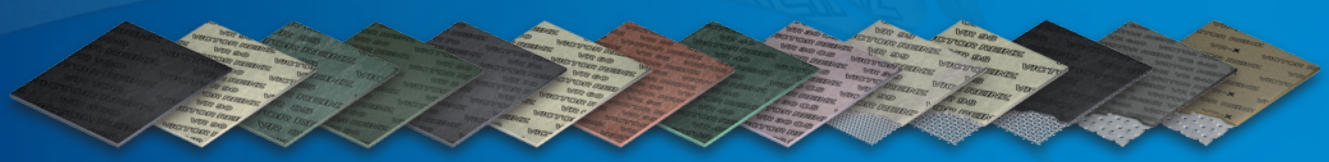
DANA

VICTOR REINZ®

Sealing Products

Sealing Solutions for Industrial Applications

We are Your Industrial Sealing Expert.



We Are Ready for the Sealing Future.

Nearly 100 years of gasket technology inspired by the claim of always producing the best gasket material of the time. We are developing the gasket material of the future today.

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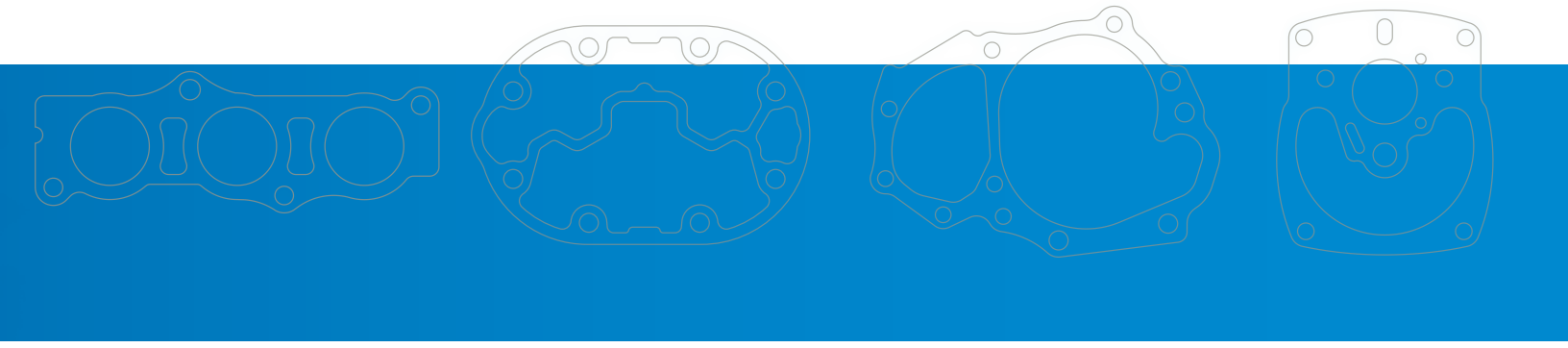


Major manufacturers trust Victor Reinz® gasket materials. Across the country and around the world, we bring to the table high-quality, innovative products, backed by service you can depend on.

Use the Benefits.

Victor Reinz® gaskets and gasket materials meet any industrial challenge: we carry exactly the right gasket material for your business and have the gasket know-how for your industry. This enables us to support you as our partner in choosing the best material. The world's best gasket fabricators trust Dana to supply the perfect fit for your needs.

Specialized in Industrial Sealing Applications.
Refrigeration compressors and evaporators, chemical and foodstuff production: Victor Reinz gasket materials are absolutely temperature-resistant and withstand the highest mechanical stresses and pressures.

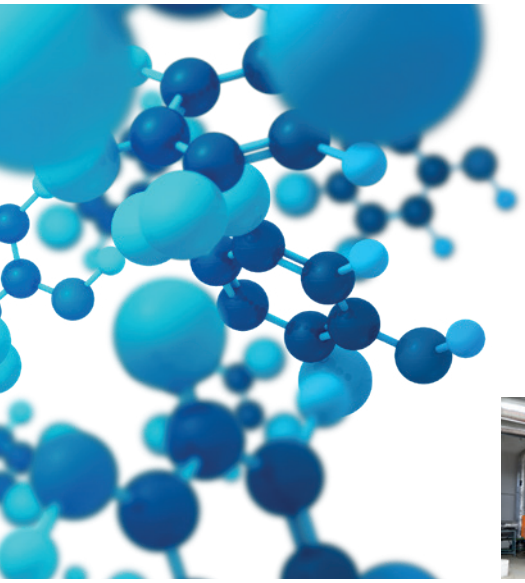
Quality Makes the Difference.
High-quality materials and world class production, certified and environmentally safe: Victor Reinz gaskets and gasket materials meet top quality demands. All gaskets and materials undergo comprehensive tests and test routines.

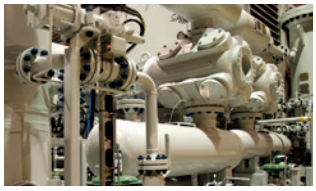
Made in Germany.
Victor Reinz gasket materials are German-engineered and made at our plant in Neu-Ulm, Germany, under rigorous quality assurance to provide you with consistent top quality – all around the world, wherever you are present.

At Home in Your Country.
Excellent availability and shortest delivery times: we have an experienced sales partner in the U.S. gasket industry providing an excellent service.

We Are Ready for the Sealing Future.
Traditional and innovative: we've been in the gasket business for almost 100 years and know the field like few others. We continually look toward innovations to come – whatever gasket you might need in the future.

Gasket Solutions for Industrial Applications and Everyday Challenges.





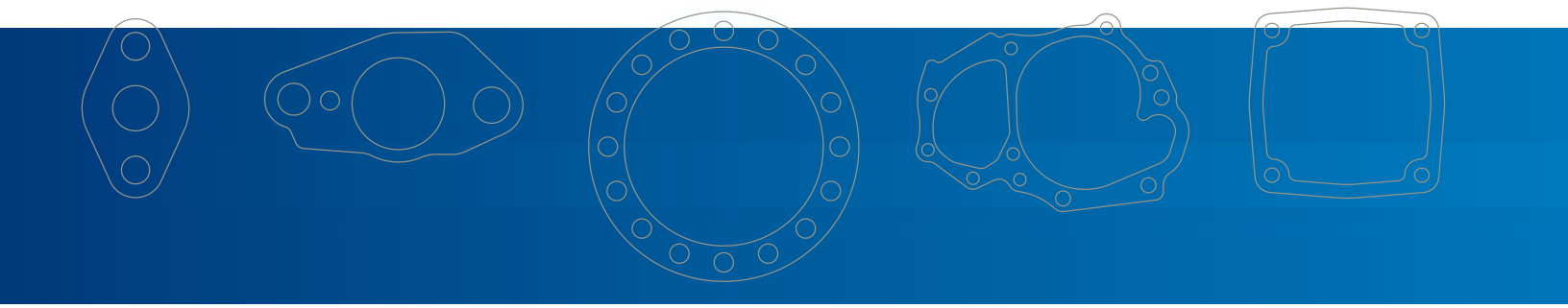
Our Industrial Applications experts develop and produce high-tech materials for gaskets as well as complete gasket solutions under the brand name Victor Reinz – from the classic flange gasket to the custom-designed high-pressure gasket.

