

Extrusion Molded Product Catalog



Silicone rubber
Fluoro rubber
NR CR NBR EPDM

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● The content of this catalog is subject to change without
notice due to product improvements, etc.
The content of the catalog is valid as of July 2018.

Extrusion-molded silicone rubber products

We manufacture silicone rubber-based products, mainly extrusion-molded silicone rubber products. Nozzles are used to continuously mold products of identical cross section. This molding method is commonly referred to as extrusion.

Features

- Molecular structure characterized by siloxane binding (whose binding energy is strong)
- Highly inactive and nontoxic polymers
- Significantly heat-resistant (200°C in general) among various rubber materials
- Stable for a long time in outdoor applications due to minimal deterioration caused by ozone in the atmosphere
- Superb electrical insulation and flame retardance in general, and effective for insulation and sealing applications
- Long products available with various cross sections

Product specifications

- Hardness** 55 ± 5° (type A) for the standard type (customizable between 35° and 80°)
- Color** Translucent for the standard products (colored as requested by the customer)
- Special products** Flame-retardant (UL94V-0), high-strength, and highly heat-resistant types also available
- Package** Available in 100 m rolls in principle

Extrusion shapes

We manufacture all products to order based on the shapes requested by the customer, except for the inventory of finished products (refer to p.5).
The nozzle fabrication fee is incurred for the first order because a new nozzle must be fabricated. No nozzle fabrication fee is incurred for tubes and round cords.

Extrusion-molded silicone rubber sponge products

The products help reduce the weight and improve the low-load sealing performance while retaining the high functionality of silicone rubber.

Features

- Heat-resistant foam (200°C in general) that retains the characteristics of silicone rubber
- Lightweight with specific gravity (apparent density) less than half that of ordinary silicone rubber due to foaming
- Superb thermal insulation performance thanks to closed cells
- Suitable for sealing applications that must not be subjected to a high load (due to low compressive load values)
- Molding precision (cross section) inferior to that of silicone rubber in general
- Long products available with various cross sections

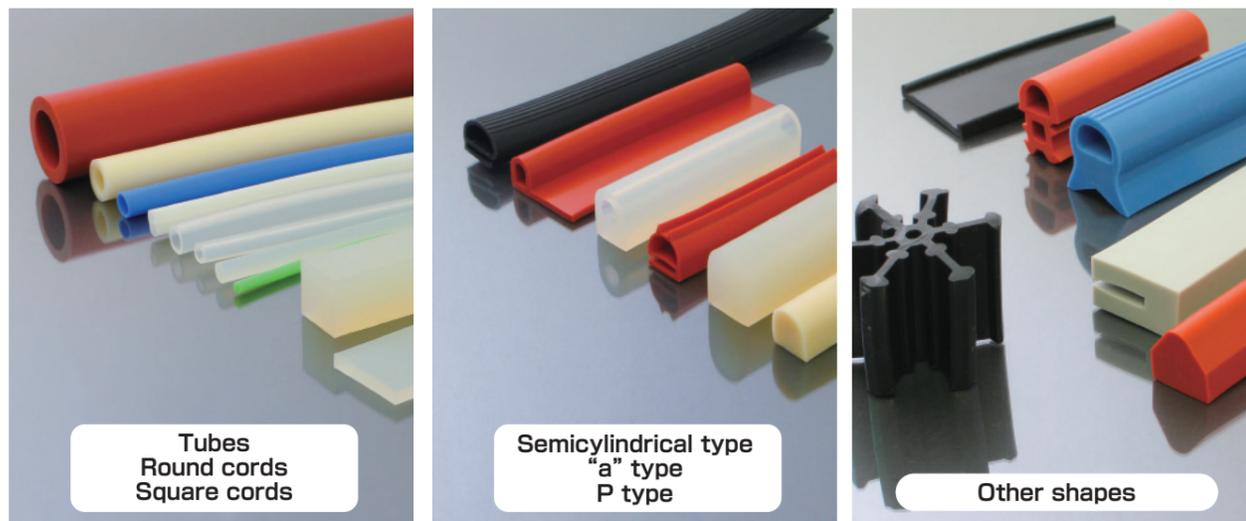
Product specifications

- Hardness** 20 ± 5° (type E) for the standard type (customizable between 5° and 60°)
- Color** Red (Indian red) for the standard products (colored as requested by the customer)
- Special products** Flame-retardant(UL94V-0),and high-strength types also available
- Package** Available in 50 m rolls in general

