



VR 640

VR® 640

Technical Data Sheet US /122

Edition: 03/2010, supersedes all prior editions.

Material	VR® 640 consists of a tanged and galvanized steel core. An asbestos- free soft material compound containing aramide fibers, inorganic fillers and high- grade binder elastomers is applied to both sides of the core.
Properties	VR® 640 exhibits very high mechanical strength together with very high pressure and temperature resistance, yet still conforms well to sealing surfaces. The material is resistant to oils, fuels, and mixtures of water and antifreeze or corrosion inhibitors.
Application	<ul style="list-style-type: none">• for cylinder head gaskets in standard internal combustion engines• for other sealed joints subjected to high mechanical and thermal stress, e.g. intake and exhaust manifolds, transmission flanges, and high- pressure pumps
Surfaces	For special applications, full- surface or partial coatings are available, e.g. a non- stick coating on a PTFE basis. Screen printing with various elastomers is also possible.



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Nominal thickness 1.30 mm unless otherwise specified

Weight per surface unit

≈ 0,78 lb/ ft² (≈ 3.8 kg/ m²)

Residual stress acc. to DIN 52 913 16 h, 570 °F (300 °C)

> 5800 psi (> 40 N/ mm²)

Compressibility and recovery

acc. to ASTM F 36, procedure J
compressibility
recovery

7 - 13 %
> 55%

Swelling acc. to ASTM F 146

in IRM 903 Oil (replaces ASTM Oil No. 3)

5 h, 300 °F (150 °C)

increase in thickness

< 10%

in water / antifreeze (50:50)

5 h, 210 °F (100 °C)

increase in thickness

< 7%

Temporary **peak temperature**

750 °F (400 °C)

Maximum **continuous temperature**

570 °F (300 °C)

Surface pressure

maximum at 570 °F (300 °C)

14500 psi (100 N/ mm²)



The data quoted above are valid for the material "as delivered" without any additional treatment. In view of the countless possible installation and operating conditions, definitive conclusions cannot be drawn for all applications regarding the behaviour in a sealed joint. Therefore, we do not give any warranty for technical data, as they do not represent assured characteristics. If you have any doubt, please contact us and specify the exact operating conditions.

Form of delivery

Gaskets

according to a drawing, dimensions supplied, or other arrangement.

Rolls

500 mm wide

Other forms of delivery by arrangement

Nominal thickness

Tolerance (mm)

Roll length (m)

0.75	+0.07/ - 0.05	280
1.00	+0.06/ - 0.06	210
1.10	+0.08/ - 0.04	190
1.20	+0.1/ - 0.02	170
1.30	+0.08/ - 0.04	160
1.40	+0.07/ - 0.08	150
1.50	+0.07/ - 0.08	140
1.60	+0.07/ - 0.08	130
1.80	+0.07/ - 0.08	110

Tighter tolerances by agreement