The customers are companies in all sectors of the manufacturing industry: from the Heating, Ventilation, Air Conditioning and Refrigeration Industry (HVAC/R Industry) to the Chemical Industry and on to the Foodstuffs Industry. Victor Reinz gaskets seal wherever uncompromising safety is required.

Partner of the Industry and Gasket Fabricators.
Dana provides professional support to industrial end customers and to gasket fabricators. We provide the ideal material and gasket know-how for the development and production of your gaskets.

Distribution and Logistics on Site.
Our distributor Target Industrial Products in the United States stocks ample supplies of our products for fast, on-demand delivery. Assistance and advice are never more than a phone call or an e-mail away.

Dana. The Global Technology Leader.
Dana is a world leader in highly engineered solutions for improving the efficiency, performance, and sustainability of powered vehicles and machinery. Dana supports the passenger vehicle, commercial truck, off-highway, and industrial markets as well as industrial and stationary equipment applications. Founded in 1904, Dana employs more than 30,000 people in 33 countries on six continents who are committed to delivering long-term value to customers.
Under the brand name Victor Reinz, Dana in Neu-Ulm, Germany, has been developing and producing innovative sealing solutions for more than half a century. For practically every industrial application, Dana's sealing concepts and gasket materials provide the most reliable solutions.



Materials.
We Have what You Need.

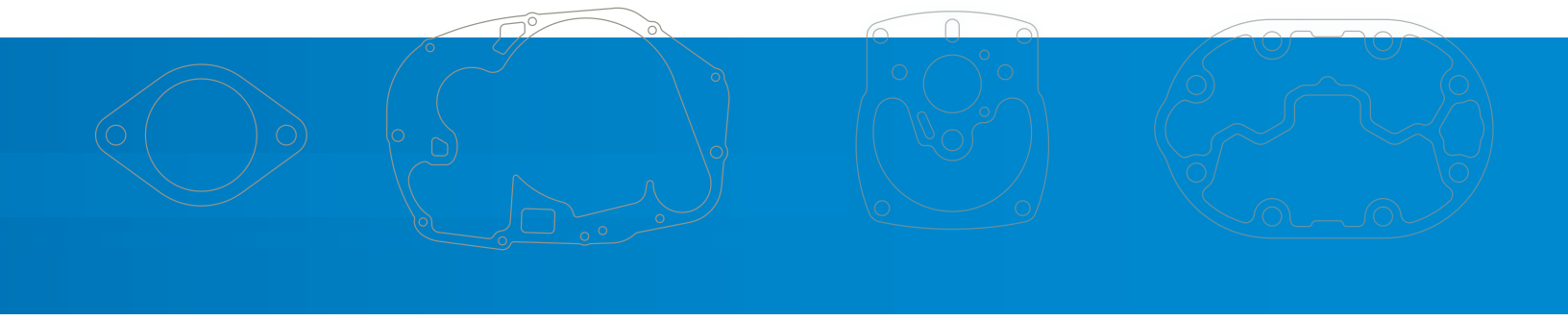
We have the right answer for all industrial gasket challenges. When it comes to your specific application, we provide the ideal gasket solution at the best value for your money. A wide range of materials is available.

The Victor Reinz Material Range

- **High-Performance Compressed Sheet**
- **General Service Compressed Sheet**
- **Soft Range Compressed Sheet**
- **Controlled Swell Gaskets**
- **High-Performance Metal Reinforced Gaskets**
- **High-Temperature Metal Reinforced Mica Gaskets**

In addition, we produce innovative gasket solutions for challenging applications. Solutions range from eyeleted gaskets with stainless steel eyelet, via graphite materials on tanged steel core, on to ePTFE material. Rubber-coated metal materials and sealing compounds complete the range of products.

We Produce the Gasket Materials you Need!



High-Performance Compressed Sheet.

Universally applicable and extremely durable! We count on high performance fibers and high quality elastomers as binders: the product group **High-Performance Compressed Sheet**.

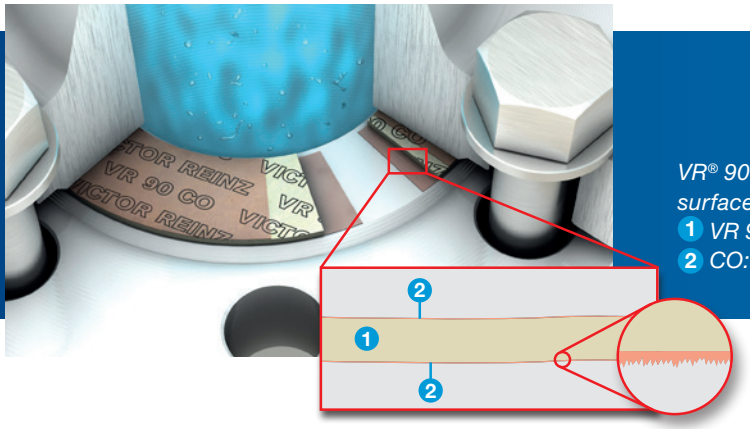
- **VR® 100**
- **VR® 90**
- **VR® 85**
- **VR® 80**

VR 100
VR 100 is a compressed sheet material made from carbon fibers and other high-temperature-resistant substances. Due to its resistance to temperatures up to 520 °F (temporarily even up to a short-term peak of 825 °F) in combination with high chemical resistance, it is used especially by the oil processing industry. Another special feature of VR 100 is its excellent capability to seal alkaline solutions, e.g. brine in the pulp and paper industry.

VR 90
VR 90 is the most successful Victor Reinz gasket material of all time. The aramid fiber based classic is physiologically harmless and comes with numerous approvals (among others: TA Luft/German Clean air Act). Universally usable, this gasket material is the perfect sealing solution for a large number of fluids and withstands high temperatures and operating pressures.

VR 90 – like no other compressed sheet on the market – combines a variety of excellent properties such as ultimate tensile strength, excellent gas-tightness, ultimate chemical resistance, and superior creep resistance even under elevated temperatures.

Leading companies in the Heating, Ventilation, Air Conditioning and Refrigeration Industry (HVAC/R Industry) in the US have been trusting the VR 90 material and other Victor Reinz products for decades – used, for example, in refrigeration compressors, evaporators, condensers, chillers, valves, etc.



