



TAILOR-MADE SEALS AND SERVICE PORTFOLIO PRODUCT OVERVIEW



The information contained herein is considered to be reliable, however no assurances, guarantees or warranties of any kind are given with regard to its correctness or suitability for any purpose. The information presented here is based on labo

ratory tests and is not necessarily indicative of the performance of the final product. Full tests and the performance of the final product are the responsibility of the user.

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COMPANY

The Freudenberg Group was founded in 1849 and is still owned by the approximately 300 descendants of the company founder. The resulting financial stability and social awareness are decisive success factors that create trust. Today, Freudenberg is a global, broadly diversified group of companies divided into Business Groups that operate in a wide variety of sectors. The company has always been considered an innovation and technology leader, from Vileda® brand household products to technically complex sealing solutions.

Freudenberg Sealing Technologies (FST) is the largest Business Group in the Freudenberg Group and is part of the Seals and Vibration Control Technology division. It is a supplier, development and service partner for customers in a wide range of market segments, such as the automotive industry, civil aviation, mechanical engineering and ship-building, the food and pharmaceutical industry and the agricultural and construction machinery industry.

Starting with the Simmerring® developed by Freudenberg in 1929, FST now has a broad, continuously customer-oriented product portfolio of premium sealing technology for highly demanding applications – from tailor-made individual solutions to complete sealing packages. The company benefits from more than 170 years of engineering and materials experience in the research, development and introduction of innovative product and process solutions.

Freudenberg Sealing Technologies rounds off its portfolio with complementary industry-standard solutions from the Dichtomatik product brand. The two-brand strategy is part of the comprehensive service portfolio of Freudenberg Sealing Technologies and guarantees a full range of seals and product-related services. Dichtomatik products are manufactured by certified suppliers and are available in numerous seal forms and materials. They are suited for moderate

operating conditions in static and dynamic applications and for fluid seals in a wide range of market segments. These include the hydraulics industry, the wind power plant industry, agricultural machinery and systems and components for general mechanical engineering. For more specific applications, e.g. in the food industry, Dichtomatik brand products are also available in certified materials.

Freudenberg Industrial Services offers technical services such as the preparation of drawings, radial force measurements, comprehensive quality and material documentation as well as material modifications and testing to ensure that all seals function reliably even in individual applications. Furthermore, local availability ensures short distances and fast response times to best serve customer needs.

FST SERVES THE ENTIRE SEALING MARKET AND THUS MEETS ALL MARKET REQUIREMENTS – QUICKLY, RELIABLY AND FROM A SINGLE SOURCE. ZUVERLÄSSIG UND AUS EINER HAND.

INDUSTRY-SPECIFIC AND CUSTOMIZED SERVICE CONCEPTS

ONLINE ORDERING PLATFORM EASY

The EASY online ordering platform enables easy order processing, as well as price, delivery time and stock queries around the clock. Besides detailed product information, installation space and cross-sectional drawings are available for download. The EASY Business Connector is used to transfer your orders directly to your SAP system. This ensures that you are always up to date on the status of your order. Register today if you do not yet have an EASY account



APPLICATION KNOW-HOW

Dichtomatik products are also certified for special applications, e.g. in the food industry. This enables us to find the right solution for every application. To ensure that seals function reliably even in individual applications, our team of experts offers technical services such as drawing preparation, radial force measurements, comprehensive quality and material documentation as well as material modifications and testing. Customer-specific sealing solutions, kitting and single packaging are just some of the other services that can be offered (perhaps depending on country-specific service offerings).



LOGISTICAL SERVICES AND QUALITY STANDARDS

The 6,500 m² warehouse in Hamburg, which functions as a European logistics hub, has just one objective: delivering Dichtomatik's uniquely high number of warehoused items as quickly as possible to the locations they are needed at. In addition to the roughly 60,000 standard dimensions, around 15,000 customer-specific seals are available from stock. Additional warehouse locations around the world support the supply chain to ensure rapid availability for our customers.



