



DONIT TESNIT



DONIFLEX® GR-EM

Composite gasket material consisting of advanced graphite-based, »beater-addition« facing material mechanically bonded to a galvanized low carbon expanded mild steel insert with exceptional radial strength, significantly improved tensile strength and resilience.

Basis

Aramid fibers, Graphite, NBR, Steel

Color

Black

Surface treatment

Branded, without coating.

A special silver coloured non-stick top and bottom layer as well as other additional surface treatments (silicone, PTFE) are available on request.

Dimensions of standard Sheet

Sheet size: 1000x500 mm
1500x500 mm

Thickness: 1.0 mm, 1.5 mm, 2.0 mm, 3.0 mm, 4.0 mm

Application

Doniflex® GR-EM is a composite gasket material consisting of advanced graphite-based, »beater-addition« facing material mechanically bonded to a galvanized low carbon expanded mild steel insert. Due to the expanded metal reinforcement, the gasket material features a number of outstanding properties as compared to conventional soft materials. It provides exceptional radial strength, significantly improved tensile strength, resilience and other fluid resisting properties required of a reliable gasket material capable to cope with higher combinations of pressure and temperature stress.

The expanded metal reinforcement permits the optimization of surface pressure distribution on assembled gasket. Thanks to optimum properties and dimensions of expanded metal insert material is easy to handle; without additional slitting significant reduction of operation costs can be achieved. In spite of its expanded metal reinforcement gasket material also exhibits high sealability against gases at elevated temperature. Doniflex® GR-EM can, therefore be used as a general purpose material for many industrial-sealing applications, as well as a high-performance gasketing material for dynamically and thermally stressed joints. Typical applications include sealing of water, steam, oils, hydrocarbons and chemicals where the medium to be sealed allows the use of a zinc-galvanized steel reinforcement. It can be used in flanges, fittings, pumps, valves, exhaust systems, engines, vessels and heat exchangers in automotive, petrochemical, pulp and paper, food, pharmaceutical industry, in power stations as well as in shipbuilding.

Technical data (Typical values for a thickness of 2.0 mm)

Density	DIN 28090-2	g/cm ³	1.75 - 1.95
Compressibility	ASTM F 36/J	%	15 - 25
Recovery	ASTM F36/J	%	min 20
Stress Resistance (50MPa, T=300 °C, 16h)	DIN 52913	MPa	min 40
Stress Resistance (50MPa, T=175 °C, 16h)	DIN 52913	MPa	min 42
Immersion in Oil IRM 903, 5h, 150 °C	ASTM F146		
• thickness increase		%	max 10
• weight increase		%	max 20
Immersion in ASTM Fuel B, 5h, 20 °C	ASTM F146		
• thickness increase		%	max 10
• weight increase		%	max 20
Specific Leak Rate	DIN 3535/6	mg/(s·m)	max 0.1
Specific Leak Rate at 100 °C	DIN 28090/2	mg/(s·m)	max 0.05
Specific Leak Rate at 300 °C	DIN 28090/2	mg/(s·m)	max 0.1
Creep deformation – 50MPa			
• change in thickness at 300 °C		%	max 8
• change in thickness at 450 °C		%	max 10
Maximum continuous temperature		°C	400
Short-term peak temperature		°C	500

All information data are based on years of experience in production and operation of sealing elements. However, in view of the wide variety of possible installation and operating conditions one cannot draw final conclusions in all application cases regarding the behavior in gasket joint. The data may not, therefore, be used to support any warranty claims.

This edition cancels all previous issues. Subject to change without notice.

DONIT TESNIT



DONIT TESNIT d.o.o.
Cesta komandanta Staneta 38
1215 MEDVODE, Slovenija
tel: +386 (0)1 582 32 00
fax: +386 (0)1 582 32 06, 582 32 08
E-mail: info@donitnesnit.si
http://www.donitnesnit.si

MEDIA RESISTANCE

Media resistance chart serves only as a guideline for the selection of material for particular application. Due to the variety of assembly and operating conditions, the data may not be used to support any warranty claims.