VR® 90 CO: consisting of VR 90 topped with an innovating surface coating.
1 *VR 90: aramid fiber based material*
2 *CO: extremely thin, highly adaptable surface coating*

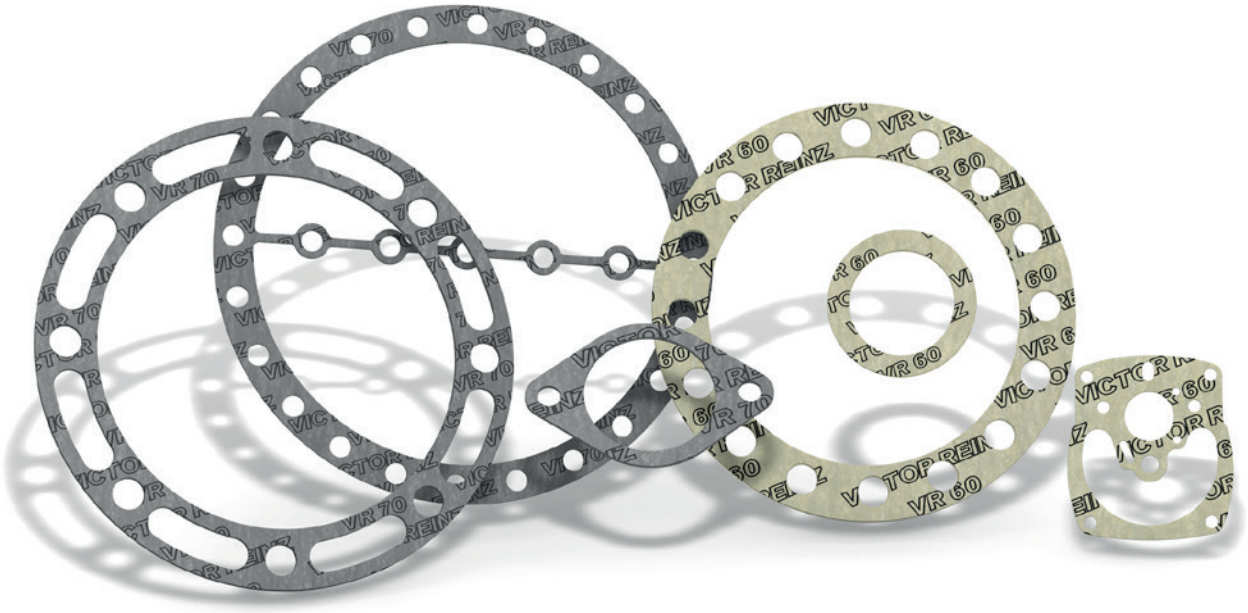
The areas of application include the chemical industry, the oil and gas industry, the HVAC/R industry on to engine construction and mechanical engineering, and many more.

VR 90 CO
In cases where VR 90 is the ideal material but surface irregularities or imperfections might lead to surface leakage, VR 90 CO is the answer. It features a special coating, called “CO coating”, that compensates for small irregularities to prevent leakage.

VR 85
VR 85 is suitable for sealing joints under high mechanical-thermal stresses where stability and tensile strength are required. Because of its good adaptability it seals oils, water, and gases very well. It is widely used, for example, in combustion engines and marine applications.

VR 80
VR 80 features excellent gas tightness coupled with high tensile strength and excellent creep resistance. It is therefore especially used for sealing tasks in the gas industry and for compressors, but also to seal fluids in pumps, transmissions and small engines, to name just a few.

General Service Compressed Sheet.



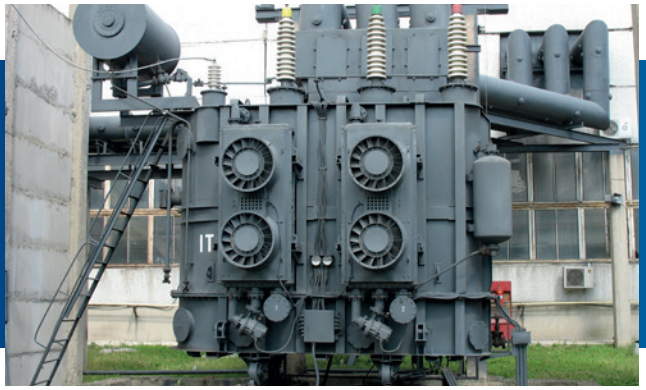
Sound quality at a good price for a wide range of applications! An important part of our productline: the **General Service Compressed Sheet** product group.

- **VR® 70**
- **VR® 60**

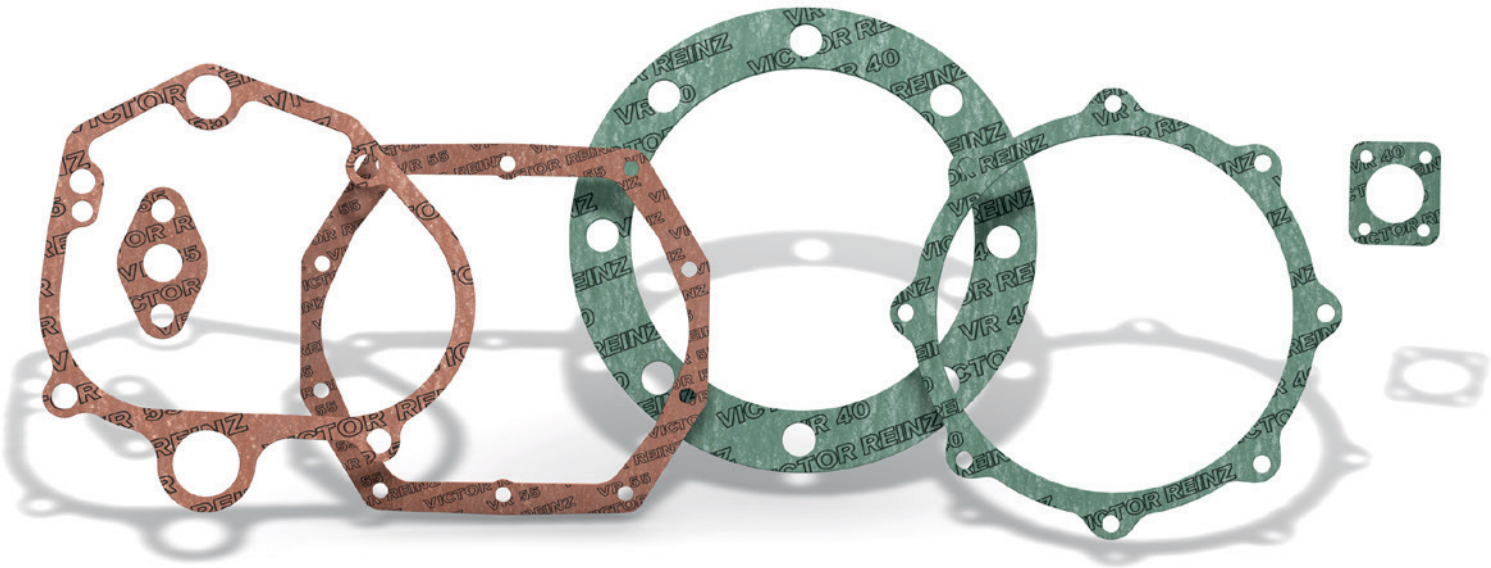
VR 70
VR 70 is a sturdy gasket material and provides an excellent value for money. Used in demanding applications such as, e.g. in HVAC/R, oil & gas, pumps, compressors, and transformers.

VR 60
Because of its great adaptability and physiological safety, VR 60 covers a wide range of applications from general mechanical engineering through sanitary installations on to potable water applications.

As a standard, all of our materials feature anti-bake properties, facilitating removal of the gasket. Additionally we offer a number of special-purpose material coatings.
Please contact us for further details.



Soft Range Compressed Sheet.