Special logistics solutions, such as Kanban or vendor-managed inventory, quality testing and simplified customs processes due to certifications, simplify order processing. The warehouse in Hamburg is certified according to DIN ISO 9001 and DIN ISO 14001, thus guaranteeing standardized processes in the quality and environmental management system. In addition, current processes are analyzed

and improved in regular Kaizen workshops. Furthermore, warehouse processes are supported by new technologies. For example, the forklifts have been converted into mobile workstations by using tablets and portable printers, and innovative glove scanners are used for scanning processes. Our other warehouses also meet the highest quality requirements and are part of regular certifications.

PRODUCT PORTFOLIO OF THE DICHTOMATIK BRAND

PRODUCTS FOR STATIC APPLICATIONS



The whole range of static seals – O-rings, cords, x-rings, cover seals, bolt seals, flange and profile seals, etc. – is available in a large number of dimensions – metric, inch and other international standards. The variety of materials, also with application-specific certifications, leaves nothing to be desired.

PRODUCTS FOR ROTATING MOVEMENTS



Rotary shaft seals are available in the standard versions with and without protective lips and in the materials NBR and FKM. In addition to the standard designs, the product range also includes special designs of rotary shaft seals, axial seals, shaft sleeves and radial seals for rotary and swivel movements..

PRODUCTS FOR TRANSLATIONAL MOVEMENTS



Pistons and rod seals, wipers, guide belts and rings for hydraulics are available from stock in countless standard dimensions in the materials NBR, PTFE, TPU, hard fabric and NBR fabric-reinforced. Application-specific modifications of the design or material can also be realized.

IMPORTANT NOTE
















Dichtomatik products comply with the industrial standard. For this reason, they are not recommended for use in the automotive industry, especially in safety-relevant applications. An overview of complementary premium sealing solutions can be found at www.fst.com.







STATIC SEALS

The values indicated here are maximum values. All of them must not be achieved simultaneously.



O-RINGS

Profile	Design	Material	Hardness (Shore A)	Color	Temperature (°C)	Special Feature
	O-Ring	EPDM	70	black	-45 to +130	
	O-Ring	EPDM	70	black	-50 to +150	peroxide cross-linking
	O-Ring	FKM	70	black	-15 to +200	
	O-Ring	FKM	75	green	-15 to +200	
	O-Ring	FKM	75	black	-15 to +200	peroxide cross-linking
	O-Ring	FKM	80	black	-15 to +200	
	O-Ring	FKM	90	green	-15 to +200	
	O-Ring FEP	FEP-encapsulated FKM		transparent/black	-20 to +205	FEP encapsulated FKM O-Ring
	O-Ring	HNBR	70	black	-30 to +150	
	O-Ring	NBR	70	black	-30 to +100	Bag in bag delivery is possible
	O-Ring	NBR	80	black	-30 to +100	
	O-Ring	NBR	90	black	-30 to +100	
	O-Ring	PTFE		white	-200 to +260	
	O-Ring	VMQ	70	redbrown	-55 to +200	
	O-Ring FEP	FEP-encapsulated VMQ		transparent/redbrown	-60 to +205	FFEP encapsulated VMQ O-Ring






ROUND CORD AND ROUND CORD RINGS

Profile	Design	Material	Hardness (Shore A)	Color	Temperature (°C)	Special Feature
	RS	EPDM	70	black	-50 to +150	peroxide cross-linking
	RS	FKM	75	black	-15 to +200	
	RS	NBR	70	black	-30 to +100	
	RS	VMQ	60	redbrown	-55 to +200	FDA- and EC 1935/2004-compliant


X-RINGS

Profile	Design	Material	Hardness (Shore A)	Color	Temperature (°C)	Special Feature
	X-Ring	NBR	70	black	-30 to +100	
	X-Ring	FKM	70	black	-15 to +200	





BACK-UP RINGS

Profile	Design	Material	Hardness (Shore A)	Color	Temperature (°C)	Special Feature
	STU	NBR	90 Shore A	black	-30 to +100	
	STR END	PTFE	≥ 51 Shore D	white	-200 to +260	
	STR GS	PTFE	≥ 51 Shore D	white	-200 to +260	
	STR END	POM	≥ 82 Shore D	white	-50 to +90	
	STR GS	POM	≥ 82 Shore D	white	-50 to +90	