ACETALDEHYDE	liquid solutions	MALEIC ANHYDRIDE	liquid solutions
AIR	gas	MARLOTERM	oil, mineral oil products
ALLYL CHLORIDE	liquid solutions	MERCURY	miscellaneous
ALUM	liquid solutions	MERCURY SALTS	liquid solutions
ALUMINIUM CHLORIDE	liquid solutions	MINERAL OIL	oil, mineral oil products
ALUMINIUM SULPHATE	liquid solutions	MINERAL OIL	oil, mineral oil products
AMMONIUM PHOSPHATE	liquid solutions	MOTOR OIL	oil, mineral oil products
ANILIN-HYDROCHLORIDE	liquid solutions		
ASPHALT	oil, mineral oil products	NICKEL SALTS	liquid solutions
ASTM OIL NO.1 FUEL	oil, mineral oil products	NITROGEN	gas
ASTM OIL NO.2 FUEL	oil, mineral oil products		
ASTM OIL NO.3C FUEL	oil, mineral oil products	OIL ACID	oil, mineral oil products
ASTM FUEL A	oil, mineral oil products		
ASTM FUEL B	oil, mineral oil products	PARAFFIN	oil, mineral oil products
ASTM FUEL C	oil, mineral oil products	PETROLEUM	oil, mineral oil products
ASTM FUEL D	oil, mineral oil products	PHOTOGRAPHIC EMULSIONS	liquid solutions
AZ 20 (32+125)	oil, mineral oil products	PHTHALIC ANHYDRIDE	liquid solutions
		POLYETHYLENE GLYCOL	oil, mineral oil products
BEER	liquid solutions	POTASH	liquid solutions
BENZINE	oil, mineral oil products.	POTASSIUM ALUM	liquid solutions
BITUMEN	oil, mineral oil products	POTASSIUM BROMATE	liquid solutions
BORAX	liquid solutions	POTASSIUM BROMIDE	liquid solutions
BRAKE FLUID (GLYCOL BASIS)	oil, mineral oil products	POTASSIUM CARBONATE	liquid solutions
BUTADIENE	oil, mineral oil products	POTASSIUM PHOSPHATE	liquid solutions
BUTENE (BUTYLENE)	oil, mineral oil products	POTASSIUM SALT	liquid solutions
		POTASSIUM SULPHATE	liquid solutions
CALCIUM CHLORIDE	liquid solutions	PROPYLENE OXIDE	gas
CALCIUM NITRATE	liquid solutions		
CARBON DIOXIDE	gas	SACCHAROSE	liquid solutions
CHLORINE GAS DRY	gas	SALT	liquid solutions
CHROME ALUM	liquid solutions	SANTOTHERM 66	oil, mineral oil products
COCONUT OIL	oil, mineral oil products	SEA WATER	liquid solutions
CONDENSATE WATER	water, steam	SILICONE GRAESE	oil, mineral oil products
COPPER SALT	liquid solutions	SILVER SALT	liquid solutions
		SOAP SOLUTION	liquid solutions
DEMINERALIZED WATER	water, steam	SODA	liquid solutions
DEXTRINE	liquid solutions	SODIUM BROMIDE	liquid solutions
DIESEL FUEL	oil, mineral oil products	SODIUM CARBONATE	liquid solutions
DIPHYL (HEAT CARRIER OIL)	oil, mineral oil products	SODIUM CHLORIDE	liquid solutions
		SODIUM DISULPHITE	liquid solutions
ETHYLCELLULOSE	liquid solutions	SODIUM DITHIONITE	liquid solutions
		SODIUM FLUORIDE	liquid solutions
FRUIT JUICE	liquid solutions	SODIUM HYDROGEN-CARBONATE	liquid solutions
FLUE GAS	gas	SODIUM HYDROGEN-SULPHATE	liquid solutions
FURNACE GAS	gas	SODIUM HYDROGEN-SULPHITE	liquid solutions
		SODIUM IODIDE	liquid solutions
GEAR OIL	oil, mineral oil products	SODIUM PERBORATE	liquid solutions
GELATIN	liquid solutions	SODIUM PHOSPHATE	liquid solutions
GENERATOR GAS	gas	SODIUM SILICATE	liquid solutions
GLAUBER SALT	liquid solutions	SODIUM SULPHATE	liquid solutions
GLUCOSE	liquid solutions	SODIUM SULPHITE	liquid solutions
GLYCOL	liquid solutions	SODIUM THIOSUPHATE	liquid solutions
GLUE	liquid solutions	SPINDLE OIL	oil, mineral oil products
		SPIRITS	oil, mineral oil products
HEAT CARRIER OIL	oil, mineral oil products	STARCH SOLUTION	liquid solutions
HEPTANE (-n)	oil, mineral oil products	STEAM	water, steam
HEXANE (-n)	oil, mineral oil products	SULPHUR DIOXIDE	gas
HOT WATER	water, steam	SYLTERM 800	oil, mineral oil products
HYDRAULIC OIL	oil, mineral oil products	SYNTREL 350	oil, mineral oil products
HYDROSULPHITE	liquid solutions		
		TANNIC ACID	liquid solutions
INERT GAS	gas	TAR	oil, mineral oil products
ISOOCTANE	oil, mineral oil products	TEST BENZINE	oil, mineral oil products
ISOPROPYL ACETATE	liquid solutions food	TETRAETHYL LEAD	oil, mineral oil products
		TRANSFORMER OIL	oil, mineral oil products
KEROSENE FUEL	oil, mineral oil products	TRI SODIUM PHOSPHATE	liquid solutions
		TURBINE OIL	oil, mineral oil products
LANOLINE (WOOL GREASE)	liquid solutions		
LATEX	liquid solutions	VASELINE	oil, mineral oil products
LAUGHING GAS	gas	VEGETABLE FAT	oil, mineral oil products
LIGHTING GAS	oil, mineral oil products	VEGETABLE OILS	oil, mineral oil products
LINK UP MEDIUMS	liquid solutions	VINYL CHLORIDE	gas
LINSEED OIL	liquid solutions		
LITHIUM BROMIDE	liquid solutions	WASCHING AGENT	liquid solutions
LUBRICATING OIL	oil, mineral oil products	WASTE GAS	gas
		WASTE WATER	liquid solutions
MACHINE OIL	oil, mineral oil products		
MAGNESIUM SALT	liquid solutions	ZINC SALTS	liquid solutions