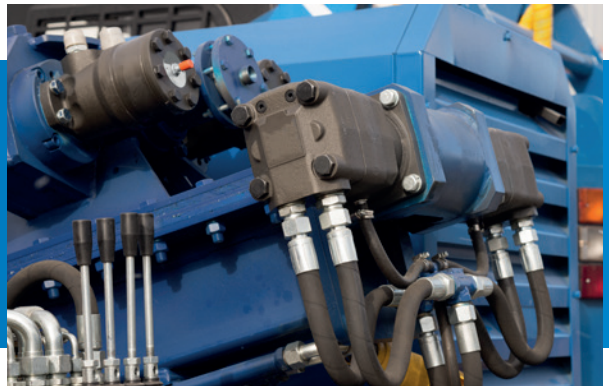


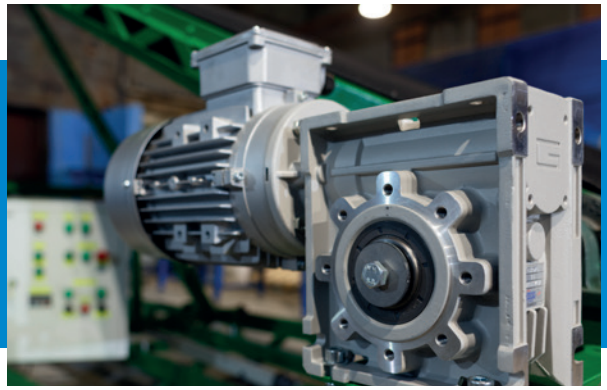
Low bolt load? We have just the right gasket material: the **Soft Range Compressed Sheet** product group.

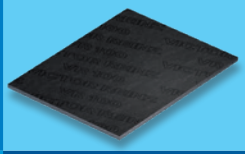
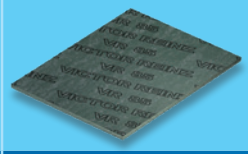
- **VR® 55**
- **VR® 40**

VR 55
VR 55 shows excellent sealability and adaptability already at low bolt load. Its good tensile strength makes it ideal for use in easily deformable construction components that are subjected to high mechanical stress. Accordingly, it is used in a broad range of applications, e.g. in housings, covers, gear boxes, HVAC/R, engines, marine applications and hydraulics, to name just a few.

VR 40
VR 40 shows excellent adaptability and sealability already at low bolt load. It is our well-priced material for light-weight applications, e.g. in HVAC/R, gear boxes and motors, housings, covers, etc.

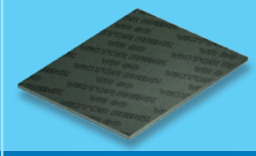
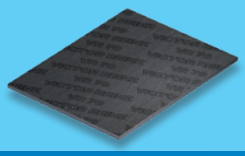
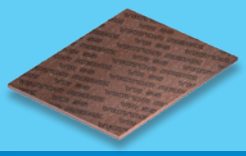
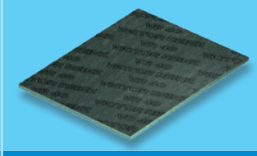




Material	High-Performance Compressed Sheet		
	VR 100	**VR 90**	**VR 85**
			
Features	¬ Highest Temperature Resistance ¬ Superior Creep Resistance ¬ Carbon and Inorganic Fibers ¬ Nitrile Binder	¬ Ultimate Chemical and Mechanical Resistance ¬ Superior Creep Resistance combined with Ultimate Tensile Strength ¬ Aramid and Inorganic Fibers ¬ Nitrile Binder	¬ High Tensile Strength Combined with Good Adaptability ¬ Excellent Creep Resistance combined with Very High Tensile Strength ¬ Aramid and Inorganic Fibers ¬ Nitrile Binder
Typical Applications	Oil Processing Industry, Pulp and Paper	Chemical Industry, HVAC/R, Water, Oil & Gas, Engines, Marine Applications, Mechanical Engineering	Combustion Engines, Marine Applications

Technical data (typical values refer to 1/16" thick material unless otherwise specified)	Standard			
Tensile strength, transverse	ASTM F 152	> 2180 psi / > 15 MPa	> 2610 psi / > 18 MPa	> 2180 psi / > 15 MPa
Creep relaxation (1/32" unless otherwise specified)	ASTM F 38 B	15 %	15 %	17 %
Sealability (1/32"), Nitrogen	ASTM F 37 B	0.25 ml / h	0.12 ml / h	0.15 ml / h
Gas permeability	DIN 3535 / 6	~ 0.1 mg / (s*m)	~ 0.02 mg / (s*m)	< 0.1 mg / (s*m)
Compressibility	ASTM F 36 J	6 – 10 %	5 – 8 %	7 – 12 %
Recovery	ASTM F 36 J	> 60 %	> 55 %	> 50 %
VR-Hot compression test (@7250 psi):				
Thickness decrease at 68 °F (20 °C)		9 %	6 %	13 %
Thickness decrease additional, at maximum continuous application temperature		11 % (520 °F / 270 °C)	8 % (480 °F / 250 °C)	7 % (480 °F / 250 °C)
Increase in thickness after immersion in:	ASTM F 146			
IRM 903 Oil, 5 h, 300 °F		0 – 10 %	0 – 7 %	0 – 8 %
ASTM Fuel B, 5 h, 73 °F		0 – 10 %	0 – 10 %	0 – 7 %
Water/antifreeze 1:1, 5 h, 212 °F		0 – 7 %	0 – 10 %	0 – 5 %
Increase in weight after immersion in:	ASTM F 146			
IRM 903 Oil, 5 h, 300 °F		10 % maximum	7 % maximum	12 % maximum
ASTM Fuel B, 5 h, 73 °F		10 % maximum	10 % maximum	10 % maximum
Water/antifreeze 1:1, 5 h, 212 °F		7 % maximum	10 % maximum	15 % maximum
Density		109 – 122 lb/ft³ / 1.75 – 1.95 g/cm³	112 – 125 lb/ft³ / 1.8 – 2 g/cm³	100 – 112 lb/ft³ / 1.6 – 1.8 g/cm³
ASTM line call-out	ASTM F 104, respectively F 868 for metal reinforced materials	F711110-A9B2E12M6	F711110-A9B2E12K7M6	F712120-A9B3E12M6
Operating temperature, max. [1]	continuous	520 °F / 270 °C	480 °F / 250 °C	480 °F / 250 °C
	temporary (peak)	825 °F / 440 °C	750 °F / 400 °C	750 °F / 400 °C
Operating pressure [1]	max.	1880 psi / 130 bar	2180 psi / 150 bar	2180 psi / 150 bar
Standard formats [2]				
Sheet size respectively coil width		1.5 x 1.5 m (approx. 60 x 60") to 1.5 x 4.5 m	1.5 x 1.5 m (approx. 60 x 60") to 1.5 x 4.5 m	1.5 x 1.5m (approx. 60 x 60“) to 1.5 x 4.5 m
Thickness		1/64" to 1/8"	1/64" to 7/32"	1/64" to 1/8"

[1] Maximum operating pressure and maximum operating temperature must not occur simultaneously.
[2] Special sheet sizes and material thicknesses on request.
Technical data shown in above table are valid on print date. Please check web site **www.targetindustrial.com** for most current version.

	General Service Compressed Sheet		Soft Range Compressed Sheet	
VR 80	**VR 70**	**VR 60**	**VR 55**	**VR 40**
				
¬ High-Performance Sheet with Excellent Gas Tightness ¬ Excellent Creep Resistance combined with High Tensile Strength ¬ Aramid and Inorganic Fibers ¬ Nitrile Binder	¬ Multi-Purpose General Service Sheet ¬ Very Good Creep Resistance combined with Good Tensile Strength ¬ Aramid and Inorganic Fibers ¬ Nitrile Binder	¬ Good General Service Sheet ¬ Good Creep Resistance ¬ Aramid and Inorganic Fibers ¬ Nitrile Binder	¬ Excellent Sealability and Adaptability already at Low Bolt Load ¬ Good Tensile Strength combined with Good Creep Resistance ¬ Aramid and Inorganic Fibers ¬ Nitrile Binder	¬ Excellent Adaptability and Sealability already at Low Bolt Load ¬ Good Creep Resistance ¬ Aramid and Inorganic Fibers ¬ Nitrile Binder
Gas Industry, Compressors, Pumps, Transmissions, Small Engines	HVAC/R, Oil & Gas, Pumps, Compressors, Transformers	Potable Water, Sanitary Installations, Pumps	Housings, Covers, Gear Boxes, HVAC/R, Engines, Marine Applications, Hydraulics	HVAC/R, Gear Boxes and Motors, Housings, Covers
> 1740 psi / > 12 MPa	> 1160 psi / > 8 MPa	> 1015 psi / > 7 MPa	> 1160 psi / > 8 MPa	> 1015 psi / > 7 MPa
15 %	16 %	21 %	19 %	22 %
0.22 ml / h	0.14 ml / h	0.11 ml / h	0.02 ml / h	0.05 ml / h
~ 0.05 mg / (s*m)	< 0.1 mg / (s*m)	~ 0.05 mg / (s*m)	< 0.01 mg / (s*m)	< 0.01 mg / (s*m)
7 – 15 %	7 – 15 %	9 – 18 %	14 – 23 %	15 – 25 %
> 50 %	> 50 %	> 50 %	> 50 %	> 60 %
11 % 8 % (480 °F / 250 °C)	10 % 17 % (480 °F / 250 °C)	12 % 22 % (430 °F / 220 °C)	17 % 28 % (390 °F / 200 °C)	15 % 26 % (390 °F / 200 °C)
0 – 10 % 0 – 10 % 0 – 5 %	0 – 10 % 0 – 10 % 0 – 5 %	10 – 25 % 10 – 25 % 0 – 10 %	0 – 10 % 0 – 15 % 0 – 5 %	0 – 10 % 0 – 15 % 0 – 5 %
10 % maximum 10 % maximum 10 % maximum	15 % maximum 10 % maximum 10 % maximum	20 % maximum 20 % maximum 10 % maximum	20 % maximum 20 % maximum 15 % maximum	20 % maximum 15 % maximum 15 % maximum
109 – 122 lb / ft³ / 1.75 – 1.95 g / cm³	119 – 131 lb / ft³ / 1.9 – 2.1 g / cm³	109 – 122 lb / ft³ / 1.75 – 1.95 g / cm³	87 – 106 lb / ft³ / 1.4 – 1.7 g / cm³	94 – 106 lb / ft³ / 1.5 – 1.7 g / cm³
F712110-A9B2E12M5	F712110-A9B3E12M4	F712330-A9B4E35M4	F714130-A9B3E33M4	F714130-A9B4E23M4
480 °F / 250 °C 750 °F / 400 °C	480 °F / 250 °C 750 °F / 400 °C	430 °F / 220 °C 570 °F / 300 °C	480 °F / 250 °C 660 °F / 350 °C	390 °F / 200 °C 570 °F / 300 °C
1450 psi / 100 bar	1450 psi / 100 bar	870 psi / 60 bar	1160 psi / 80 bar	725 psi / 50 bar
1.5 x 1.5 m (approx. 60 x 60") to 1.5 x 4.5 m 1/64" to 1/8"	1.5 x 1.5 m (approx. 60 x 60") to 1.5 x 4.5m 1/64" to 1/8"	1.5 x 1.5 m (approx. 60 x 60") to 1.5 x 4.5 m 1/64" to 1/8"	1.5 x 1.5 m (approx. 60 x 60") to 1.5 x 4.5 m 1/64" to 1/8"	1.5 x 1.5 m (approx. 60 x 60") to 1.5 x 4.5 m 1/64" to 1/8"

High-Performance Metal Reinforced Gaskets.

High mechanical and thermal load? Applications with vibrations? No headache for us: the **High-Performance Metal Reinforced Gaskets** product group.

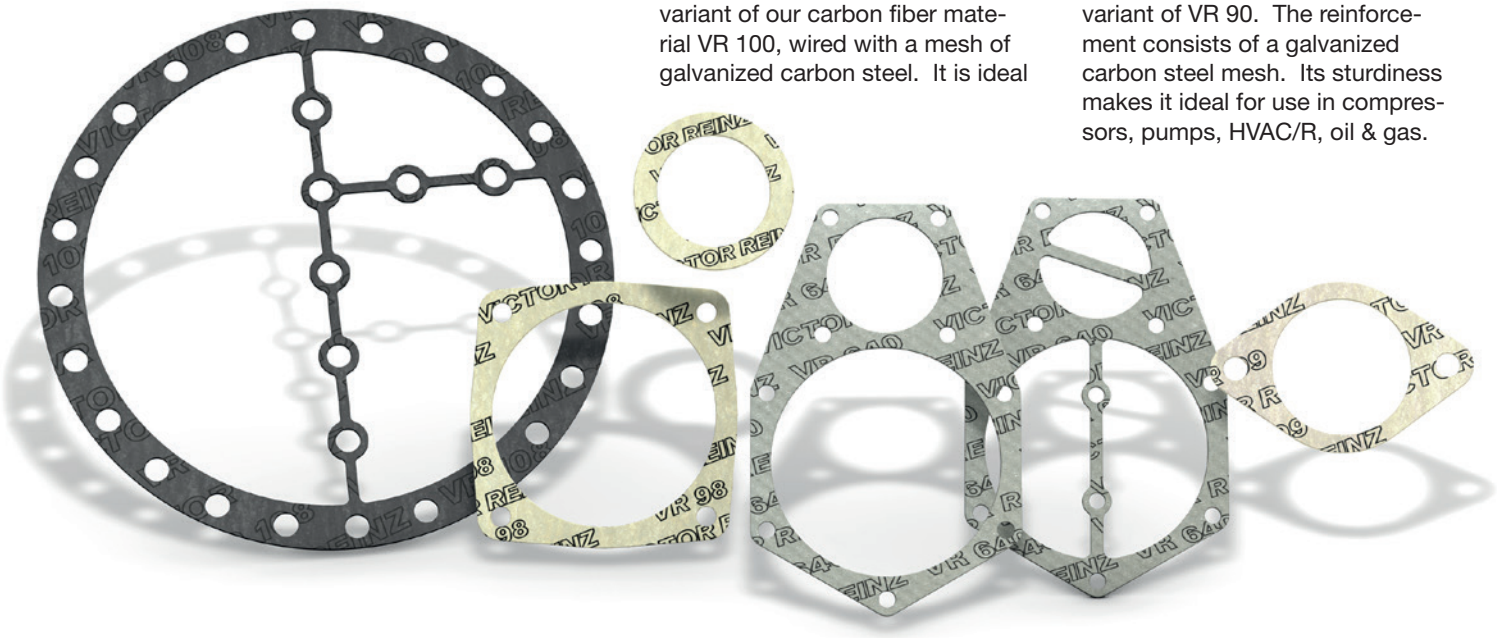
- **VR® 640**
- **VR® 108**
- **VR® 99**
- **VR® 98**

