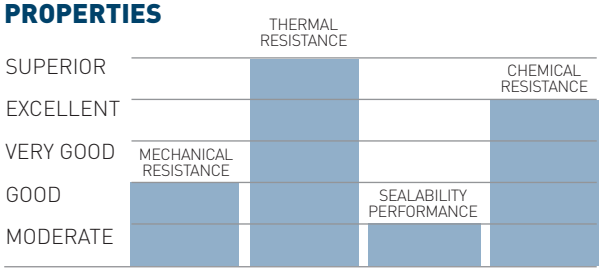
DONIFLEX® G-LD

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

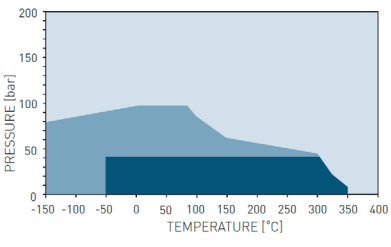
Composition	Aramid fibers, natural graphite, inorganic fillers, NBR binder.
Color	Grey
Approvals	AMTEC TA-Luft (VDI 2440)

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
Change in thickness at 400 °C, 50 MPa		%	17

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.

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	+	Dioxane	?	Oleic acid	+
Acetic acid, 10%	+	Diphyl (Dowtherm A)	+	Oleum (Sulfuric acid, fuming)	-
Acetic acid, 100% (Glacial)	?	Esters	?	Oxalic acid	+
Acetone	?	Ethane (gas)	+	Oxygen (gas)	+
Acetonitrile	-	Ethers	?	Palmitic acid	+
Acetylene (gas)	+	Ethyl acetate	?	Paraffin oil	+
Acid chlorides	-	Ethyl alcohol (Ethanol)	+	Pentane	+
Acrylic acid	+	Ethyl cellulose	?	Perchloroethylene	?
Acrylonitrile	-	Ethyl chloride (gas)	?	Petroleum (Crude oil)	+
Adipic acid	+	Ethylene (gas)	+	Phenol (Carbolic acid)	-
Air (gas)	+	Ethylene glycol	+	Phosphoric acid, 40%	?
Alcohols	+	Formaldehyde (Formalin)	?	Phosphoric acid, 85%	?
Aldehydes	?	Formamide	+	Phthalic acid	+
Alum	+	Formic acid, 10%	+	Potassium acetate	+
Aluminium acetate	+	Formic acid, 85%	?	Potassium bicarbonate	+
Aluminium chlorate	+	Formic acid, 100%	?	Potassium carbonate	+
Aluminium chloride	+	Freon-12 (R-12)	+	Potassium chloride	+
Aluminium sulfate	+	Freon-134a (R-134a)	+	Potassium cyanide	+
Amines	-	Freon-22 (R-22)	?	Potassium dichromate	?
Ammonia (gas)	?	Fruit juices	+	Potassium hydroxide	?
Ammonium bicarbonate	+	Fuel oil	+	Potassium iodide	+
Ammonium chloride	+	Gasoline	+	Potassium nitrate	+
Ammonium hydroxide	?	Gelatin	+	Potassium permanganate	?
Amyl acetate	?	Glycerine (Glycerol)	+	Propane (gas)	+
Anhydrides	?	Glycols	+	Propylene (gas)	+
Aniline	-	Helium (gas)	+	Pyridine	-
Anisole	+	Heptane	+	Salicylic acid	?
Argon (gas)	+	Hydraulic oil (Glycol based)	+	Seawater/brine	+
Asphalt	+	Hydraulic oil (Mineral type)	+	Silicones (oil/grease)	+
Barium chloride	+	Hydraulic oil (Phosphate ester based)	+	Soaps	+
Benzaldehyde	?	Hydrazine	-	Sodium aluminate	+
Benzene	+	Hydrocarbons	+	Sodium bicarbonate	+
Benzoic acid	+	Hydrochloric acid, 10%	?	Sodium bisulfite	+
Bio-diesel	+	Hydrochloric acid, 37%	-	Sodium carbonate	+
Bio-ethanol	+	Hydrofluoric acid, 10%	-	Sodium chloride	+
Black liquor	+	Hydrofluoric acid, 48%	-	Sodium cyanide	+
Borax	+	Hydrogen (gas)	+	Sodium hydroxide	?
Boric acid	+	Iron sulfate	+	Sodium hypochlorite (Bleach)	?
Butadiene (gas)	+	Isobutane (gas)	+	Sodium silicate (Water glass)	+
Butane (gas)	+	Isooctane	+	Sodium sulfate	+
Butyl alcohol (Butanol)	+	Isoprene	+	Sodium sulfide	+
Butyric acid	+	Isopropyl alcohol (Isopropanol)	+	Starch	+
Calcium chloride	+	Kerosene	+	Steam	+
Calcium hydroxide	+	Ketones	?	Stearic acid	+
Carbon dioxide (gas)	+	Lactic acid	+	Styrene	?
Carbon monoxide (gas)	+	Lead acetate	+	Sugars	+
Cellosolve	?	Lead arsenate	+	Sulfur	?
Chlorine (gas)	?	Magnesium sulfate	+	Sulfur dioxide (gas)	?
Chlorine (in water)	?	Maleic acid	+	Sulfuric acid, 20%	-
Chlorobenzene	?	Malic acid	+	Sulfuric acid, 98%	-
Chloroform	?	Methane (gas)	+	Sulfuryl chloride	-
Chloroprene	?	Methyl alcohol (Methanol)	+	Tar	+
Chlorosilanes	?	Methyl chloride (gas)	?	Tartaric acid	+
Chromic acid	-	Methylene dichloride	?	Tetrahydrofuran (THF)	?
Citric acid	+	Methyl ethyl ketone (MEK)	?	Titanium tetrachloride	
Copper acetate	+	N-Methyl-pyrrolidone (NMP)	?	Toluene	+
Copper sulfate	+	Milk	+	2,4-Toluenediisocyanate	?
Creosote	?	Mineral oil (ASTM no.1)	+	Transformer oil (Mineral type)	+
Cresols (Cresylic acid)	?	Motor oil	+	Trichloroethylene	?
Cyclohexane	+	Naphtha	+	Vinegar	+
Cyclohexanol	+	Nitric acid, 10%	?	Vinyl chloride (gas)	?
Cyclohexanone	?	Nitric acid, 65%	-	Vinylidene chloride	?
Decalin	+	Nitrobenzene	?	Water	+
Dextrin	+	Nitrogen (gas)	+	White spirits	+
Dibenzyl ether	?	Nitrous gases (NOx)	?	Xylenes	+
Dibutyl phthalate	?	Octane	+	Xylenol	-
Dimethylacetamide (DMA)	?	Oils (Essential)	+	Zinc sulfate	+
Dimethylformamide (DMF)	?	Oils (Vegetable)	+		

All information and data quoted are based upon decades 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.

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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