



EXPANDED GRAPHITE

ISO 9001:2000 Reg No.: 0269

FLEXITECK (UK)

Style : 2300

UC UNIVERSAL



Graphite intercalation compounds are produced from the natural graphite flakes, which are compressed into foils without a binder or filler. Graphite sheets are manufactured in various forms, namely unreinforced, impregnated or reinforced. Absence of binders means no ageing or embrittlement. Long-term stability of compressibility and recovery over a wide range of temperatures. No cold or warm flow up to maximum permissible gasket stress. High creep strength under compressive stress. It is highly anisotropic, particularly in respect to electrical and thermal conductivity.

Our GRAPHITE in accordance with SHELL MESC Specification and have SHELL, VALERO, CHEVRON, PHILIPS 66, & McJUNKIN approval.

Sheet Form:

Model 2300A: Pure Graphite Sheet

Model 2300B: Tanged AISI 316 Stainless Steel Sheet 0.10mm Thick

Model 2300C: Foil AISI 316 stainless Steel Sheet 0.10mm Thick

Or other Alloy Steel.

Model 2300D: Corrugated Flexible Graphite Tape with one side adhesive

Model 2300E : Wire Reinforced

Model 2300G: Graphite Seal



TECHNICAL DATA:

Carbon Content:		> 98%
Sulphur Content:		< 1500ppm
Chloride Content:		< 50ppm
Fluoride Content:		< 50ppm
Density:		1.0 ~ 1.6 gm/cm ³
Gas permeability (DIN 3535) :		< = 0.6 ~ 1.0 cm ³ /min
ASTM “m” factor:		2.5 ~ 3.0 psi
“y” stress:		4000 ~ 9000 psi
Deformation factors DIN 28090 T02		
Compressibility:	(E ksw)	40 ~ 55 %
Recovery:	(E krw)	11.2 %
Young’s modulus (DIN 28090):		950 N/mm ²
Temperature (Inert atmosphere):		-200°C ~ 1200°C
Working temp.:		-200 – 3300 C in non-oxidizing
Pressure:		102 Bar (1480 psi)
		200 Bar (SS tanged inserted)
Tensile strength:		4.6 mpa

Total halogen :
 Weight loss:
 Bulk density:

<100 ppm
 3.6 %/hr
 1.04g/cm³

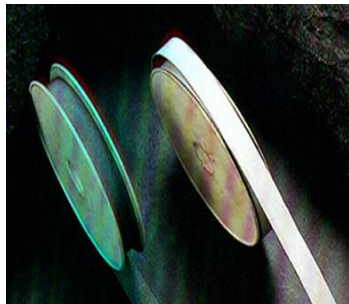
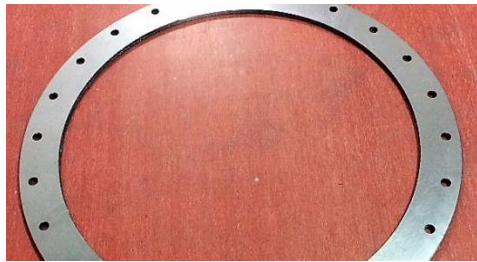


Table of Chemical Resistance of Flexible Graphite

Completely Resistant o		Moderately Resistant Δ		Not Resistant x			
<i>Acetaldehyde</i>	o	<i>Chromosulfuric Acid (<20C)</i>	o	<i>Iodines (Aqueous Salt Solution)</i>	o	<i>Potassium (<350 C, Molten)</i>	o
<i>Acetic Acid</i>	o	<i>Citric Acid</i>	o	<i>Iodine (Room Temperature)</i>	Δ	<i>Potassium Chlorate</i>	x
<i>Acetic Acid Amyl Ester</i>	o	<i>Copper (Molten)</i>	o	<i>Iron (Molten)</i>	x	<i>Potassium Hydrogen Sulfate</i>	o

