TECHNICAL DATA SHEET

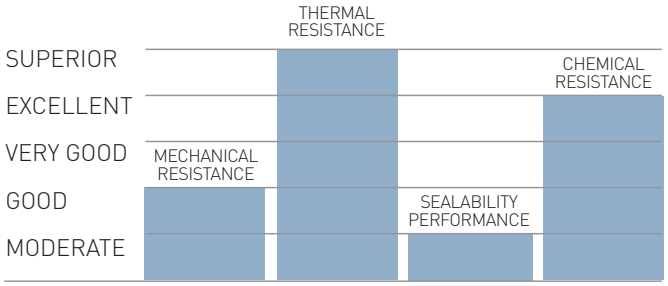
Queensland Gaskets

DONIT | DONIFLEX®-G-LD



DONIFLEX® G-LD is an advanced composite material based on graphite and aramid manufactured under organic solvent-free conditions. DONIFLEX® G-LD combines the advantages of the chemical and thermal resistance of graphite with the strength of aramid. This "low density" material has high compressibility, good stress resistance and is highly flexible in adapting to uneven flanges. It has wide application range in particular for steam supply, chemicals, and heating systems.

PROPERTIES



APPROPRIATE INDUSTRIES & APPLICATIONS

- GENERAL PURPOSE
- WATER SUPPLY
- POTABLE WATER SUPPLY
- STEAM SUPPLY
- CHEMICAL INDUSTRY
- PETROCHEMICAL INDUSTRY
- PAPER AND CELLULOSE INDUSTRY
- AUTOMOTIVE AND ENGINE BUILDING INDUSTRY
- POWER PLANT
- HEATING SYSTEMS
- HIGH TEMP. APPLICATIONS
- VALVES

Composition	Aramid fibers, natural graphite, inorganic fillers, NBR binder.
Color	Grey
Approvals	AMTEC TA-Luft (VDI 2440)

Contact us to discuss requirements and place your order **07 3277 3922**

All information and data quoted has been provided by Donit Tesnit and are based upon years of experience in the production and operation of sealing elements. This data may not be used to support any warranty claims. With its publication this latest edition supersedes all previous issues and is subject to change without further notice.

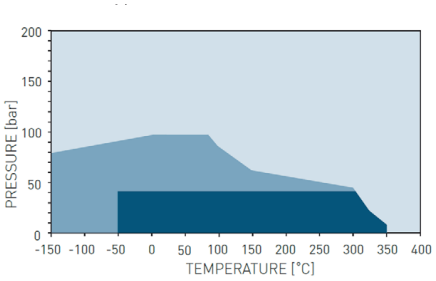
TECHNICAL DATA

Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm³	1.2
Compressibility	ASTM F36J	%	35
Recovery	ASTM F36J	%	17
Tensile strength	ASTM F152	MPa	4.5
Stress resistance	DIN 52913		
50 MPa, 16 h, 175 °C		MPa	40
50 MPa, 16 h, 300 °C		MPa	35
Specific leak rate	DIN 3535-6	mg/(s·m)	0.5
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	3
ASTM Fuel B, 5 h, 23 °C		%	2
Weight increase			
Oil IRM 903, 5 h, 150 °C		%	30
ASTM Fuel B, 5 h, 23 °C		%	25
Compression modulus	DIN 28090-2		
At room temperature: ε_{KSW}		%	26
At elevated temperature: $\varepsilon_{WSW/200\ °C}$		%	5
Percentage creep relaxation	DIN 28090-2		
At room temperature: ε_{KRW}		%	3.0
At elevated temperature: $\varepsilon_{WRW/200\ °C}$		%	0.5
Creep deformation			
Change in thickness at 20 °C, 50 MPa		%	33
Change in thickness at 300 °C, 50 MPa		%	8

P-T DIAGRAM

EN 1514-1, Type IBC, PN 40, DIN 28091-2 / 3.8, 2.0 mm



- General suitability - Under common installation practices and chemical compatibility.
- Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- Limited suitability - Technical consultation is mandatory.

Queensland Gaskets

Standard dimensions of sheets	Size (mm): 1500 x 1480 | 2000 x 1480 Thickness (mm): 0.5 | 1.0 | 1.5 | 2.0 | 3.0 Other sizes and thicknesses available on request.

Acetamide	+
Acetic acid, 10%	+
Acetic acid, 100% (Glacial)	?
Acetone	?
Acetonitrile	-
Acetylene (gas)	+
Acid chlorides	-
Acrylic acid	+
Acrylonitrile	-
Adipic acid	+
Air (gas)	+
Alcohols	+
Aldehydes	?
Alum	+
Aluminium acetate	+
Aluminium chlorate	+
Aluminium chloride	+
Aluminium sulfate	+
Amines	-
Ammonia (gas)	?
Ammonium bicarbonate	+
Ammonium chloride	+
Ammonium hydroxide	?
Amyl acetate	?
Anhydrides	?
Aniline	-
Anisole	+
Argon (gas)	+
Asphalt	+
Barium chloride	+
Benzaldehyde	?
Benzene	+
Benzoic acid	+
Bio-diesel	+
Bio-ethanol	+
Black liquor	+
Borax	+
Boric acid	+
Butadiene (gas)	+
Butane (gas)	+
Butyl alcohol (Butanol)	+
Butyric acid	+
Calcium chloride	+
Calcium hydroxide	+
Carbon dioxide (gas)	+
Carbon monoxide (gas)	+
Cellosolve	?
Chlorine (gas)	?
Chlorine (in water)	?
Chlorobenzene	?
Chloroform	?
Chloroprene	?
Chlorosilanes	?
Chromic acid	-
Citric acid	+
Copper acetate	+
Copper sulfate	+
Creosote	?
Cresols (Cresylic acid)	?
Cyclohexane	+
Cyclohexanol	+
Cyclohexanone	?
Decalin	+
Dextrin	+
Dibenzyl ether	?
Dibutyl phthalate	?
Dimethylacetamide (DMA)	?
Dimethylformamide (DMF)	?

Dioxane	?
Diphyl (Dowtherm A)	+
Esters	?
Ethane (gas)	+
Ethers	?
Ethyl acetate	?
Ethyl alcohol (Ethanol)	+
Ethyl cellulose	?
Ethyl chloride (gas)	?
Ethylene (gas)	+
Ethylene glycol	+
Formaldehyde (Formalin)	?
Formamide	+
Formic acid, 10%	+
Formic acid, 85%	?
Formic acid, 100%	?
Freon-12 (R-12)	+
Freon-134a (R-134a)	+
Freon-22 (R-22)	?
Fruit juices	+
Fuel oil	+
Gasoline	+
Gelatin	+
Glycerine (Glycerol)	+
Glycols	+
Helium (gas)	+
Heptane	+
Hydraulic oil (Glycol based)	+
Hydraulic oil (Mineral type)	+
Hydraulic oil (Phosphate ester based)	+
Hydrazine	-
Hydrocarbons	+
Hydrochloric acid, 10%	?
Hydrochloric acid, 37%	-
Hydrofluoric acid, 10%	-
Hydrofluoric acid, 48%	-
Hydrogen (gas)	+
Iron sulfate	+
Isobutane (gas)	+
Isooctane	+
Isoprene	+
Isopropyl alcohol (Isopropanol)	+
Kerosene	+
Ketones	?
Lactic acid	+
Lead acetate	+
Lead arsenate	+
Magnesium sulfate	+
Maleic acid	+
Malic acid	+
Methane (gas)	+
Methyl alcohol (Methanol)	+
Methyl chloride (gas)	?
Methylene dichloride	?
Methyl ethyl ketone (MEK)	?
N-Methyl-pyrrolidone (NMP)	?
Milk	+
Mineral oil (ASTM no.1)	+
Motor oil	+
Naphtha	+
Nitric acid, 10%	?
Nitric acid, 65%	-
Nitrobenzene	?
Nitrogen (gas)	+
Nitrous gases (NOx)	?
Octane	+
Oils (Essential)	+
Oils (Vegetable)	+

Oleic acid	+
Oleum (Sulfuric acid, fuming)	-
Oxalic acid	+
Oxygen (gas)	+
Palmitic acid	+
Paraffin oil	+
Pentane	+
Perchloroethylene	?
Petroleum (Crude oil)	+
Phenol (Carbolic acid)	-
Phosphoric acid, 40%	?
Phosphoric acid, 85%	?
Phthalic acid	+
Potassium acetate	+
Potassium bicarbonate	+
Potassium carbonate	+
Potassium chloride	+
Potassium cyanide	+
Potassium dichromate	?
Potassium hydroxide	?
Potassium iodide	+
Potassium nitrate	+
Potassium permanganate	?
Propane (gas)	+
Propylene (gas)	+
Pyridine	-
Salicylic acid	?
Seawater/brine	+
Silicones (oil/grease)	+
Soaps	+
Sodium aluminate	+
Sodium bicarbonate	+
Sodium bisulfite	+
Sodium carbonate	+
Sodium chloride	+
Sodium cyanide	+
Sodium hydroxide	?
Sodium hypochlorite (Bleach)	?
Sodium silicate (Water glass)	+
Sodium sulfate	+
Sodium sulfide	+
Starch	+
Steam	+
Stearic acid	+
Styrene	?
Sugars	+
Sulfur	?
Sulfur dioxide (gas)	?
Sulfuric acid, 20%	-
Sulfuric acid, 98%	-
Sulfuryl chloride	-
Tar	+
Tartaric acid	+
Tetrahydrofuran (THF)	?
Titanium tetrachloride	
Toluene	+
2,4-Toluenediisocyanate	?
Transformer oil (Mineral type)	+
Trichloroethylene	?
Vinegar	+
Vinyl chloride (gas)	?
Vinylidene chloride	?
Water	+
White spirits	+
Xylenes	+
Xylenol	-
Zinc sulfate	+

P-T diagrams indicate the maximum permissible combination of internal pressure and service temperature which can be simultaneously applied for a given gasket according its material type, thickness, size and tightness class. Given the wide variety of gasket applications and service conditions, these values should only be regarded as guidance for the proper gasket assembly. In general, thinner gaskets exhibit better P-T properties.

CHEMICAL RESISTANCE CHART

The recommendations made here are intended as a guideline for the selection of a suitable gasket type. As the function and durability of products are dependent upon a number of factors, the data may not be used to support any warranty claims.

\+ Recommended
? Recommendation depends on operating conditions
\- Not recommended

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DONIT TESNIT, d.o.o.

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Contact us to discuss requirements and place your order 07 3277 3922