



SEAL MATERIAL & PROFILE OVERVIEW

PRODUCT RANGE AND SERVICES

seal-mart



at seal-mart we offer you complete product range and services

- sealing solutions tailored to your specifications
- partnership from the design phase to serial production
- just-in-time manufacturing of seals and components up to 4.000 mm diameter
- production of industrial gaskets of any kind
- production of advanced engineering plastics products (AEPP)
- cylinder repair services and remanufacturing



quality makes the difference

quality is at the core of everything we do. production breakdowns due to sealing problems can cause huge losses. therefore, we make every effort to deliver high quality sealing products that meet our customers' needs. at seal-mart, we are constantly striving to enforce and improve our quality standards, since customers demand the highest quality sealing solutions to compete in their highly competitive markets.

superior manufacturing concept

at seal-mart we know that only state-of-the-art technology can provide us with an edge on our competitors. a rapidly changing environment demanded for a new production concept that surpasses our customers' requirements, such as:

- delivery on demand with short cycle times
- no mould or tooling limitations
- no stock requirements for our customers
- seal engineering to customer specification

to face this challenge, we manufacture seals with cutting edge CNC turning technology to satisfy the very specific needs of every customer, in every industry.

we serve the following industries

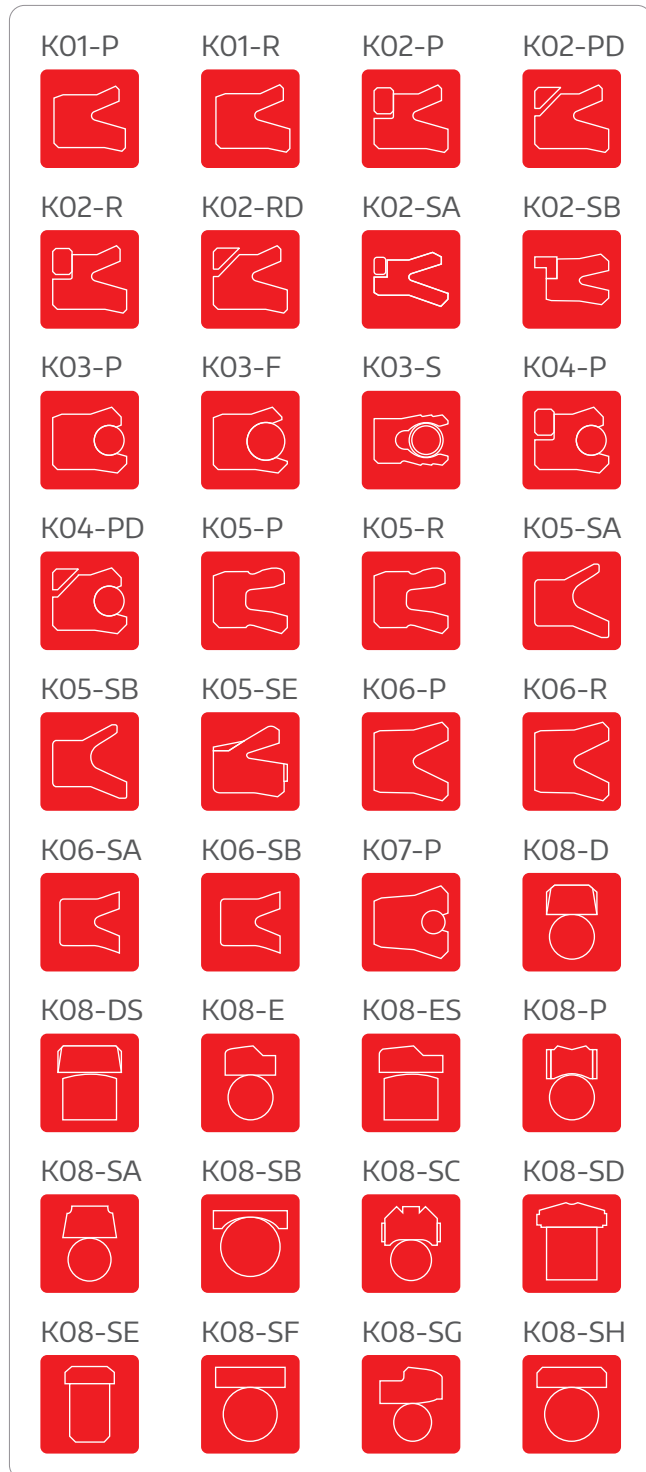
- agricultural industry
- automotive industry
- cement, lime, ceramic & refractory industry
- chemical industry
- construction industry
- electronic industry
- food & pharmaceutical industry
- general mechanical engineering
- mining industry
- non-ferrous industry
- oil & gas industry
- plastic & rubber processing industry
- power supply industry
- pulp & paper industry
- shipbuilding industry
- steel industry
- textile industry
- water supply & water treatment industry
- wood & wood processing industry