Extrusion shapes

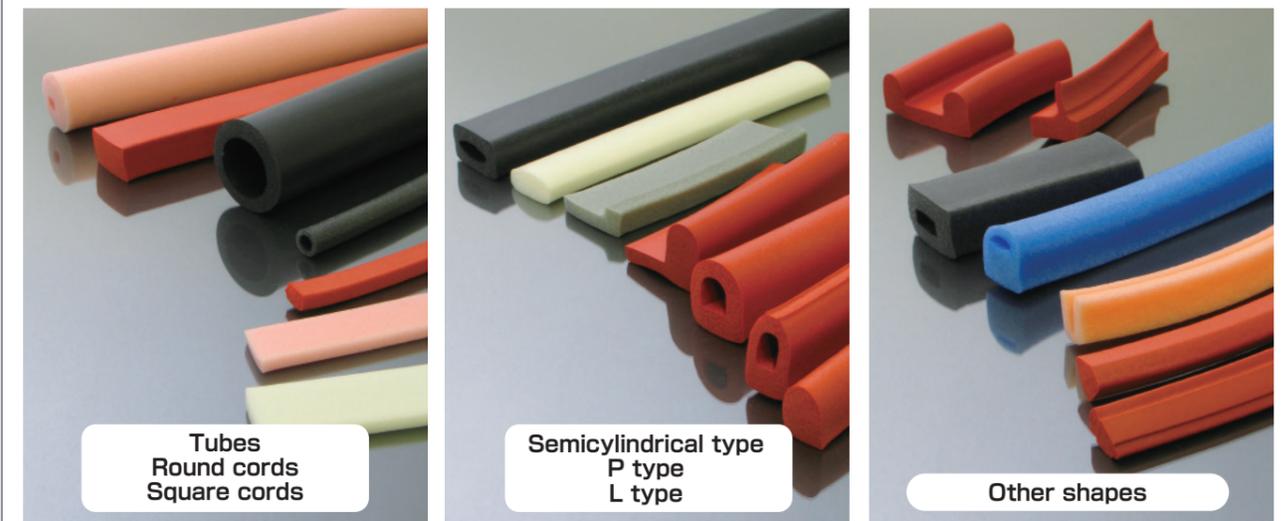
We manufacture all products to order based on the shapes requested by the customer, except for the inventory of finished products (refer to p.5).
The nozzle fabrication fee is incurred for the first order because a new nozzle must be fabricated. No nozzle fabrication fee is incurred for tubes and round cords.

Examples of shapes



※The maximum extrusion size is about $\phi 50 \times \phi 60$ for tubes.
※For extrudability of specific cross sections, please contact us.

Examples of shapes



※The maximum extrusion size is about 30 × 30 mm for square cords and $\phi 30$ for round cords.
※For extrudability of specific cross sections, please contact us.

Extrusion-molded synthetic rubber products

Synthetic rubbers are widely used in many industrial fields, particularly for applications that require strength and impact absorption.

Materials and Features

- NR Hardness range: 50-80° Highest in elasticity but inferior in weather resistance
- CR Hardness range: 45-80° Used in general industrial applications due to the well-balanced performance
- NBR Hardness range: 50-90° Characterized by high oil resistance but inferior in weather resistance
- EPDM Hardness range: 50-80° Highly resistant to weather (outdoor exposure) and ozone

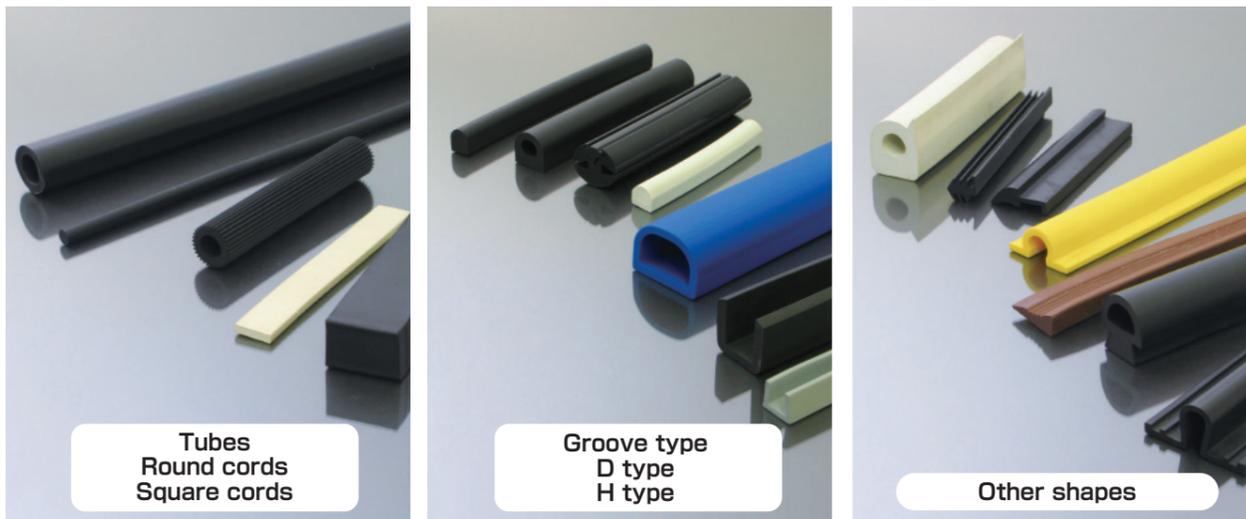
Product specifications

- Hardness** 60 ± 5° (type A) for the standard type (customizable within the range shown above depending on the material)
- Color** Black for the standard products (colored as requested by the customer)
- Special products** High-strength, flame-retardant CR, etc. also available
- Package** Available in 50 or 100 m rolls in general (depending on the cross section; please contact us for details)