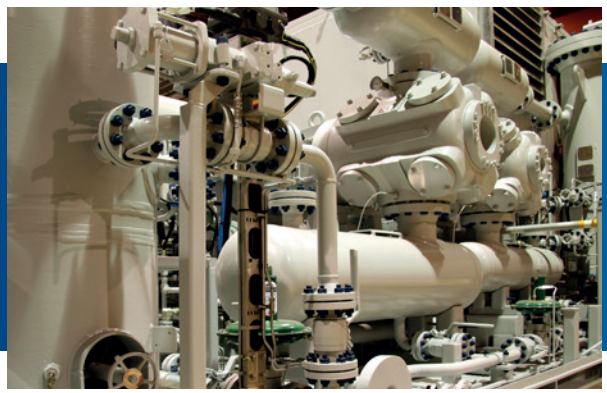
VR 640
VR 640 is a metal reinforced fiber based gasket material featuring a galvanized tanged steel core. It exhibits very high mechanical strength together with high pressure and superior temperature resistance, yet it still conforms well to sealing surfaces. The material is resistant to oils, fuels, and mixtures of water and antifreeze or corrosion inhibitors. Areas of application: e.g. intercoolers, compressors, engines, marine applications, HVAC/R.

VR 108
VR 108 is the metal reinforced variant of our carbon fiber material VR 100, wired with a mesh of galvanized carbon steel. It is ideal for applications with fluctuating temperatures and pressures or vibrations, for example in the oil & gas and pulp and paper industry.

VR 99
VR 99 is our VR 90, reinforced with an expanded stainless steel. The strong metal reinforcement ensures a high degree of blowout safety and mechanical strength. Areas of application: e.g. chemical industry, HVAC/R, water, oil & gas.

VR 98
VR 98 is the wire mesh reinforced variant of VR 90. The reinforcement consists of a galvanized carbon steel mesh. Its sturdiness makes it ideal for use in compressors, pumps, HVAC/R, oil & gas.



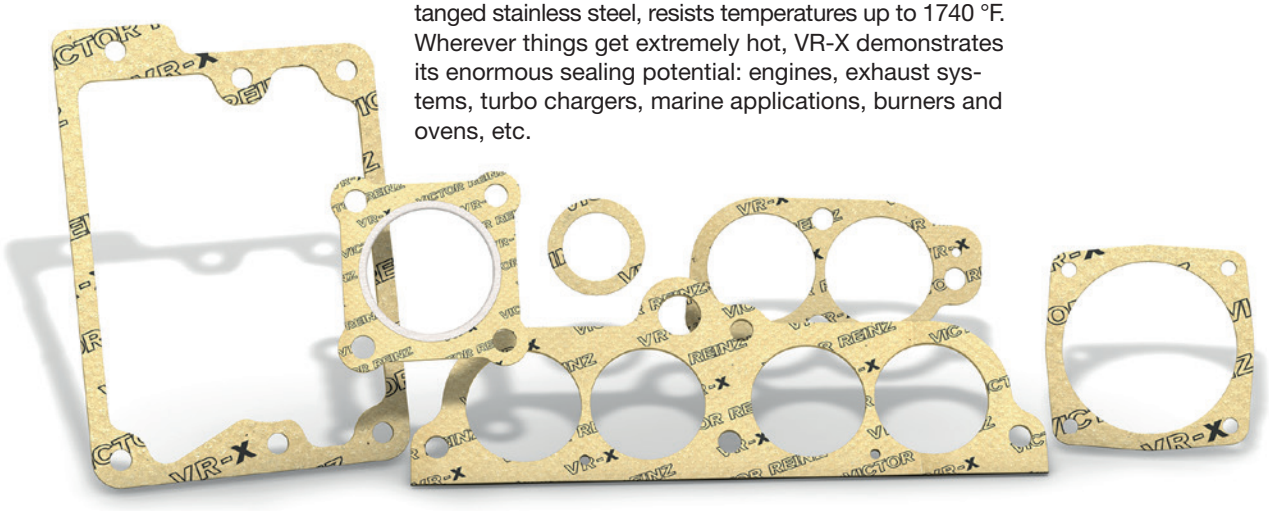


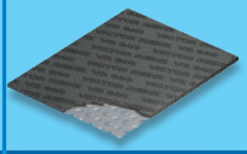
Controlled Swell Gaskets.

VR® 30 CS
VR 30 CS is a high-performance controlled swell material with high tensile strength. The dimensionally stable gasket material swells in oil in a controlled manner. Because of its specific properties the material is especially suitable for sealing oil pans, valve covers and transmissions.

High-Temperature Metal Reinforced Mica Gaskets.

VR®-X
VR-X is the most heat-resistant material among the Victor Reinz gasket materials. The premium grade mica material, reinforced with a special heat-resistant tanged stainless steel, resists temperatures up to 1740 °F. Wherever things get extremely hot, VR-X demonstrates its enormous sealing potential: engines, exhaust systems, turbo chargers, marine applications, burners and ovens, etc.

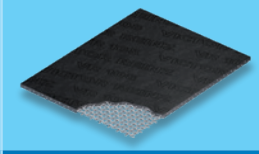
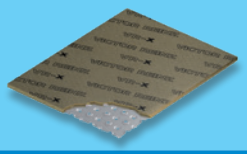


Material	Controlled Swell Gaskets	High-Performance Metal Reinforced Gaskets
	VR 30 CS	**VR 640**
		
Features	¬ High-Performance Controlled Swell Material ¬ Very Good Creep Resistance combined with High Tensile Strength ¬ Aramid and Inorganic Fibers ¬ Special Controlled Swell Binder	¬ Metal Reinforced with Galvanized Tanged Steel Core ¬ Ultimate Creep Resistance ¬ Superior Temperature Resistance ¬ Inorganic Fibers ¬ Nitrile Binder
Typical Applications	Oil Pans, Valve Covers, Transmissions	Intercoolers, Compressors, Engines, Marine Applications, HVAC/R