BOLT SEALS

Profile	Design	Material	Hardness (Shore A)	Color	Max. pressure in MPa (bar)	Temperature (°C)	Special Feature
	US	FKM	70	brown	25 (250)	-15 to +200	
	US	NBR	70	black	25 (250)	-30 to +100	
	US	NBR	70	black	25 (250)	-30 to +100	Metal ring, rust- and acid-resistant steel 1.4301 (AISI 304)
	USS	FKM	70	brown	25 (250)	-15 to +200	Additional centering
	USS	FKM	70	brown	25 (250)	-15 to +200	Additional centering, metal ring, rust- and acid-resistant steel 1.4301 (AISI 304)
	USS	NBR	70	black	25 (250)	-30 to +100	Additional centering
	USS	NBR	70	black	25 (250)	-30 to +100	Additional centering, metal ring, rust- and acid-resistant steel 1.4301 (AISI 304)

PROFILE RINGS

Profile	Design	Material	Hardness (Shore A)	Color	Max. pressure in MPa (bar)	Temperature (°C)	Special Feature
	PRR	EPDM	80	violet	60 (600)	-45 to +150	<ul style="list-style-type: none"> In accordance with DIN 3869 Peroxide cross-linking
	PRR	FKM	80	green	60 (600)	-20 to +200	<ul style="list-style-type: none"> In accordance with DIN 3869 Certified DIN EN 549 E1/H3
	PRR	NBR	85	black	60 (600)	-30 to +100	<ul style="list-style-type: none"> In accordance with DIN 3869 Certified DIN EN 549 B1/H3
	PRR221	TPU	92	blue		-40 to +120	

SAE FLANGE SEALS

Profile	Design	Material	Hardness (Shore A)	Max. pressure in MPa (bar)	Temperature (°C)	Special Feature
	FLAN89	TPU	95	40 (400)	-30 to +100	


FORMED PARTS

Formed parts (design FOR) are customer-specific sealing elements. They can be manufactured based on a reference sample, a drawing or a special layout. In this way, they can be adjusted to the precise installation conditions. Elastomers and thermoplastics are available in a variety of grades.



ASSORTMENT BOXES

These boxes are equipped with various selections of seals, providing the required dimension for every repair needed on-site.



Box	Design	Material	Hardness (Shore A)	Color
	BOX OR	NBR	70 90	black
	BOX OR	FKM	80	black
	BOX OR	EPDM	70	black
	BOX OR	VMQ	70	redbrown
	BOX RS	NBR	70	black
	BOX RS	FKM	75	black
	BOX XR	NBR	70	black
	BOX XR	FKM	70	black



ROTATING SEALS

The values indicated here are maximum values. All of them must not be achieved simultaneously.














CASSETTE SEALS

Profile	Design	Material	Hardness (Shore A)	Color	Max. pressure in MPa (bar)
	C	NBR	70	black	0,05 (0,5)
	C	FKM	80	brown	0,05 (0,5)

Cassette seals are only available as special designs upon request.






RADIAL SHAFT SEAL RINGS

Profile	Design	Material	Hardness (Shore A)	Color	Max. speed (m/s)	Max. pressure in MPa (bar)	Temperature (°C)
	WA	FKM	80	brown	34	0,05 (0,5)	-25 to +150
	WA	NBR	70	black	10	0,05 (0,5)	-40 to +80 (briefly +100)
	WAS	FKM	80	brown	8	0,05 (0,5)	-25 to +150
	WAS	NBR	70	black	8	0,05 (0,5)	-40 to +80 (briefly +100)
	WAK	FKM	80	brown	35	0,05 (0,5)	-30 to +200
	WAK	NBR	70	black	12	0,05 (0,5)	-40 to +100
	WAG	FKM	80	brown	35	0,05 (0,5)	-30 to +200
	WAG	NBR	70	black	12	0,05 (0,5)	-40 to +100
	WAY	FKM	80	brown	10	1 (10)	-25 to +150
	WAY	NBR	80	blue	10	1 (10)	-40 to +80 (briefly +100)