SEAL PROFILE HYDRAULIC & PNEUMATIC

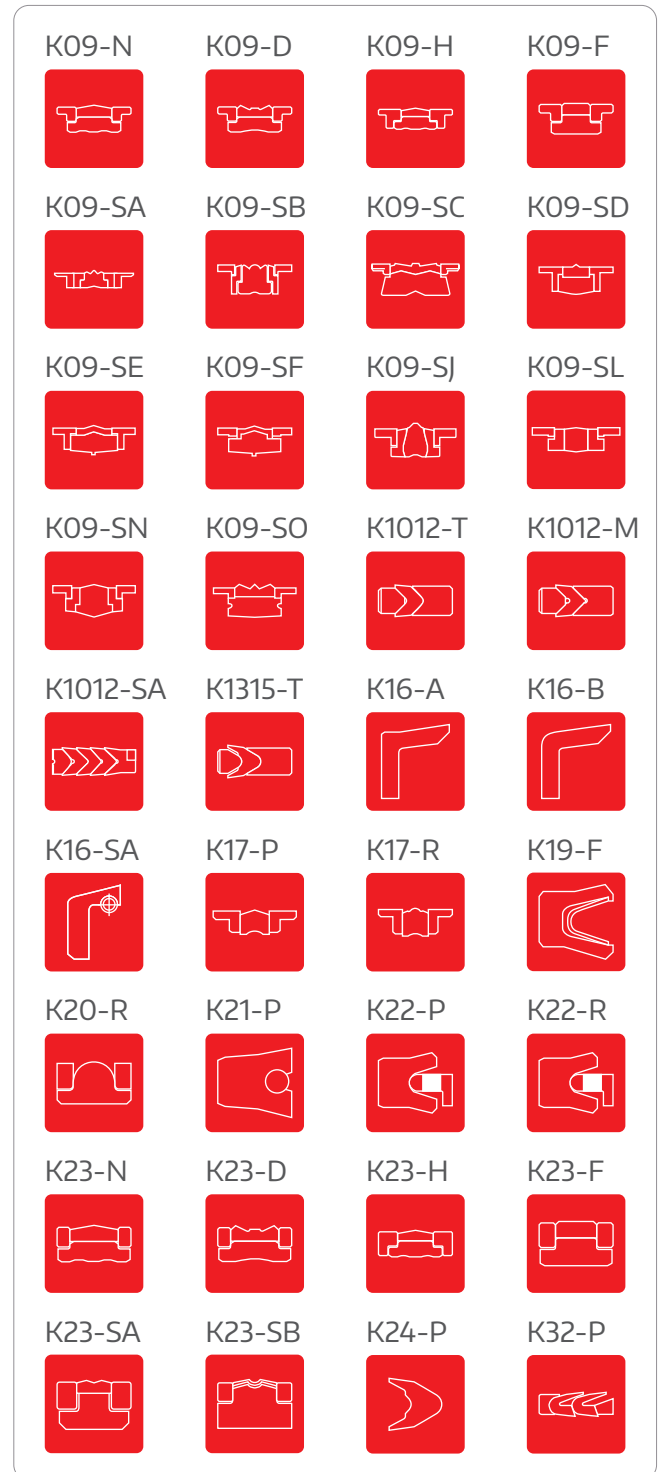
seal-mart



piston seal



piston seal



SEAL PROFILE HYDRAULIC & PNEUMATIC



piston seal

K35-P 	K60 	K61 	K62
K64 	K65 	K66 	K67
K68 	K68-B 	K69 	K70
K71 	K72 	K73 	K74
K75 	K76 	K77 	K78
K80 	K82 	K86 	K88

rod seal

S02-SA 	S03-P 	S03-F 	S03-S
S04-P 	S04-PD 	S05-P 	S05-R
S06-P 	S06-R 	S06-SA 	S07-P
S08-P 	S08-PE 	S08-R 	S08-SA
S08-SB 	S09-D 	S09-DS 	S09-E
S09-ES 	S09-P 	S09-SA 	S09-SB
S09-SD 	S09-SF 	S09-SG 	S09-SH
S1012-M 	S1012-T 	S1012-SA 	S1315-T
S16-A 	S16-B 	S16-SB 	S17-P