Technical data (typical values refer to 1/16" thick material unless otherwise specified)	Standard		nominal thickness 1.3 mm unless otherwise specified
Tensile strength, transverse	ASTM F 152	> 2030 psi / > 14 MPa	> 7250 psi / > 50 MPa
Creep relaxation (1/32" unless otherwise specified)	ASTM F 38 B	21 %	14 % [valid for t=1 mm]
Sealability (1/32"), Nitrogen	ASTM F 37 B	0.40 ml / h	-
Gas permeability	DIN 3535 / 6	< 0.1 mg / (s*m)	-
Compressibility	ASTM F 36 J	8 – 15 %	7 – 13 %
Recovery	ASTM F 36 J	> 55 %	> 55 %
VR-Hot compression test (@7250 psi):			
Thickness decrease at 68 °F (20 °C)		11 %	9 %
Thickness decrease additional, at maximum continuous application temperature		10 % (390 °F / 200 °C)	4 % (570 °F / 300 °C)
Increase in thickness after immersion in:	ASTM F 146		
IRM 903 Oil, 5 h, 300 °F		10 – 30 %	0 – 10 %
ASTM Fuel B, 5 h, 73 °F		10 – 30 %	-
Water/antifreeze 1:1, 5 h, 212 °F		-	0 – 7 %
Increase in weight after immersion in:	ASTM F 146		
IRM 903 Oil, 5 h, 300 °F		30 % maximum	-
ASTM Fuel B, 5 h, 73 °F		20 % maximum	-
Water/antifreeze 1:1, 5 h, 212 °F		-	-
Density		97–109 lb / ft³ / 1.55 – 1.75 g / cm³	-
ASTM line call-out	ASTM F104, respectively F 868 for metal reinforced materials	F712440-A9B4E35M6	0FMF1; F = F702100-B2E00M8
Operating temperature, max.[1]	continuous	390 °F / 200 °C	570 °F / 300 °C
	temporary (peak)	750 °F / 400 °C	750 °F / 400 °C
Operating pressure[1]	max.	1740 psi / 120 bar	-
Standard formats[2]			
Sheet size respectively coil width		1.5 x 1.5 m (approx. 60 x 60") to 1.5 x 4.5 m	coil width max. 0.5 m (approx. 20")
Thickness		1/64" to 1/8"	0.75 to 1.8 mm

[1] Maximum operating pressure and maximum operating temperature must not occur simultaneously.
[2] Special sheet sizes and material thicknesses on request.
Technical data shown in above table are valid on print date. Please check web site **www.targetindustrial.com** for most current version.

High-Temperature Metal Reinforced Mica Gaskets

VR 108	VR 99	VR 98	VR-X
			
¬ Metal Reinforced with Galvanized Steel Mesh ¬ Superior Creep Resistance ¬ Very High Temperature Resistance ¬ Carbon and Inorganic Fibers ¬ Nitrile Binder	¬ Metal Reinforced with Expanded Stainless Steel Core ¬ Ultimate Chemical Resistance ¬ Superior Creep Resistance ¬ Highest Pressure Resistance ¬ Aramid and Inorganic Fibers ¬ Nitrile Binder	¬ Metal Reinforced with Galvanized Steel Mesh ¬ Superior Creep Resistance ¬ High Temperature Resistance ¬ Aramid and Inorganic Fibers ¬ Nitrile Binder	¬ Metal Reinforced with Special Heat-Resistant Tanged Steel Core ¬ Excellent Creep Resistance ¬ Ultimate Temperature Resistance up to 1740 °F (950 °C)“ ¬ Mica Material
Oil Processing Industry, Pulp and Paper	Chemical Industry, HVAC/R, Water, Oil & Gas	Compressors, Pumps, HVAC/R, Oil & Gas	Engines, Exhaust Systems, Turbo Chargers, Marine Applications, Burners and Ovens
> 3335 psi / > 23 MPa	> 7540 psi / > 52 MPa	> 2900 psi / > 20 MPa	> 7250 psi / > 50 MPa
18 %	22 % [valid for t=1 mm]	23 %	26 % [valid for t=1.2 mm]
-	-	-	-
~ 0.25 mg / (s*m)	~ 0.05 mg / (s*m)	~ 0.25 mg / (s*m)	-
6 – 9 %	~ 5 %	> 5 %	5 – 15 %
> 50 %	~ 60 %	> 60 %	> 40 %
9 % 8 % (520 °F / 270 °C)	6 % 5 % (480 °F / 250 °C)	7 % 7 % (480 °F / 250 °C)	18 % 11 % (570 °F / 300 °C)
0 – 10 % 0 – 10 % 0 – 7 %	0 – 10 % 0 – 10 % 0 – 5 %	0 – 10 % 0 – 10 % 0 – 5 %	0 – 5 % 0 – 5 % 5 – 20 %
10 % maximum 10 % maximum 7 % maximum	10 % maximum 10 % maximum 5 % maximum	10 % maximum 10 % maximum 5 % maximum	15 % maximum 10 % maximum 20 % maximum
122 –134 lb/ft³ / 1.95 – 2.15 g / cm³	~ 153 lb / ft³ / ~ 2.45 g / cm³	125 – 137 lb / ft³ / 2 – 2.2 g / cm³	-
0FMF9; F = F711110-B3E12M7	0FMF9; F = F711110-B4E12M8	0FMF9; F = F711110-B4E12M6	0FMF1; F = F702120-B5E11M8
520 °F / 270 °C 825 °F / 440 °C	500 °F / 260 °C 750 °F / 400 °C	480 °F / 250 °C 750 °F / 400 °C	1740 °F / 950 °C -
2320 psi / 160 bar	3625 psi / 250 bar	2465 psi / 170 bar	-
1.5 x 1.5 m (approx. 60 x 60") 1/32" to 1/8"	1.25 x 1.5 m (approx. 50 x 60") 1.0, 1.5 and 2.0 mm	1.5 x 1.5 m (approx. 60 x 60") 1/32" to 1/8"	coil width max. 0.5 m (approx. 20") 1.2 and 1.6 mm

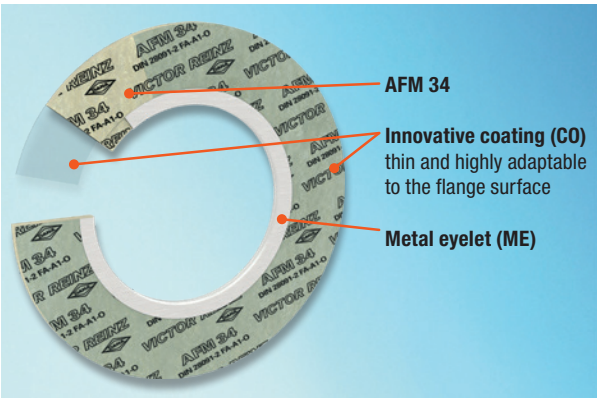
Special Gasket Solutions.

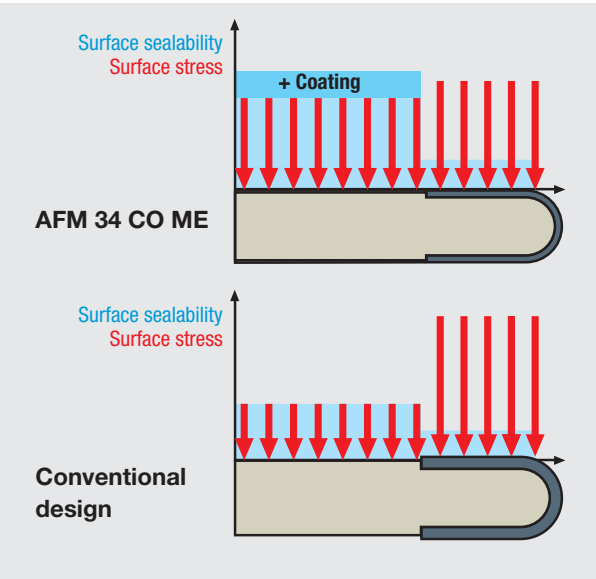
Eyeleted Gaskets.

Special requirements under extremely difficult conditions? Our answer: the **Special Gasket Solutions** product group.