Profile	Design	Material	Hardness (Shore A)	Color	Max. speed (m/s)	Max. pressure in MPa (bar)	Temperature (°C)
	WASY	FKM	80	brown	35	1 (10)	-30 to +170
	WASY	NBR	80	blue	12	1 (10)	-40 to +100
	WAD	NBR	70	black	6	0,05 (0,5)	-40 to +100
	WAO	NBR	70	black	6		-40 to +80 (briefly +100)
	WAOK	NBR	70	green	6		-40 to +100
	WB	NBR	70	black	10	0,05 (0,5)	-40 to +80 (briefly +100)
	WBS	NBR	70	black	12	0,05 (0,5)	-40 to +100
	WBD	NBR	70	black	6	0,05 (0,5)	-40 to +100
	WBO	NBR	70	black	6		-40 to +100
	WC	NBR	70	black	12	0,05 (0,5)	-40 to +100
	WCS	NBR	70	black	12	0,05 (0,5)	-40 to +100
	WCL	FKM	75	black	15	0,05 (0,5) Optional 1 (10)	-30 to +200
	WCL	NBR	70	black	12	0,05 (0,5) Optional 1 (10)	-40 to +100
	WCP20	PTFE		grey	40	1 (10)	-90 bis +250



RADIAL SHAFT SEAL RINGS

Profile	Design	Material	Hardness (Shore A)	Color	Max. speed (m/s)	Max. pressure in MPa (bar)	Temperature (°C)
	WE5	FKM	80	black	25	0,05 (0,5)	-20 to +180
	WE5	NBR	80	black	20	0,05 (0,5)	-40 to +100
	WE5	HNBR	80	black	25	0,05 (0,5)	-40 to +150
	WEPO	PTFE		black	15	1 (10)	-20 to +200
	WAX	NBR	70	black	10	0,05 (0,5)	-40 to +100

AXIAL SEALS

Profile	Design	Material	Hardness (Shore A)	Color	Max. speed (m/s)	Temperature (°C)
	VRM01	FKM	70	brown	12	-30 to +180
	VRM02	FKM	70	brown	12	-30 to +180
	VRM01	NBR	70	black	12	-40 to +100
	VRM02	NBR	70	black	12	-40 to +100

V-RINGS

Profile	Design	Material	Hardness (Shore A)	Color	Temperature (°C)	Special Feature
	VA	FKM	60 70	brown	-20 to +200	
	VA	NBR	60	black	-40 to +100	Ozone-resistant
	VS	FKM	60	brown	-20 to +200	
	VS	NBR	60	black	-40 to +100	Ozone-resistant
	VL	FKM	60	brown	-20 to +200	
	VL	NBR	60	black	-40 to +100	Ozone-resistant
	VE	FKM	60 70	brown	-20 to +200	
	VE	NBR	60	black	-40 to +100	Ozone-resistant



Circumferential speed (m/s)

NBR: ≤ 8 ; axially secured starting at ≥ 8 ; radially secured starting at ≥ 12

FKM: ≤ 6.5 ; axially secured starting at ≥ 6.5 ; radially secured starting at ≥ 10



END CAPS

Profile	Design	Material	Hardness (Shore A)	Color	Max. pressure in MPa (bar)	Temperature (°C)
	VER01	FKM	70	brown	0,05 (0,5)	-20 to +200
	VER01	NBR	70	black	0,05 (0,5)	-30 to +100
	VER02	FKM	70	brown	0,05 (0,5)	-20 to +200
	VER02	NBR	70	black	0,05 (0,5)	-30 to +100
	VER03	FKM	70	brown	0,05 (0,5)	-20 to +200
	VER03	NBR	70	black	0,05 (0,5)	-30 to +100
















SHAFT SLEEVES

Profile	Design	Material
	WSH	Rust and acid-resistant steel 1.4301 (AISI 304)

FLUID SEALS

The values indicated here are maximum values. All of them must not be achieved simultaneously.