rod seal

S01-P 	S01-R 	S01-SC 	S02-P
S02-PD 	S02-R 	S02-RD 	S02-S

SEAL PROFILE HYDRAULIC & PNEUMATIC



rod seal

S17-R	S17-SA	S17-SB	S18-P
S18-R	S19-F	S20-R	S21-P
S22-P	S22-R	S24-P	S2527-F
S2931-F	S32-P	S32-SA	S35-P
S60	S61	S62	S63
S64	S65	S67	S68
S69	S70	S73	S75
S76	S78		

wiper

A01-A	A01-B	A02-A	A02-B
A02-I	A02-SA	A02-SB	A03-A
A03-SA	A03-SC	A03-SD	A04-A
A04-B	A05-A	A05-B	A05-I
A06-A	A07-A	A08-A	A08-B
A09-A	A10-A	A11-A	A11-I
A11-SC	A11-SF	A11-SG	A11-SJ
A11-SK	A11-SL	A12-A	A12-B
A13-A	A25-F	A26-F	A27-F

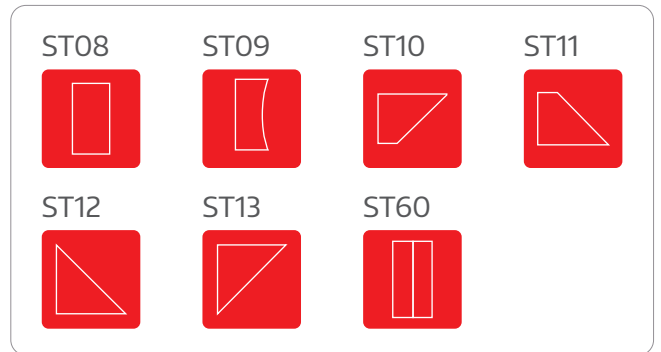
SEAL PROFILE HYDRAULIC & PNEUMATIC



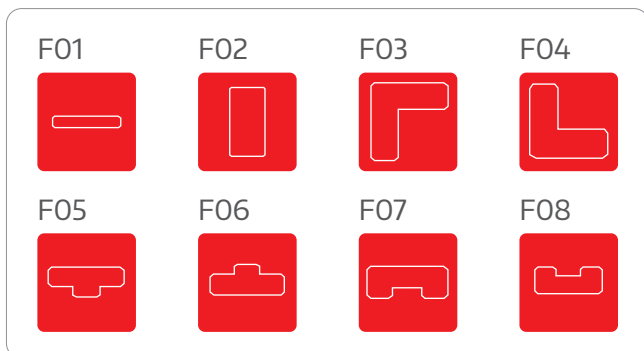
wiper



guide ring



backup ring

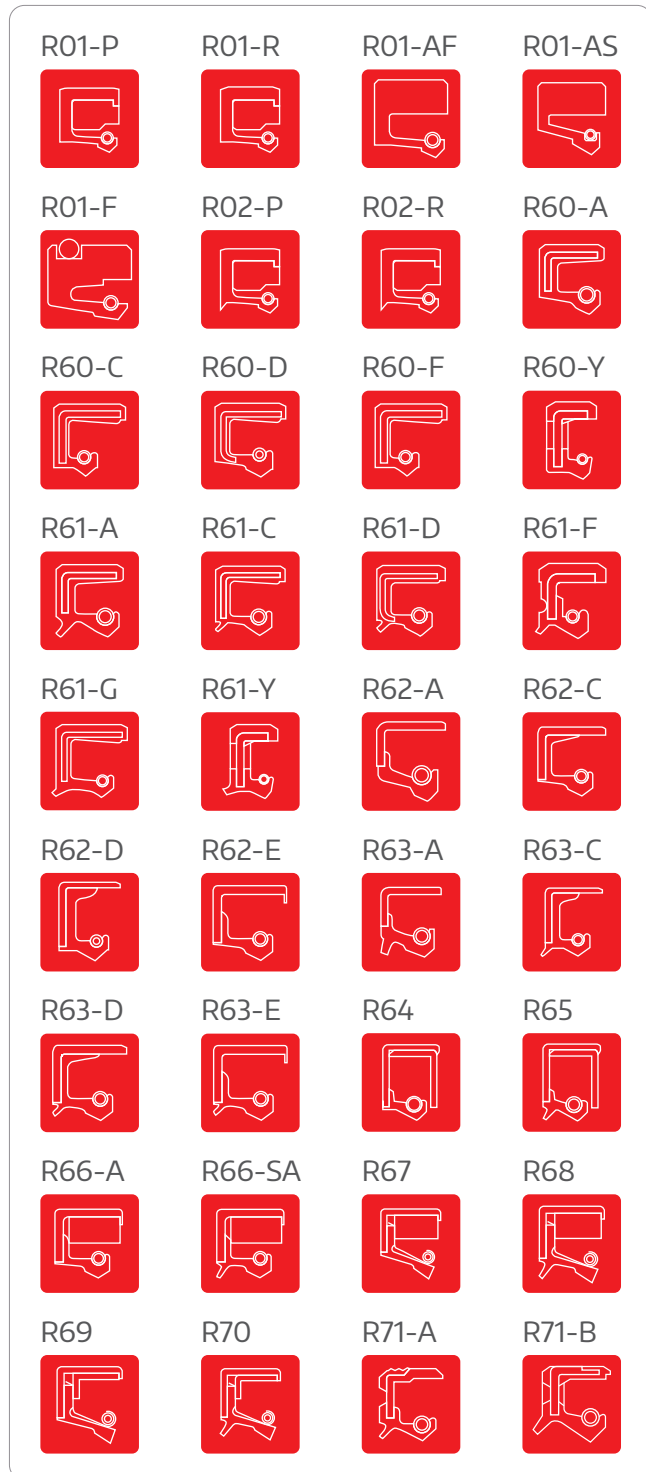


SEAL PROFILE ROTARY SEAL

seal-mart



oil seal



oil seal



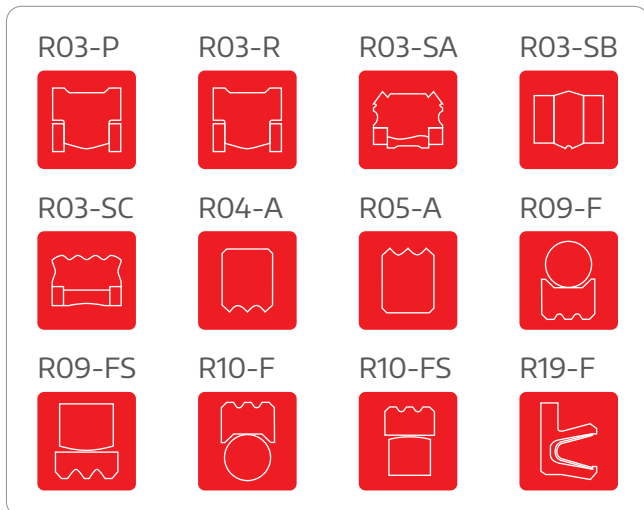
SEAL PROFILE ROTARY SEAL



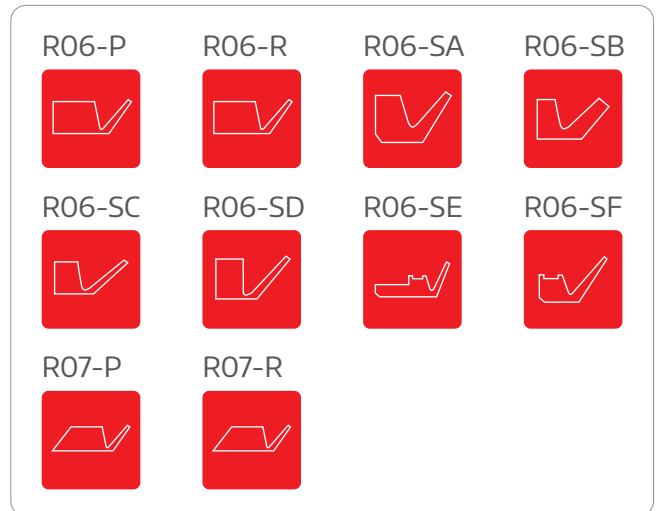
oil seal



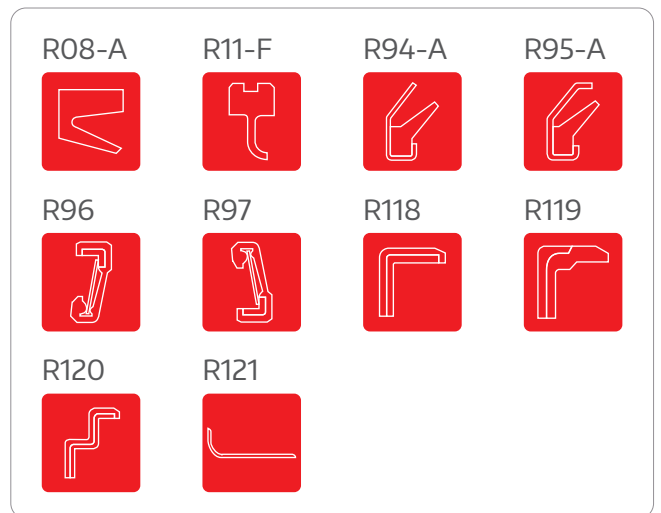
roto slide seal



v ring

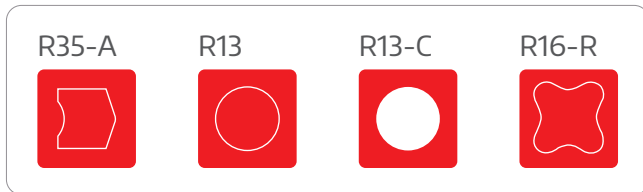


rotary other

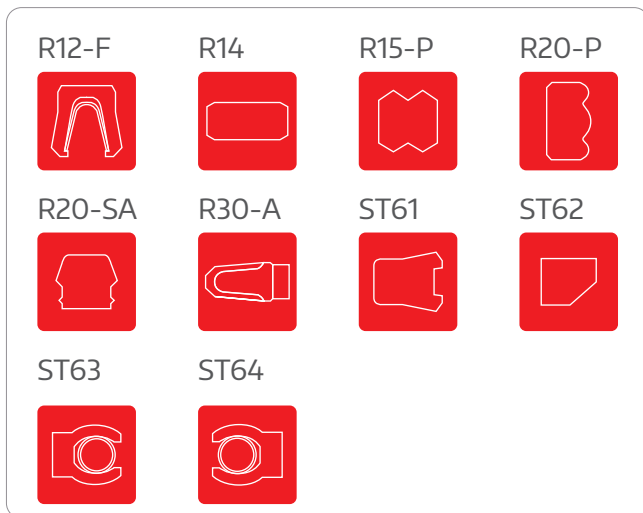


SEAL PROFILE STATIC SEAL

dox ring



static other



STANDARD MATERIALS SPECIFICATION



standard materials specification	standard	unit	polyurethanes										rubber elastomers						thermoplastics									