- **Eyeleted Gaskets**
- **Graphite Materials**
- **ePTFE-Material**
- **Rubber Coated Materials**

AFM 34 CO ME™.
Thanks to our innovative coating (CO) in combination with an easily adaptable metal eyelet (ME), AFM 34 CO ME gaskets provide ultimate sealing already at low bolt load. The flange gasket with stainless steel eyelet is used especially in the chemical, petro-chemical and natural gas industry.





Graphite Materials.

ePTFE-Material.

Rubber Coated Materials.

Chemotherm SP™ and Chemotherm SPE™.
Made of expanded graphite on a tanged steel core, Chemotherm SP is the special material for quick-changing thermal-mechanical operating conditions. Its excellent material properties give proof especially in the exhaust area or as a cylinder-head gasket.

Our Chemotherm SPE features a tanged stainless steel core. Thus, the SPE version expands the range of applications to sealing aggressive fluids, e.g. in piping construction and apparatus engineering.

REINZOFLON E™.
REINZOFLON E consists of pure expanded PTFE (ePTFE) – a material with excellent chemical resistance to aggressive fluids. Because of its special structure, ePTFE is mechanically very strong and stable as well as soft and very adaptable.
REINZOFLON E is used wherever sealing against highly aggressive fluids, e.g. acids, is required.

MatriCS™ and MatriCS plus™.
MatriCS defines a new generation of rubber coated materials. It consists of a carbon steel core with fiber reinforced rubber coating; it is very compressible and features good recovery. MatriCS is the ideal solution for sealing joints that have to meet stringent mechanical and thermal requirements simultaneously.

MatriCS plus, compared to MatriCS, features stainless steel as metal core and a thicker fiber reinforced elastomer coating – for applications with high dynamics and/or where corrosion resistance is of importance.

Sealants.

No space for a flat gasket and extremely narrow web width? Our solution: the **Sealing Compounds** product group.

- **REINZOPLAST®**
- **REINZOSIL®**
- **REINZOSIL-t**
- **RE-MOVE**

REINZOPLAST
REINZOPLAST is a solvent-free, permanently plastic, non-curing polyurethane sealants with very good flow properties. It is ideal for sealing joints subjected to great static loads with vibrations.

REINZOSIL
REINZOSIL is a quick-hardening universal silicone sealants for sealing even large gaps – also without component disassembly.
It features high temperature and fluid resistance.

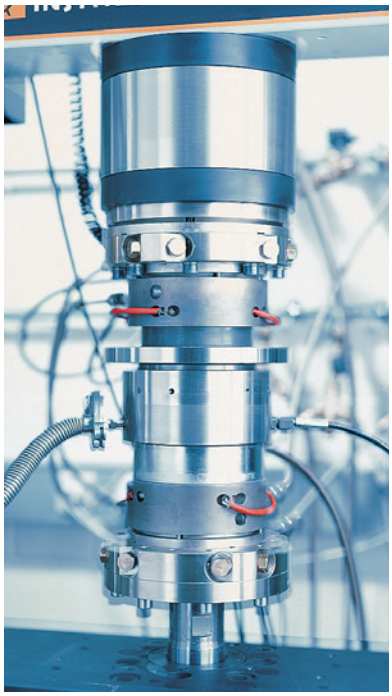
REINZOSIL-t
REINZOSIL-t is the transparent version of REINZOSIL. Because of its transparency, it is primarily used at exposed sealing joints when visual appearance matters.

RE-MOVE
RE-MOVE is a highly effective sealant remover based on ether solvent with a propellant. The agent removes any kind of gasket residues and sealing compounds quickly and easily.
Beyond this, it can also be used to remove adhesives, resin and paint residues.

TIP FROM THE EXPERTS

For sealing gaps smaller than 0.006 inches between the two sealing surfaces, REINZOPLAST is the right choice. For gaps of 0.006 inches and larger our product REINZOSIL seals quickly and reliably.

Tested Quality. Your Advantage.



Gasket material is our business – and we know it as few others do. Of course, we test our materials according to DIN and ASTM standards, but even these do not cover all properties essential in practical application. For this reason we always go one step further. We use our own additional standards, designated as RPM (Reinz test methods), which guarantee highest quality – for your safety's sake.

For example

- **RPM 511** measures the deformation (compressibility and recovery) as a function of surface stress (also known as LDC = load deflection curves).
- **RPM 510** hot compression test measures creep relaxation under temperature for different surface stress levels.

With all these tests we ensure that you receive materials that are ideal for your applications. Naturally, we have all required ISO certifications, e.g. ISO/TS 16949.

Strict Testing Methods, International Certificates, Worldwide References.
Rest assured that you're always receiving the best quality.

Practical Tips for Gaskets.

Installation
Correct installation is a basic requirement for the reliable function of a gasket. The surface stress at assembly has to be in between the minimum required and maximum permissible for the respective gasket material.

¬ Use only new, undamaged, and dry gaskets. Please consider our storage recommendations, provided below.
¬ Clean the sealing surfaces carefully without scratching them. Make sure that the sealing surfaces are dry.
¬ Center the gasket. Do not apply any additional sealing compound, grease, releasing agent or similar substance to the gasket or the sealing surfaces.
¬ Do not use corroded bolts, nuts or washers. The calculated surface stress must match the actually achieved stress. Therefore, the bolts and nuts should be lubricated slightly.
¬ Align the two sealing surfaces and tighten the bolts by hand.
¬ In order to achieve an even distribution of the surface stress, the bolts must be torqued to the specified value in star pattern using at least three steps.
Example:
- Step 1:
20% of the specified torque
- Step 2:
60% of the specified torque
- Step 3:
100% of the specified torque
¬ All bolts must be torqued to the same specified value.
¬ Retorqueing of bolts is recommended before commissioning to compensate for potential settling of the gasket.
¬ Retorqueing of fiber or PTFE based gaskets that have been in operation must only be done under ambient temperature. Retorque with great care in several steps to avoid damage to the gasket.

Storage recommendations
Please consider the following storage conditions for fiber based gaskets and gasket material sheets:

Recommended maximum storage period is two to three years under the following conditions:
¬ Temperature: below 68 °F
¬ Relative humidity: 30...60 %
¬ No direct sunlight
¬ No artificial lighting with high UV content
¬ No ozone
¬ Stress-free storage

Any significant deviation from the above will reduce the maximum storage period. When critical (e.g. toxic) gases are to be sealed, the storage period should not exceed one year. If necessary, the gaskets or gasket material sheets must be stored in airtight and lightproof packaging.

Warning
Properties/applications shown throughout this brochure are typical. Your specific application should not be implemented without independent study and evaluation for suitability. For specific application recommendations please consult us. Failure to select the proper sealing products could result in material damage and/or serious personal injury. Performance data published in this brochure is based on field tests, customer field reports and/or in-house testing. Field conditions will affect gasket performance. While utmost care has been taken while compiling this brochure,we assume no responsibility for errors. Specifications are subject to change without notice. We point out that this method for gasket selection is merely a general guide and should not be the sole means for selecting or rejecting a product.

At Home in Your Country.

Excellent availability and shortest delivery times: we have an experienced sales partner in the U.S. gasket industry providing an excellent service.

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Fax (412) 486-0914
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