PISTON SEALS

Profile	Design	Material	Hardness (Shore A)	Max. speed (m/s)	Max. pressure in MPa (bar)	Temperature (°C)
	N05	NBR	80	0,5	20 (200)	-30 to +100
	KNA16	NBR	80	0,5	50 (500)	-30 to +100
	KK03	NBR	80	0,5	40 (400)	-30 to +100
	KNA23	NBR	90	0,5	16 (160)	-30 to +100
	N21	NBR	90	0,5	16 (160)	-30 to +100
	KK22	NBR F*	90	0,5	40 (400)	-30 to +100
	KDS01	NBR F*	90	0,5	40 (400)	-30 to +100
	KNA28	TPU	95	0,5	40 (400)	-40 to +100
	N25	TPU	95	0,5	30 (300)	-40 to +100
	N36	TPU	95	0,5	40 (400)	-40 to +100
	K70	TPU	95	0,5	25 (250)	-30 to +100
	K84	TPU	98	0,5	40 (400)	-30 to +100
	KPOR31	PTFE-Bronze		15	40 (400)	-30 to +100
	KPOR131	PTFE-Bronze		15	40 (400)	-30 to +100
	KPOR30	PTFE-Bronze		15	40 (400)	-30 to +100











* F: fabric (fabric-reinforced material)












PISTON SEALS

Profile	Design	Material	Hardness (Shore A)	Max. speed (m/s)	Max. pressure in MPa (bar)	Temperature (°C)
	KPOR130	PTFE-Bronze		15	40 (400)	-30 to +100
	KK71	PTFE-Bronze		1,5	40 (400)	-30 to +100
	KNA44	PTFE carbon + graphite		15	35 (350)	-150 to +250



ROD SEALS

Profile	Design	Material	Hardness (Shore A)	Max. speed (m/s)	Max. pressure in MPa (bar)	Temperature (°C)
	N21	NBR	90	0,5	16 (160)	-30 to +100
	SNI24	NBR	90	0,5	16 (160)	-30 to +100
	N05	NBR	80	0,5	20 (200)	-30 to +100
	SNI07	NBR	80	0,5	40 (400)	-30 to +100
	SDS01 3/2	NBR/NBR F*	90	0,5	40 (400)	-30 to +100
	SDS01 1/0	NBR F*	90	0,5	40 (400)	-30 to +100
	SDR01	NBR/NBR F*	90			-30 to +100
	N25	TPU	95	0,5	30 (300)	-40 to +100
	SNI30	TPU	95	0,5	40 (400)	-40 to +100
	SNI39	TPU	95	0,5	40 (400)	-40 to +100















* F: fabric (fabric-reinforced material)

Profile	Design	Material	Hardness (Shore A)	Max. speed (m/s)	Max. pressure in MPa (bar)	Temperature (°C)
	N36	TPU	95	0,5	40 (400)	-40 to +100
	S72	TPU	95	0,5	40 (400)	-30 to +100
	SNI35	TPU	95	0,5	40 (400)	-40 to +100
	SPOR30	PTFE-Bronze		15	40 (400)	-30 to +100
	SPOR130	PTFE-Bronze		15	40 (400)	-30 to +100
	SPOR131	PTFE-Bronze		15	40 (400)	-30 to +100
	SPOR31	PTFE-Bronze		15	40 (400)	-30 to +100
	SPOR06	PTFE-Bronze		2,0	16 (160)	-30 to +100
	SNI43	PTFE carbon + graphite		15	35 (350)	-150 to +250








RADIAL SEALS

Profile	Design	Material	Peripheral speed (m/s)	Max. pressure in MPa (bar)	Temperature (°C)
	RPORI32	PTFE carbon + graphite	≤ 2	30 (300)	-30 to +100
	RPORA32	PTFE carbon + graphite	≤ 2	30 (300)	-30 to +100

WIPERS

Profile	Design	Material	Hardness (Shore A)	Max. speed (m/s)	Temperature (°C)
	AE40	NBR	90	1	-30 to +110
	AE41	NBR	90	1	-30 to +110
	AM43	NBR	90	1	-30 to +110
	AM45	NBR	90	1	-30 to +110
	AD51	NBR	90	1	-30 to +110
	AE42	TPU	90	2	-40 to +100
	AE47	TPU	90	2	-40 to +100
	AM44	TPU	95	2	-40 to +100
	AM54	TPU	95	1	-40 to +100
	AD48	TPU	95	1	-40 to +100
	ADM55	TPU	95	1	-40 to +100
	AD60	PTFE-Bronze		15	-30 to +100
	AD61	PTFE-Bronze		15	-30 to +100
	AE80	PTFE-Bronze		15	-30 to +100

GUIDE ELEMENTS

Profile	Design	Material	Slide speed (m/s)	Contact pressure (N/mm ²)	Temperature (°C)	Delivered condition	Surface
	GS01	PTFE, bronze-filled	≤ 15	static: ≤ 25 dynamic: ≤ 15	-60 to +200	Roll	structured
	GS10	PTFE, bronze-filled	≤ 15	static: ≤ 25 dynamic: ≤ 15	-60 to +200	Roll	smooth
	FRK01	PTFE, bronze-filled	≤ 15	static: ≤ 25 dynamic: ≤ 155	-60 to +200	Strip, 30° cut	structured
	FRS01	PTFE, bronze-filled	≤ 15	static: ≤ 25 dynamic: ≤ 15	-60 to +200	Strip, 30° cut	structured
	GS05	Hard fabric with PTFE	≤ 1	static: ≤ 350 dynamic: ≤ 100	-50 to +120	Roll	smooth
	FRK05	Hard fabric with PTFE	≤ 1	static: ≤ 350 dynamic: ≤ 100	-50 to +120	Ring, 45° bevel cut°	smooth
	FRS05	Hard fabric with PTFE	≤ 1	static: ≤ 350 dynamic: ≤ 100	-50 to +120	Ring, 45° bevel cut	smooth



INSTALLATION AND DISMANTLING TOOLS

Installation tools ease the assembly and dismantling of seal profiles. They can be found on the online ordering platform EASY.

Art.-No. 67189703



Set of dismantling tools for O-rings and u-rings, stable design, 8-part, case contains a complete set.

Application areas:

The dismantling tools are suited for use with nearly any dimension.

Art.-No. 67189704



Set of installation tools for u-rings, 5-part, incl. a holding block as a clamping aid for affixing the pliers, case contains a complete set.

Application areas:

The installation pliers can be used for u-rings with a diameter of up to 165 mm.

- | | |
|--------------------------------|-----------|
| Installation pliers S: | 22–30 mm |
| Installation pliers M: | 30–50 mm |
| Installation pliers L: | 50–70 mm |
| Installation pliers XL: | 70–165 mm |

Art.-No. 49406848



Calibration pliers for PTFE seals

Application areas:

Calibration pliers can be used within the range of 50–360 mm.



Art.-No. 67189705



Dismantling tool for shaft seal rings, u-rings and end caps

Application areas:

These dismantling tools are suited for use with nearly any dimension.

Art.-No. 67195157



PTFE cutter for PTFE guide band

Application areas: The cutting pliers cut the PTFE guide band at a 45° angle. The cleanly cut edges require no additional deburring. The maximum width of the PTFE guide band is 25 mm.

Art. No. 67195159:

Replacement blades for PTFE cutter (10 units)

CERTIFIED MATERIALS

LAST UPDATED: 23.01.2020

GAS DEVICES AND SYSTEMS IN DOMESTIC INSTALLATIONS OR IN HOME APPLIANCES

Approval	Certifying authority	Temperature range	Compound
DIN EN 549	DVGW	B1/H3 (0 to +80 °C)	NB 90 18 03
DIN EN 549	DVGW	B1/H3 (0 to +80 °C)	NB 70 28 22
DIN EN 549	DVGW	B2/H3 (-20 to +80 °C)	NB 70 28 07
DIN EN 549	DVGW	B2/H3 (-20 to +80 °C)	NB 70 27 17
DIN EN 549	DVGW	C2/H3 (-20 to +100 °C)	HN 70 27 04
DIN EN 549	DVGW	C2/H3 (-20 to +100 °C)	HN 70 18 10
DIN EN 549	DVGW	D2/H3 (-20 to +125 °C)	HN 70 78 01
DIN EN 549	DVGW	E1/H3 (0 to +150 °C)	FP 80 27 01
DIN EN 549	DVGW	E1/H3 (0 to +150 °C)	FP 80 18 01
DIN EN 549	DVGW	E1/H3 (0 to +150 °C)	FP 80 18 04

GAS SUPPLY LINES AND GAS PIPELINES

Approval	Certifying authority	Temperature range	Compound
DIN EN 682	DVGW	GBL (-15 to +50 °C)	NB 70 27 32