			S-mart PU standard polyurethane	S-mart HPU hydrolysis-resistant polyurethane	S-mart GPU polyurethane for gasket seals and big cross sections	S-mart LTPU low-temperature polyurethane	S-mart HTPU high-temperature polyurethane	S-mart SPU self-lubricated polyurethane	S-mart XPU hard polyurethane	S-mart XHPU hard hydrolysis resistant polyurethane	S-mart XSPU hard self-lubricated polyurethane	S-mart NBR acrylonitrile-butadiene-rubber	S-mart HNBR hydrogenated acrylonitrile-butadiene rubber	S-mart FKM VITON®/fluorocarbon rubber	S-mart EPDM ethylene-propylene diene rubber	S-mart MVO vinyl methyl siloxane rubber	S-mart TFE/P - ALFAS tetrafluoroethylene propylene rubber (ALFAS)	S-mart PTFE virgin polytetrafluoroethylene	S-mart PTFE glass polytetrafluoroethylene filled with 15% Glass Filler - 5% MoS ₂	S-mart PTFE bronze polytetrafluoroethylene filled with 40% Bronze	S-mart PTFE carbon polytetrafluoroethylene filled with 25% Carbon	S-mart PTFE graphite polytetrafluoroethylene filled with 15% Graphite	S-mart PTFE ekonol polytetrafluoroethylene filled with 10% Ekonol	S-mart POM polyoxymethylene (polycrystal)	S-mart PA polyamide	S-mart PAEK polyaryletherketone	S-mart UHMWPE ultra high molecular weight polyethylene	