Extrusion shapes

We manufacture all products to order based on the shapes requested by the customer, except for the inventory of finished products (refer to p.6).
The nozzle fabrication fee is incurred for the first order because a new nozzle must be fabricated.
No nozzle fabrication fee is incurred for tubes and round cords.

Examples of shapes



※For extrudability of specific cross sections, please contact us.

Extrusion-molded fluoro rubber / fluoro rubber sponge products

Fluoro rubber is the top-grade material characterized by excellent chemical stability.

Features

- Highly resistant to heat (200°C in general) but slightly inferior in cold resistance (-20°C)
- Highly resistant to oils and hardly affected by fuel oils (kerosene and gasoline) and lubricants
- Highly resistant to chemicals (acids and solvents) but affected by strong alkalis and ethers
- Highly resistant to weather and characterized by outstanding resistance to UV and ozone among rubber materials

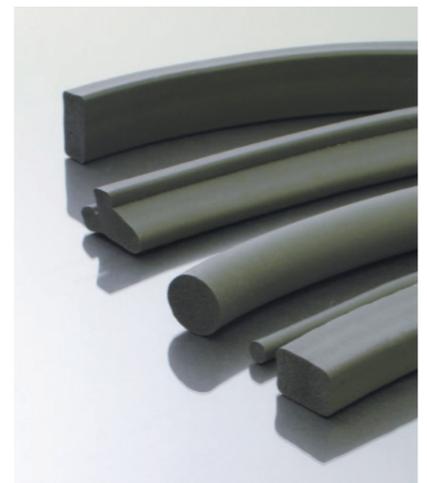
Fluoro rubber extrusion

- Hardness** 75 ± 5° (type A), and 60 ± 5° (type A)
- Color** Black
- Special products** The roll length (m) depends on the cross section.
- Finishing**
 - We manufacture products to order based on the shapes requested by the customer. The nozzle fabrication fee is incurred for the first order. (No nozzle fabrication fee is incurred for round cords.)
 - For extrudability of specific cross sections, please contact us.
 - The maximum extrusion size is ϕ 20 for round cords and 20 × 20 mm for square cords.

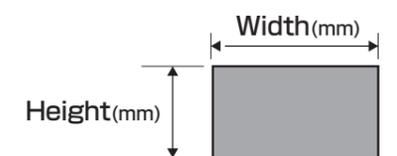


Fluoro rubber sponge extrusion

- Hardness** 40 ± 5° (type E)
- Color** Black
- Special products** The roll length (m) depends on the cross section.
- Finishing**
 - We manufacture all products to order based on the shapes requested by the customer, except for the inventory of finished products (refer to p.6). The nozzle fabrication fee is incurred for the first order. (No nozzle fabrication fee is incurred for round cords and square cords below.)
 - For extrudability of specific cross sections, please contact us.
 - The extrusion size is between ϕ 6 and ϕ 20 for round cords. For square cords, refer to the list of existing nozzles below. ("X" represents items that cannot be extruded.)



(Cross section of a square cord)



List of existing nozzles	Height (mm) \ Width (mm)	10	15	20	25	30
	5	○	○	○	○	○
10	○	○	○	○	○	
15	○	○	○	○	×	
20	○	○	○	○	×	

Finished products in inventory (silicone)

Size table for finished products in inventory

Silicone rubber sponge square cords / round cords (red)

Height×Width(mm)	Roll(m)	Height×Width(mm)	Roll(m)	Height×Width(mm)	Roll(m)
3×50	50	6×30	50	15×20	50
5×10	50	10×10	50	15×25	50
5×15	50	10×15	50	15×30	50
5×20	50	10×20	50	20×20	50
5×25	50	10×25	50	20×25	50
3×10	50	5×30	50	10×30	50
3×15	50	5×40	50	10×40	50
3×20	50	5×50	50	12×12	50
3×25	50	6×10	50	12×15	50
3×30	50	6×15	50	12×25	50
3×40	50	6×20	50	15×15	50

Diameter (mm)	Roll(m)	Diameter (mm)	Roll(m)	Diameter (mm)	Roll(m)
5φ	50	8φ	50	13φ	50
6φ	50	9φ	50		
7φ	50	10φ	50		

Reference physical properties of products Hardness : 20 ± 5° (type E)

Test item	Test result	Measurement condition
Physical properties	Hardness ※1 (type E)	20
	Tensile strength (MPa)	0.9
	Elongation (%)	250
Heat resistance	Hardness change	+1
	Tensile strength change rate	-3%
	Elongation change rate	-13%
	Heat resistance test condition : 200°C×72H	

Food sanitation standards (compliant with Public Notice No. 370 issued by the Japanese Ministry of Health, Labour and Welfare)

*1 In JIS-K6253:2006, the measurement method was changed (measurement conducted three seconds later). However, the measurement values in the above table are based on the conventional measurement method (measurement conducted within one second) which is still widely used.