DRINKING WATER

Approval	Certifying authority	Temperature range	Compound
DVGW type examination	DVGW	WA/WB	EP 70 39 01
ACS	eurofins		EP 70 39 01
BS6920	WRAS	to +85 °C	EP 70 39 01

WATER SUPPLY AND DRAINAGE

Approval	Certifying authority	Temperature range	Compound
DVGW type examination	DVGW	WA/WB	EP 70 39 01

FOOD CONTACT AND PHARMACEUTICAL INDUSTRY

Approval	Certifying authority	Temperature range	Compound
FDA 21 CFR	CERISIE	§ 177.2600	EP 70 27 03
FDA 21 CFR	SGS Fresenius	§ 177.2600	SI 70 28 03
FDA 21 CFR	SGS Fresenius	§ 177.2600	SI 70 18 07
FDA 21 CFR	SGS Fresenius	§ 177.2600	SI 70 50 03
FDA 21 CFR	SGS Fresenius	§ 177.2600	SI 70 27 14
FDA 21 CFR	SGS Fresenius	§ 177.2600	EP 70 39 01
FDA 21 CFR	SGS Fresenius	§ 177.2600	SI 60 41 01
FDA 21 CFR	SGS Fresenius	§ 177.2600	FP 75 94 12
BfR (EG 1935/2004)	SGS Fresenius	Recommendation XVV	SI 70 18 07
BfR (EG 1935/2004)	SGS Fresenius	Recommendation XV	SI 70 50 03
BfR (EG 1935/2004)	SGS Fresenius	Recommendation XV	SI 70 27 14
LFGB (EG 1935/2004)	SGS Fresenius	Recommendation XXI	EP 70 39 01
LFGB (EG 1935/2004)	SGS Fresenius	Recommendation XV	SI 60 41 01
LFGB (EG 1935/2004)	SGS Fresenius	Recommendation XXI	FP 75 94 12
CIP-/SIP-ability	ECOLAB		EP 70 39 01
USP Class VI, 121 °C	BSL	Chapter 88 (in vivo)	EP 70 39 01
USP 32	BSL	Chapter 87 (in vitro)	EP 70 39 01
3-A® Sanitary Standard	CERISIE	Class I	FP 75 94 12
CIP-/SIP-ability	ECOLAB		FP 75 94 12

Elastomer	Hardness (Shore A)	Color
NBR	90	black
NBR	70	black
NBR	70	black
NBR	70	black
HNBR	70	black
HNBR	70	black
HNBR	70	yellow
FKM	80	black
FKM	80	black
FKM	80	green

Elastomer	Hardness (Shore A)	Color
NBR	70	black

Elastomer	Hardness (Shore A)	Color
EPDM perox.	70	black
EPDM perox.	70	black
EPDM perox.	70	black

Elastomer	Hardness (Shore A)	Color
EPDM perox.	70	black

Elastomer	Hardness (Shore A)	Color
EPDM perox.	70	black
VMQ	70	redbrown
VMQ	70	redbrown
VMQ	70	redbrown
VMQ	70	redbrown
EPDM perox.	70	black
VMQ	60	redbrown
FKM perox.	75	black
VMQ	70	redbrown
VMQ	70	redbrown
VMQ	70	redbrown
EPDM perox.	70	black
VMQ	60	redbrown
FKM perox.	75	black
EPDM perox.	70	black
EPDM perox.	70	black
EPDM perox.	70	black
FKM perox.	75	black
FKM perox.	75	black

INDUSTRY PROVEN



COMPREHENSIVE PRODUCT PORTFOLIO FOR SEALING APPLICATIONS

Freudenberg Sealing Technologies (FST) has a broad, customer-oriented product portfolio of premium sealing technology for highly demanding applications – from customized individual solutions to complete sealing packages.

The range is rounded off by complementary industrial standard solutions from the Dichtomatik product brand. The two-brand-strategy is part of Freudenberg Sealing Technologies' comprehensive service portfolio and guarantees a full range of seals

and product-related services. Dichtomatik products are manufactured by certified suppliers and are available in many different seal shapes and materials. They are suited for moderate operating conditions in static, dynamic and rotary applications.

FST serves the entire sealing market with this complementary product portfolio and thus meets all market requirements – quickly, reliably and from a single source.

www.fst.com | dichtomatik.fst.com



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