colour			green	red	red	blue	white	grey/black	dark green	dark red/yellow	dark grey	black	black/green	brown	black	reddish brown/blue	black	white	grey	bronze (brown)	black	dark grey	cream	white/black	natural/black	cream	natural/white	
hardness	DIN 53505 / ISO 868	Shore A	95±2	95±2	95±2	95±2	96±2*	95±2				85±5	85±5	83±5	85±5	85±5	83±5											
hardness	DIN 53505 / ISO 868	Shore D	48±3	48±3	47±3	48±3	50±3*	48±3	57±3	60±3	57±3							57	60	64	65	60±3*	56±3*	82	77	86	61±3*	
ball indentation hardness	DIN 53456 H 135/30	N/mm ²																				26±5	28±5				36	
density	DIN 53479 / ISO 1183	g/cm ³	1,20	1,20	1,20	1,17	1,17*	1,24	1,21	1,22	1,26	1,31	1,22	2,30	1,22	1,52	1,60	2,17	2,25	3,00	2,10	2,13	2,04	1,41	1,15	1,32	0,93	
100% modulus	DIN 53504	N/mm ²	≥12	≥13	≥11	≥12	11	17	≥18	≥20	24	≥11	≥10	≥5	≥9	≥5	8											
tensile strength / yield stress	DIN 53504[53455] ASTM D 4745-79	N/mm ²	≥40	≥50	≥45	≥50	45	50	≥50	≥50	45	≥16	≥18	≥8	≥12	≥7	13	27	18	22	15	16**	20**	62	65	97	40**	
compressive strength	DIN 53455	N/mm ²																					11				88	
elongation at break	DIN 53504[53455] ASTM D 4745-79	%	≥430	≥330	≥280	≥450	500	380	≥400	≥350	350	≥130	≥180	≥200	≥110	≥130	200	300	200	280	180	140**	250**	40	120	≥50	50**	
modulus of elasticity - tensile test	DIN 53457	N/mm ²																						2600	1800	3600	680	
compression set 70°C/24h 20% Def		%	≤30	≤27	≤30	≤27		25	24	26	24																	
100°C/24h 20% Def		%	≤35	≤33	≤40	≤33		30	29	30	30																	
100°C /22h	DIN 53517	%										≤22	≤22		≤15													
175°C /24h	DIN 53517	%												≤20		≤15	29											
rebound resilience	DIN 52512	%	42	29	43	50						28	29	7	38	44												
tear strength	DIN 53515	N/mm	≥100	≥100	≥40	≥80	80	120	≥140	170	160	21	20	15	21		19											
abrasion	DIN 53516	mm ³	18	17	25	15	15	17	18	20	20	90	90	150	120		110											
minimum service temperature		°C	-30	-20	-30	-50	-35	-20	-30	-20	-20	-30	-25	-20	-50	-60	-10	-200	-200	-200	-200	-200	-200	-200	-50	-40		-200
maximum service temperature		°C	+110	+110	+110	+110	+135	+110	+110	+110	+110	+100	+150	+200	+150	+200	+200	+260	+260	+260	+260	+260	+260	+260	+100	+100	+260	+80
mineral oil based resistance		RT	+	+	+	+		+	+	+	+	+	+	+	-	+0	+	+	+	+	+	+	+	+	+	+	+	
		600C	+	+	+	+		+	+	+	+	+	+	+	-	+0	+	+	+	+	+	+	+	+	+	+	+	
HFA-E water +oil emuls. resistance		RT	0	+	+	0		+	0	+	+	+	+	+	-	0	+	+	+	+	+	+	+	+	+	+	+	
		600C	-	+	0	-		+	-	+	+	+	+	0	-	0	+	+	+	+	+	+	+	+	+	+	+	
water resistance		RT	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	+	+	
		600C	-	+	0	-		+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	+	+	

legend;
+ suitable
- not recommended
0 unknown data or limited resistance
RT room temperature (20°C)
* ISO standard
** ASTM standard