(The values in the table are for reference and do not represent the standard values.)

Size table for finished products in inventory

Silicone rubber tubes / round cords (translucent)

Inside diameter × Outside diameter(mm)	Roll(m)	Inside diameter × Outside diameter(mm)	Roll(m)	Inside diameter × Outside diameter(mm)	Roll(m)
3×4	100	6×9	100	9×12	50
3×5	100	6×10	100	9×13	50
3×6	100	6×12	50	9×14	50
3×7	100	7×9	100	10×12	50
4×6	100	7×10	100	10×13	50
0.5×1	100	4×7	100	7×11	100
1×2	100	4×8	100	7×12	50
1×3	100	5×7	100	8×10	100
1.5×2.5	100	5×8	100	8×11	100
1.5×3	100	5×9	100	8×12	50
2×3	100	5×10	100	8×13	50
2×4	100	5×11	50	8×14	50
2×5	100	6×8	100	9×11	50

Diameter (mm)	Roll(m)	Diameter (mm)	Roll(m)	Diameter (mm)	Roll(m)
2φ	100	6φ	100	10φ	50
3φ	100	7φ	100	12φ	50
4φ	100	8φ	100		
5φ	100	9φ	50		

Reference physical properties of products Hardness : 55 ± 5° (type A)

Test item	Test result	Measurement condition
Physical properties	Hardness ※1 (type A)	58
	Tensile strength (MPa)	11.4
	Elongation (%)	525
Heat resistance	Hardness change	+4
	Tensile strength change rate	-4%
	Elongation change rate	-10%
	Heat resistance test condition : 200°C×72H	

Food sanitation standards (compliant with Public Notice No. 370 issued by the Japanese Ministry of Health, Labour and Welfare)

(The values in the table are for reference and do not represent the standard values.)

Inventory of finished products (CR, NBR, fluoro rubber sponge)

Size table for finished products in inventory

CR and NBR round cords (black)

Diameter (mm)	Roll(m)	Diameter (mm)	Roll(m)
3φ	100	7φ	50
4φ	100	8φ	50
5φ	100	9φ	50
6φ	100	10φ	50

Diameter (mm)	Roll(m)	Diameter (mm)	Roll(m)
3φ	100	7φ	50
4φ	100	8φ	50
5φ	100	9φ	50
6φ	100	10φ	50

Reference physical properties of products Hardness : 60 ± 5° (type A)

Test item	Test result		Measurement condition
	CR	NBR	
Physical properties	Hardness ※1 (type A)	60	59
	Tensile strength (MPa)	7.6	7.6
	Elongation (%)	360	480
Heat resistance	Hardness change	+7	+4
	Tensile strength change rate	+7%	-2%
	Elongation change rate	-5%	-8%
	Heat resistance test condition : 70°C×48H		

(The values in the table are for reference and do not represent the standard values.)

Size table for finished products in inventory

Fluoro rubber sponge square cords / round cords (black)

Height×Width (mm)	Roll(m)	Height×Width (mm)	Roll(m)
5×10	30	10×20	20
5×15	20		
10×10	30		
10×15	20		

Diameter (mm)	Roll(m)
6φ	20
8φ	20
10φ	20

Reference physical properties of products Hardness : 40 ± 5° (type E)

Test item	Test result	Measurement condition
Physical properties	Hardness ※1 (type E)	40
	Tensile strength (MPa)	0.9
	Elongation (%)	160
Heat resistance	Hardness change	+6
	Tensile strength change rate	+19%
	Elongation change rate	-25%
Heat resistance test condition : 200°C×72H		

(The values in the table are for reference and do not represent the standard values.)

The quantity in inventory (silicone, CR, NBR, and fluoro rubber sponge) is subject to change. Please contact us to check the latest information.

※ The size of products in inventory is subject to change without notice.

Compliance with environmental regulations

All the extrusion molded products comply with the amended RoHS Directive that bans the use of six substances (Cd, Pb, Hg, Cr⁶⁺, PBBs, and PBDEs) with four phthalates (DEHP, BBP, DBP, and DIBP) added.

(Note) RoHS Directive: Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment.