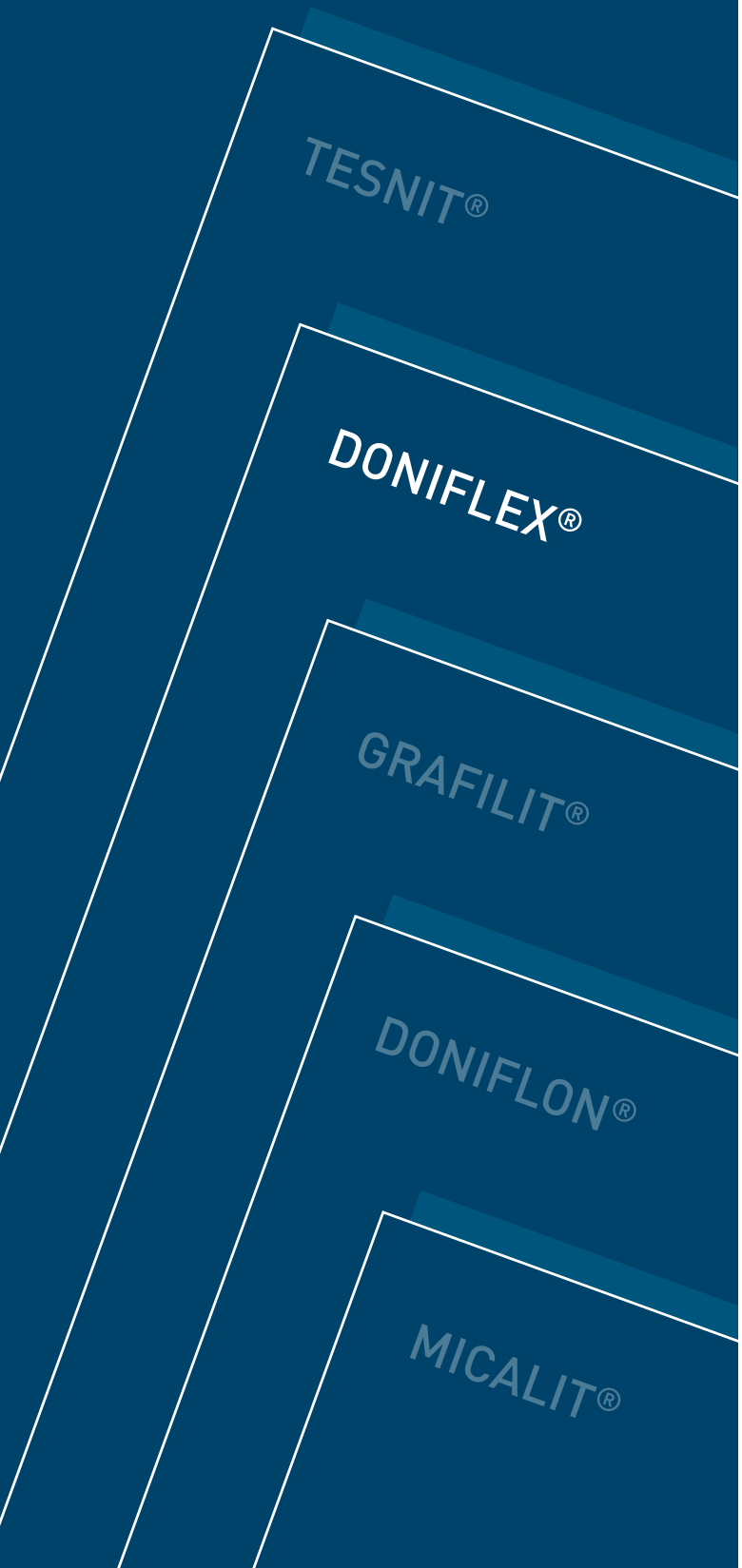
DONIT
Made in EU



DONIT®
A perfect fit

WE ARE A TRUE PARTNER FOR YOUR SUCCESS

DONIT® Sealing technologies

As a leader in gaskets, gasket sheets, and advanced sealing technologies, we offer the optimum solution with a perfect fit for your most challenging sealing requirements. Backed by decades of excellence in understanding of sealing problems, extensive know how in application engineering, and consistent manufacturing of reliable high quality products, we are in position to respond quickly and efficiently to your inquiry.

WE ARE A TRUE PARTNER FOR YOUR SUCCESS

With a wide experience in problem-solving and unshaken commitment to high quality standards, we are dedicated to provide you the best service and products. In addition, through customer-driven innovation, our strong R&D team is qualified to successfully design the adequate sealing solution.

Our customer satisfaction rests upon four pillars:

- Complete production chain and international sales network
- Quality assurance and safety
- Application engineering
- Technical training courses and seminars

THE DONIT® PHILOSOPHY

Our philosophy is based on building long-term business relationship with our customers that extends across many sectors of industries. Customer satisfaction is our driving-force which is attained through the constant supply of reliable and high quality products embracing product improvement and support.

DONIT® gasket sheets and sealing solutions are high quality products which have received several industrial quality approvals. Our products support the environmental legislation without compromising their sealing performance.

EMPLOYEES

Over 200 employees dedicated to you:
We strive for permanent professional and personal growth. We promote teamwork and diversity.

Our international team supports you regardless your geographical location.

80% - Secondary school / technical school or lower

18% - Bachelor or equivalent

2% - Doctoral or equivalent

CERTIFIED QUALITY

We assure high quality, environmentally friendly products to our customers. Quality and care for the environment is embedded in both our minds and our organization.

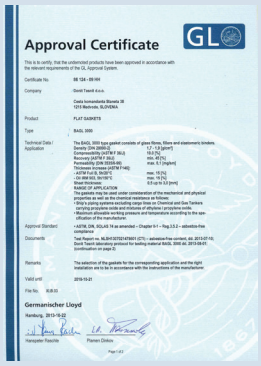
Care for the environment is embedded in our tradition. DONIT TESNIT d.o.o. is certified by international ISO 9001 and ISO 14001 standards.

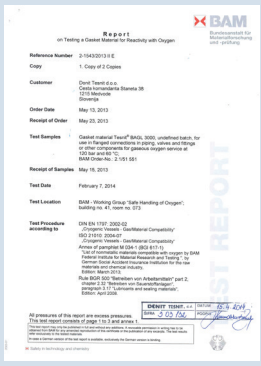
We also ensure that product quality and safety is in accordance with a number of widely recognized international standards such as:

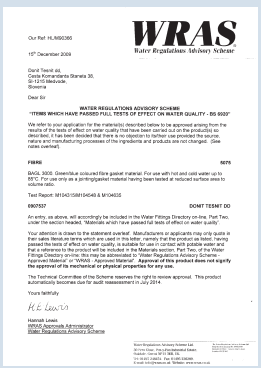
DVGW (DIN 3535-6, VP 401), SVGW (DIN 3535-6), DVGW KTW, DVGW W270, BAM, WRAS, TA-Luft (VDI 2440), API 6FA / API 607, ABS, Germanischer Lloyd


DIN-DVGW type examination certificate
DIN-DVGW-Baumusterprüfzertifikat


CERTIFICATE


Approval Certificate


Report
on Testing a Gasket Material for Reactivity with Oxygen

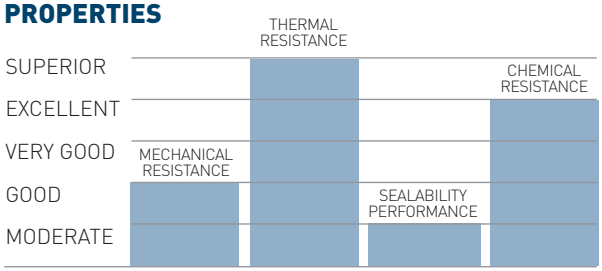

WRAS
Water Regulations Advisory Scheme


ABS
Certificate of
MANUFACTURING ASSESSMENT

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

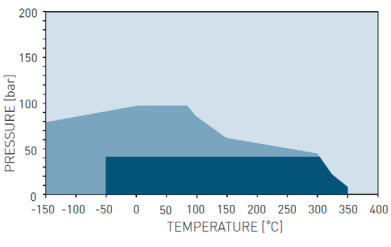
Composition	Aramid fibers, natural graphite, inorganic fillers, NBR binder.
Color	Grey
Approvals	AMTEC TA-Luft (VDI 2440)

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

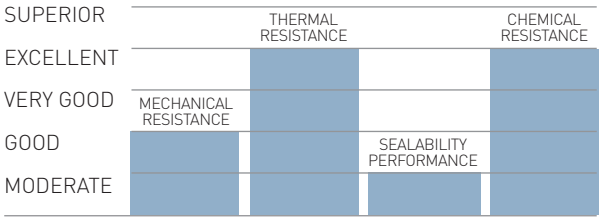
DONIT TESNIT, d.o.o.
Cesta komandanta Staneta 38
1215 Medvode, Slovenia
Phone: +386 (0)1 582 33 00
Fax: +386 (0)1 582 32 06
+386 (0)1 582 32 08
Web: www.donit.eu
E-mail: info@donit.eu

Date of issue: 08.2017 / TDS-DGLD-05-2015

DONIFLEX® G-MD

DONIFLEX® G-MD is an advanced composite material based on graphite and aramid manufactured under organic solvent-free conditions. DONIFLEX® G-MD combines the advantages of the chemical and thermal resistance of graphite with the strength of aramid. This "medium density" material has good stress resistance for gaskets with narrow-width. It is particularly suitable for steam and hot water supplies as well as for boilers and radiators.

PROPERTIES



APPROPRIATE INDUSTRIES & APPLICATIONS

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

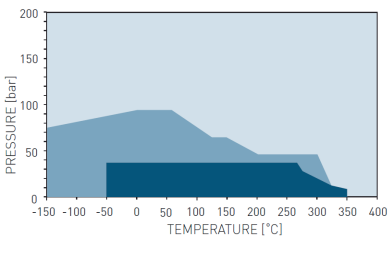
Composition	Aramid fibers, natural graphite, inorganic fillers, NBR binder.
Color	Grey
Approvals	Please inquire.

TECHNICAL DATA Typical values for a thickness of 1 mm

Density	DIN 28090-2	g/cm³	1.4
Compressibility	ASTM F36J	%	20
Recovery	ASTM F36J	%	32
Tensile strength	ASTM F152	MPa	9
Stress resistance	DIN 52913		
50 MPa, 16 h, 175 °C		MPa	45
50 MPa, 16 h, 300 °C		MPa	40
Specific leak rate	DIN 3535-6	mg/(s·m)	0.5
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	5
ASTM Fuel B, 5 h, 23 °C		%	5
Weight increase			
Oil IRM 903, 5 h, 150 °C		%	20
ASTM Fuel B, 5 h, 23 °C		%	17
Compression modulus	DIN 28090-2		
At room temperature: ε_{KSW}		%	17
At elevated temperature: $\varepsilon_{WSW/200\,°C}$		%	5
Percentage creep relaxation	DIN 28090-2		
At room temperature: ε_{KRW}		%	2.6
At elevated temperature: $\varepsilon_{WRW/200\,°C}$		%	0.2
Creep deformation			
Change in thickness at 20 °C, 50 MPa		%	18
Change in thickness at 300 °C, 50 MPa		%	10
Change in thickness at 400 °C, 50 MPa		%	15

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

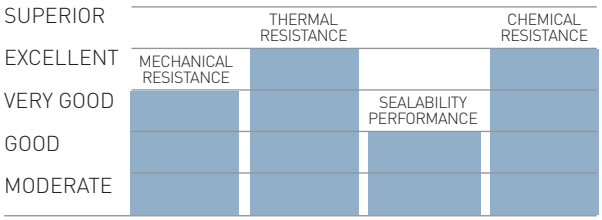
DONIT TESNIT, d.o.o.
Cesta komandanta Staneta 38
1215 Medvode, Slovenia
Phone: +386 (0)1 582 33 00
Fax: +386 (0)1 582 32 06
+386 (0)1 582 32 08
Web: www.donit.eu
E-mail: info@donit.eu

Date of issue: 08.2017 / TDS-DGMD-05-2015

DONIFLEX® G-HD

DONIFLEX® G-HD is an advanced composite material based on graphite and aramid manufactured under organic solvent-free conditions. DONIFLEX® G-HD combines the advantages of the chemical and thermal resistance of graphite with the strength of aramid. This "high density" material has very good stress resistance and sealability at elevated temperatures under continuous load. It is ideal in particular for petrochemicals and power plants.

