

MATERIAL DATASHEET

V. 05/2018

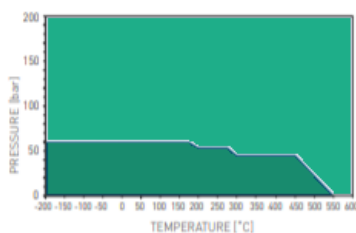
GRAFILIT® SP

Material Information	
Manufacturer	Donit
Composition	Expanded natural graphite, tanged AISI 316 insert
Applications	High temperature, engine industry, power plants
Approvals	DVGW DIN 3535-27, DVGW DIN 30563 (5 bar), API 628, BAM (Oxygen), DNV GL
Colour	Black
Thickness (mm)	1,0; 1,5; 2,0; 3,0
Sheet dimensions (mm)	1 000 x 1 500; 1 500 x 1 500
Other	ash content < 1 %, fluoride and chloride content 20 ppm

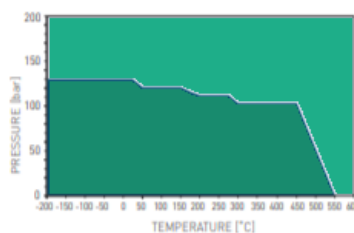
Technical Data (1,5 mm thickness)		
Density, DIN 28090-2 (g/cm ³)	Compressibility, ASTM F36A (%)	Recovery, ASTM F36A (%)
1,5	35	17
Tensile strength, DIN 52910 (MPa)	Stress resistance, DIN 52913 (MPa)	Specific leak rate, DIN 3535-6 (mg/s·m)
not defined	49 (50 MPa, 300 °C, 16 h)	0,05
Thickness increase, ASTM F146 (%)	Compression modulus, DIN 28090-2 (%)	Creep relaxation, DIN 28090-2 (%)
not defined	34 (ϵ_{KSW}) 1,2 ($\epsilon_{WSW/200\text{ }^\circ\text{C}}$)	4,2 (ϵ_{KRW}) 3,3 ($\epsilon_{WRW/200\text{ }^\circ\text{C}}$)
Peak temperature (°C/°F)	Continuous temperature (°C/°F)	Maximum pressure (bar/psi)
700/1292	550/1022	160/2320

pT-diagrams

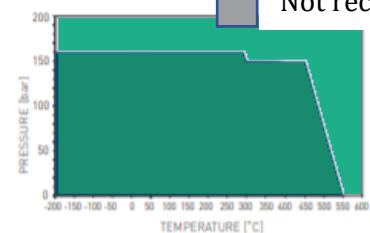
Demanding gases



Steam, gases



Liquids



- General suitability
- Limited suitability
- Not recommended

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Recommended Media			
Acetic acid 10 %	Copper sulfate	Isobutane	Propane
Acetone	Creosote	Isooctane	Propylene
Acetonitrile	Cresols	Isoprene	Pthalic acid
Acetylene	Cyclohexane	Isopropanol	Pyridine
Acids	Cyclohexanol	Kerosene	Salicylic acid
Acids	Cyclohexanone	Lead acetate	Soaps
Acrylic acid	Decalin	Lead arsenate	Sodium aluminate
Acrylonitrile	Dextrin	Magnesium sulfate	Sodium bicarbonate
Adipic acid	Dibenzyl ether	Maleic acid	Sodium bisulfite
Air	Dibutyl phthalate	Methane	Sodium carbonate
Alcohols	Dimethylacetamide (DMA)	Methanol	Sodium chloride
Aluminium sulfate	Dimethylformamide (DMF)	Methyl chloride	Sodium cyanide
Amines	Dioxane	Methyl ethyl ketone (MEK)	Sodium hydroxide
Ammonia	Diphyl	Methylene dichloride	Sodium silicate (water glass)
Ammonium bicarbonate	Ethane	Methyl-pyrrolidone (NMP)	Sodium sulfate
Ammonium hydroxide	Ethanol	Milk	Solvents
Amyl acetate	Ethyl acetate	Mineral oil	Solvents
Anhydrides	Ethyl cellulose	Motor oil	Starch
Aniline	Ethyl chloride	Naphtha	Steam
Anisole	Ethylene	Nitrobenzene	Stearic acid
Argon	Ethylene glycol	Nitrogen	Styrene
Asphalt	Formaldehyde	Octane	Sugars
Benzaldehyde	Formamide	Oils (essential)	Sulfur
Benzene	Freon-12 (R-12)	Oils (vegetable)	Sulfur dioxide
Benzoic acid	Freon-134a (R-134a)	Oils, fuels	Tar
Bio-diesel	Freon-22 (R-22)	Oleic acid	Tetrahydrofuran (THF)
Bio-ethanol	Fruit juices	Oxygen	Toluene
Borax	Fuel oil	Palmitic acid	Toluene diisocyanate
Boric acid	Gasoline	Paraffin oil	Transformer oil (mineral)
Butadiene	Gelatin	Pentane	Trichloroethylene
Butane	Glycerine	Perchloroethylene	Vinegar
Butyl alcohol	Glycols	Petroleum	Vinyl chloride
Butyric acid	Helium	Phenol	Vinylidene chloride
Calcium hydroxide	Heptane	Potassium acetate	Water

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Carbon dioxide	Hydraulic oil (glycol)	Potassium bicarbonate	White spirits
Carbon monoxide	Hydraulic oil (mineral)	Potassium carbonate	Xylenes
Cellosolve	Hydraulic oil (phosphate ester)	Potassium chloride	Xylenol
Chlorobenzene	Hydrazine	Potassium cyanide	Zinc sulfate
Chloroform	Hydrocarbons	Potassium hydroxide	
Chloroprene	Hydrogen	Potassium iodide	
Copper acetate	Iron sulfate	Potassium nitrate	