SPECIAL MATERIALS SPECIFICATION

data of other special materials such as list below available on request

	material name	color	description
polyurethanes	s-mart HPU-95A-blue	blue	hydrolysis resistant polyurethane, 95 shore A, blue
	s-mart HPU-95A-natural	natural	hydrolysis resistant polyurethane, 95 shore A, natural
	s-mart GPU-57D-yellow	yellow	polyurethane, 57 shore D, casted polyurethane, yellow
	s-mart GPU-72D-black	black	polyurethane, 72 shore D, casted polyurethane, black
rubber elastomers	s-mart NBR-85A-white	white	acrylonitrile butadiene rubber, 85 shore A, white
	s-mart NBR-85A-LT-black	black	acrylonitrile butadiene rubber, 85 shore A, for low temperature, black
	s-mart HNBR-85A-FG-black	black	hydrogenated acrylonitrile butadiene rubber, 85 shore A, food grade, black
	s-mart HNBR-85A-LT-black	black	hydrogenated acrylonitrile butadiene rubber, 85 shore A, for low temperature, black
	s-mart HNBR-85A-ED-black	black	hydrogenated acrylonitrile butadiene rubber, 85 shore A, explosive decompression grade, black
	s-mart HNBR-90A-black	black	hydrogenated acrylonitrile butadiene rubber, 90 shore A, black
	s-mart HNBR-93A-black	black	hydrogenated acrylonitrile butadiene rubber, 93 shore A, black
	s-mart FKM-75A-PEROX-black	black	fluorocarbon rubber, 75 shore A, peroxide cured, black
	s-mart FKM-75A-LC-black	black	fluorocarbon rubber, 75 shore A, low compression set, black
	s-mart FKM-80A-black	black	fluorocarbon rubber, 80 shore A, black
	s-mart FKM-80A-FG-black	black	fluorocarbon rubber, 80 shore A, food grade, black
	s-mart FKM-85A-FG-white [brown]	white/brown	fluorocarbon rubber, 85 shore A, food grade, white/brown
	s-mart FKM-90A-black	black	fluorocarbon rubber, 90 shore A, black
	s-mart FKM-95A-black	black	fluorocarbon rubber, 95 shore A, black
	s-mart EPDM-85A-FG-white	white	ethylene propylene diene rubber, 85 shore A, food grade, white
	s-mart EPDM-85A-FG-black	black	ethylene propylene diene rubber, 85 shore A, food grade, black
	s-mart EPDM-93A-black	black	ethylene propylene diene rubber, 93 shore A, black
	s-mart MVQ-85A-FG-translucent	translucent	vinyl methyl silicone rubber, 85 shore A, food grade, translucent
	s-mart TFE/P-85A-ED-black	black	tetrafluoroethylene propylene rubber (AFLAS), 85 shore A, explosive decompression grade, black
thermoplastics	s-mart PTFE-57D-turquoise	turquoise	polytetrafluoro ethylene, 57 shore D, filled with 1% pigments, turquoise
	s-mart PTFE-60D-GF25-grey	grey	polytetrafluoro ethylene, 60 shore D, filled with 25% glassfiber, grey
	s-mart PTFE-60D-GF15-turquoise	turquoise	polytetrafluoro ethylene, 60 shore D, filled with 15% glassfiber & 1% pigments, turquoise
	s-mart PTFE-62D-GP-orange	orange	polytetrafluoro ethylene, 62 shore D, filled with glass & pigments, orange
	s-mart PTFE-63D-BR46-blue	blue	polytetrafluoro ethylene, 63 shore D, filled with 46% bronze and 1% pigments, bronze blue
	s-mart PTFE-64D-BR40-green	green	polytetrafluoro ethylene, 64 shore D, filled with 40% bronze, green
	s-mart PTFE-60D-CA-black	black	polytetrafluoro ethylene, 60 shore D, filled with carbon & additives, black
	s-mart TEXGRA	grey	polyester fabric reinforced polyester resin with graphite filler, grey



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germany	philippines	