PROPERTIES



APPROPRIATE INDUSTRIES & APPLICATIONS

- GENERAL PURPOSE
- STEAM SUPPLY
- GAS SUPPLY
- CHEMICAL INDUSTRY
- PETROCHEMICAL INDUSTRY
- PAPER AND CELLULOSE INDUSTRY
- SHIPBUILDING
- POWER PLANT
- HEATING SYSTEMS
- HIGH TEMP. APPLICATIONS

Composition	Aramid fibers, natural graphite, inorganic fillers, NBR binder.
Color	Grey
Approvals	Please inquire.

TECHNICAL DATA Typical values for a thickness of 1.5 mm

Density	DIN 28090-2	g/cm³	1.5
Compressibility	ASTM F36J	%	15
Recovery	ASTM F36J	%	45
Tensile strength	ASTM F152	MPa	8
Stress resistance	DIN 52913		
50 MPa, 16 h, 175 °C		MPa	42
50 MPa, 16 h, 300 °C		MPa	38
Specific leak rate	DIN 3535-6	mg/(s·m)	0.1
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	5
ASTM Fuel B, 5 h, 23 °C		%	5
Weight increase			
Oil IRM 903, 5 h, 150 °C		%	15
ASTM Fuel B, 5 h, 23 °C		%	15
Compression modulus	DIN 28090-2		
At room temperature: ε_{KSW}		%	6
At elevated temperature: $\varepsilon_{WSW/200\ °C}$		%	6
Percentage creep relaxation	DIN 28090-2		
At room temperature: ε_{KRW}		%	4.0
At elevated temperature: $\varepsilon_{WRW/200\ °C}$		%	0.5
Creep deformation			
Change in thickness at 20 °C, 50 MPa		%	15
Change in thickness at 300 °C, 50 MPa		%	7
Change in thickness at 400 °C, 50 MPa		%	/

Standard dimensions of sheets	Size (mm): 1500 x 1480 | 2000 x 1480 Thickness (mm): 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.

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

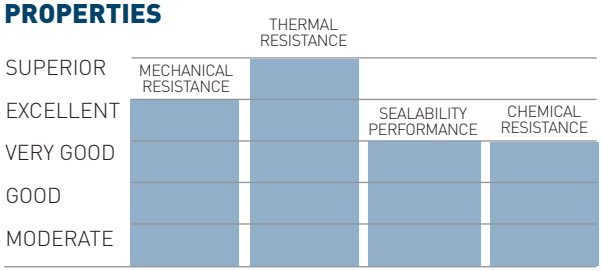
DONIT TESNIT, d.o.o.
Cesta komandanta Staneta 38
1215 Medvode, Slovenia
Phone: +386 (0)1 582 33 00
Fax: +386 (0)1 582 32 06
+386 (0)1 582 32 08
Web: www.donit.eu
E-mail: info@donit.eu

Date of issue: 08.2017 / TDS-DGHD-05-2015

DONIFLEX® G-EM

DONIFLEX® G-EM is an advanced composite material based on graphite and aramid manufactured under organic solvent-free conditions. DONIFLEX® G-EM is reinforced with expanded galvanized steel sheet insert. Even surface pressure distribution on gasket provides excellent thermo-mechanical properties and very good sealing characteristics. Therefore material is particularly suitable for petrochemicals, high temperature applications and valves.

