **Butadiene Acrylonitrile** Fax: 972-881-2605 **Applications** BASIC CHARACTERISTICS Nitrile Rubber, or Buna-N Durometer Range (Shore A)_ 20 - 95 automotive transmission Tensile Range (P.S.I.)_ 200 - 3000 Elongation (Max %)_ 600 belts hoses Compression Set Good Resilience - Rebound_ Good oil seals V belts Abrasion - Resistance **Excellent** synthetic leather Tear Resistance_ Good printer's roller Solvent Resistance_ Good to Excellent cable jacketing Oil Resistance_ **Good to Excellent** oil-resistant rubber hose Low Temperature Usage (F deg)___ (-30° to -40°) High Temperature Usage (F deg)___ to +250° printing roller spinning and weaving belt rollers Aging Weather - Sunlight_ Poor Adhesion to Metals Good to Excellent Buna-N, Nitrile is a superior oil and gas resistant synthetic polymer. Used in the aeronautical, petroleum, and automotive industries for fuel, oil, and solvent handling seals, hoses and equipment. Buna-N should not be used in low threshold limit value (TLV) solvents such as acetone, ozone, nitro hydrocarbons, Methyl Ethyl Ketone, and chlorinated hydrocarbons.

FOR: QUICK REF - EPDM - NEOPRENE - SBR - BUNA-N - SILICONE - NATURAL RUBBER - VITON®

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SERVICE Rubber Group, Inc. **SILICONE** 740 F Avenue Silicone Common Name_ Plano, Texas, 75074 ASTM D-2000 Classification_ FC, FE, GE TOLL FREE: 800-292-2606 Military (MIL-STD 417)_ Phone: 972-881-2606 Chemical Definition_ Polysiloxane Fax: 972-881-2605 **Applications** BASIC CHARACTERISTICS Polysiloxane Durometer Range (Shore A) 30 - 90 Tensile Range (P.S.I.) 200 - 1500 cookware Elongation (Max %) 700 medical applications sealants Compression Set Good Resilience - Rebound adhesives Good **lubricants** Abrasion - Resistance_ Fair to Poor Tear Resistance_ insulation Poor create rubber molds Solvent Resistance_ Poor Oil Resistance_ Fair to Poor food storage (-60° to -150°) medical implants Low Temperature Usage (F deg) High Temperature Usage (F deg)_ to +450° electronics Aging Weather - Sunlight Excellent apparel sportswear Adhesion to Metals_ Good ENGINEERING COMMENT Silicone Rubbers are widely used in industry. Generally non-reactive, inert, stable, and resistant to extreme environment and temperatures from -150°F to +450°F. Highly resistant to oxidation, ozone, weather and sunlight. From automotive applications to a large variety of cooking, baking, and food storage products. Due to its inertness, used on many medical and cookware devices. Silicone is generally attacked by most concentrated solvents, oils, concentrated acids and dilute sodium hydroxide.

FOR: QUICK REF - EPDM - NEOPRENE - SBR - BUNA-N - SILICONE - NATURAL RUBBER - VITON®

NATURAL RUBBER Natural Rubber Common Name_ ASTM D-2000 Classification AA Military (MIL-STD 417)_ RN Chemical Definition_ Polyisoprene **BASIC CHARACTERISTICS** Durometer Range (Shore A) 20 - 100 500 - 3500 Tensile Range (P.S.I.)_ Elongation (Max %)_ 700 Compression Set_ **Excellent** Resilience - Rebound_ Excellent Abrasion - Resistance Excellent Tear Resistance Excellent Solvent Resistance_ Poor Oil Resistance Poor (-20º to -60º) Low Temperature Usage (F deg)___ High Temperature Usage (F deg)__ to +1750 Aging Weather - Sunlight_ Poor Adhesion to Metals Excellent ENGINEERING COMMENT:

Natural Rubber is used extensively in many applications and products. It is very stretchy and flexible, has a high coefficient of friction and is extremely waterproof. An elastic hydrocarbon polymer that was originally derived from latex; it has good compression set, food-roll behavior and great molding and extruding properties. Natural Rubber is not recommended for oil and solvent resistance. Also, sunlight and ozone attacks it.

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Applications

Polyisoprene

- door and window profiles
- * hoses
- * belts
- * matting
- * flooring
- * dampeners (anti-vibration mounts)
- * gloves (medical, household and industrial)
- * used in adhesives
- * vehicle and airplane tires

FOR: QUICK REF - EPDM - NEOPRENE - SBR - BUNA-N - SILICONE - NATURAL RUBBER - VITON®

VITON® FLUORO-ELASTOMER SERVICE Rubber Group, Inc. 740 F Avenue Common Name_ Viton®, Fluoro-Elastomer, FKM Plano, Texas, 75074 ASTM D-2000 Classification_ TOLL FREE: 800-292-2606 Military (MIL-STD 417)_ MIL-R-25897 and MIL-R-83248 Phone: 972-881-2606 Chemical Definition_ Fluorinated Hydrocarbon Fax: 972-881-2605 **BASIC CHARACTERISTICS Applications** Durometer Range (Shore A)_ 55 - 90 Viton®, Fluoro-Elastomer, FKM Tensile Range (P.S.I.)_ 500 - 2000 Elongation (Max %)_ 300 seals, hoses, o-rings shaft seals Compression Set **Excellent** Resilience - Rebound_ Fair expansion joints and gaskets auto, appliance Abrasion - Resistance_ Good chemical and fluid power industries Tear Resistance_ Good Solvent Resistance_ **Excellent** Oil Resistance Excellent Low Temperature Usage (F deg)_ (0° to -10°) +400° to +600° High Temperature Usage (F deg)_ Aging Weather - Sunlight Excellent Adhesion to Metals Good **ENGINEERING COMMENT:** Fluoro-Elastomers offer excellent resistance to aggressive fuels and chemicals, including oils, lubricants, most mineral acids and solvents. Static applications from -65° F to 600° F. Viton® and Fluoro-Elastomers are not recommended for ketones, low molecular weight esters and nitro containing compounds.

FOR: QUICK REF - EPDM - NEOPRENE - SBR - BUNA-N - SILICONE - NATURAL RUBBER - VITON®

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