PROPERTIES



APPROPRIATE INDUSTRIES & APPLICATIONS

- STEAM SUPPLY
- PETROCHEMICAL INDUSTRY
- PAPER AND CELLULOSE INDUSTRY
- AUTOMOTIVE AND ENGINE BUILDING INDUSTRY
- SHIPBUILDING
- POWER PLANT
- HEATING SYSTEMS
- HIGH TEMP. APPLICATIONS
- VALVES

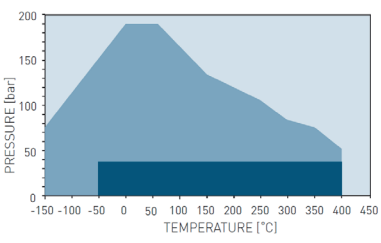
Composition	Aramid fibers, natural graphite, inorganic fillers, NBR binder. Expanded galvanized steel sheet insert (0.4 mm).
Color	Grey
Approvals	Please inquire.

TECHNICAL DATA Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm³	1.7
Compressibility	ASTM F36J	%	20
Recovery	ASTM F36J	%	30
Tensile strength	ASTM F152	MPa	15
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)	0.1
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	8
ASTM Fuel B, 5 h, 23 °C		%	8
Weight increase			
Oil IRM 903, 5 h, 150 °C		%	18
ASTM Fuel B, 5 h, 23 °C		%	18
Compression modulus	DIN 28090-2		
At room temperature: ε_{KSW}		%	7
At elevated temperature: $\varepsilon_{WSW/200\,°C}$		%	7
Percentage creep relaxation	DIN 28090-2		
At room temperature: ε_{KRW}		%	3.5
At elevated temperature: $\varepsilon_{WRW/200\,°C}$		%	0.7
Creep deformation			
Change in thickness at 20 °C, 50 MPa		%	18
Change in thickness at 300 °C, 50 MPa		%	8
Change in thickness at 400 °C, 50 MPa		%	10

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 Thickness (mm): 1.0 | 1.5 | 2.0 | 3.0 | 4.0 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

DONIT TESNIT, d.o.o.
Cesta komandanta Staneta 38
1215 Medvode, Slovenia
Phone: +386 (0)1 582 33 00
Fax: +386 (0)1 582 32 06
+386 (0)1 582 32 08
Web: www.donit.eu
E-mail: info@donit.eu

Date of issue: 08.2017 / TDS-DGEM-05-2015


A perfect fit
of TRUST
COMMITMENT
POSSIBILITIES
Customer and challenge
driven innovation
High level of flexibility
Adapt to new changes
Broad portfolio of gasket materials and products
BEST PRACTICE
SOLUTIONS

Slovenia
DONIT TESNIT, D.O.O.
Cesta komandanta Staneta 38,
1215 Medvode, Slovenia
Phone: +386 (0)1 582 33 00
E-mail: info@donit.eu

China
SUZHOU DONIT SEALING MATERIALS
Import and Export Co., Ltd.
No. 8 Suzhou Avenue West,
Bank of China Building, Room 1904,
SIP, 215021, P.R. China
Phone: +86 (0)512 659 535 29
E-mail: sales.suzhou@donit.eu

India
DONIT TESNIT INDIA
C-406, Mantri Lavendula Mulshi Road,
Bavdan Khurd, Pune - 411 021, India
Phone: +91 20 6520 7558
E-mail: sales.india@donit.eu

Middle East
DONIT TESNIT MIDDLE EAST
SM - Office- F1- 216B Ajman Free Zone Authority,
Ajman, United Arab Emirates
E-mail: sales.middleeast@donit.eu

North America
DONIT TESNIT NORTH AMERICA LLC
Donit Tesnit North America, LLC
5110 Fulton Industrial Blvd, Suite E
Atlanta, Georgia 30336
Mobile: 678-360-8562
Phone: 404-696-3998
Fax: 877-624-2766
E-mail: sales.northamerica@donit.eu

Latin America
DONIT TESNIT LATIN AMERICA
E-mail: sales.latinamerica@donit.eu

Slovenia
DONIT TESNIT, D.O.O.
Donit Industrial Sealing Solutions
Paradiž 4, 8210 Trebnje, Slovenia
Phone: +386 (0)8 205 50 44
E-mail: salesgaskets@donit.eu

Belgium
DISS-EUROPE BVBA
Donit Industrial Sealing Solutions
Bannerlaan 50,
2280 Grobbendonk, Belgium
Phone: +32 (0)14 302 100
E-mail: sales@disseurope.be

Date of issue: 08.2017 / CB-05-2015

www.donit.eu