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<i>Acetone</i>	<i>o</i>	<i>Diethyl Ether</i>	<i>o</i>	<i>Iso-Octane</i>	<i>o</i>	<i>Potassium Hydroxide Solution(<400C)</i>	<i>o</i>
<i>Acrylic Acid</i>	<i>o</i>	<i>Diethylamine</i>	<i>o</i>	<i>Isopropyl Alcohol</i>	<i>o</i>	<i>Potassium Nitrate</i>	<i>x</i>
<i>Acrylic Acid Ethyl Ester</i>	<i>o</i>	<i>Dimethyl Sulfoxide</i>	<i>o</i>	<i>Kerosene</i>	<i>o</i>	<i>Propane</i>	<i>o</i>
<i>Acrylonitrile</i>	<i>o</i>	<i>Dioxane</i>	<i>o</i>	<i>Lead (Molten)</i>	<i>o</i>	<i>Propylene</i>	<i>o</i>
<i>Air (<450 C)</i>	<i>o</i>	<i>Diphenyl Ether</i>	<i>o</i>	<i>Magnesium (Molten)</i>	<i>o</i>	<i>Silicones</i>	<i>o</i>
<i>Aluminum (molten)</i>	<i>o</i>	<i>Epichlorohydrin</i>	<i>o</i>	<i>Maleic Acid</i>	<i>o</i>	<i>Siloxanes</i>	<i>o</i>
<i>Ammonia</i>	<i>o</i>	<i>Ethanol</i>	<i>o</i>	<i>Mercaptans</i>	<i>o</i>	<i>Silver (Molten)</i>	<i>o</i>
<i>Ammonium Hydroxide Solution</i>	<i>o</i>	<i>Ethanolamine</i>	<i>o</i>	<i>Mercury (Molten)</i>	<i>o</i>	<i>Soda (Molten Salt)</i>	<i>o</i>
<i>Amyl Alcohol</i>	<i>o</i>	<i>Ethyl Butyl Ester</i>	<i>o</i>	<i>Methanol</i>	<i>o</i>	<i>Sodium (<350C, Molten)</i>	<i>o</i>

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Completely Resistant o		Moderately Resistant Δ		Not Resistant x			
Aniline	o	Ethylene	o	Methyl Ethyl Ether	o	Sodium Peroxide	x
Aqua Regia	x	Ethylene Dibromide	o	Methyl Ethyl Ketone	o	Sodium Hydroxide Solution (<400C)	o
Benzaldehyde	o	Ethylene Dichloride	o	Methyl Isobutyl Ketone	o	Steam (< 750C)	o
Benzene	o	Ethylene Glycol	o	Monochloroacetic Acid	o	Stearic Acid	o
Benzene Hexachloride	o	Fluorides (Aqueous Salt Solution)	o	Monochlorobenzene	o	Sulfates (Aqueous Salt Solution)	o
Bleach Liquor	o	Fluorine (>150C)	Δ	Motor Oil	o	Sulfonic Acid	o
Borates (Aqueous Salt Solution)	o	Formaldehyde	o	Nitrates (Aqueous Salt Solution)	o	Sulfur	o
Boric Acid	o	Formic Acid	o	Nitric Acid	x	Sulfur Dioxide	o
Bromides (Aqueous)	o	Freon	o	Nitric Acid (< 20%)	o	Sulfur Hexafluoride	o

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<i>Solution)</i>							
<i>Bromine (Dry)</i>	x	<i>Gasoline</i>	o	<i>Nitric Acid (>20% at room Temp)</i>	Δ	<i>Sulfur Trioxide</i>	x
<i>Bromine (Room Temperature)</i>	Δ	<i>Glycol</i>	o	<i>Nitrobenzene</i>	o	<i>Sulfuric Acid (>96%RT, or High rt)</i>	x
<i>Calcium Chloride (Molten Salt)</i>	o	<i>Gold (Molten)</i>	o	<i>Nitrogen</i>	o	<i>Sulfuric Acid (70%-85% up to 170 C)</i>	o
<i>Carbon Dioxide (<600c)</i>	o	<i>Heat Transfer Oil</i>	o	<i>Nitrogen Dioxide (<600 C)</i>	o	<i>Sulfuric Acid (85%-93% <150 C)</i>	o
<i>Carbon Disulfide</i>	o	<i>Hydraulic Oil</i>	o	<i>Nitrous Oxide</i>	o	<i>Sulfuric Acid (93-96%, at room temp)</i>	Δ
<i>Carbon Monoxide</i>	o	<i>Hydrazine</i>	o	<i>Octyl Alcohol</i>	o	<i>Sulfurous Acid</i>	o
<i>Carbon Tetrachloride</i>	o	<i>Hydrobromic Acid</i>	o	<i>Oleum (fuming Sulfuric Acid)</i>	x	<i>Tartaric Acid</i>	o

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<i>Carbonic Acid</i>	o	<i>Hydrochloric Acid</i>	o	<i>Oxygen (< 350 C)</i>	o	<i>Thionyl Chloride</i>	o
<i>Chlorides (Aqueous Salt Solution)</i>	o	<i>Hydrofluoric Acid (>60% at room temperature)</i>	Δ	<i>Paint Thinner</i>	o	<i>Tin (Molten)</i>	o
<i>Chlorine (Dry)</i>	o	<i>Hydrofluoric Acid (<60%, <90 C)</i>	o	<i>Perchloric Acid (<20%)</i>	o	<i>Transformer Oil</i>	o
<i>Chlorine Dioxide</i>	x	<i>Hydrofluorosilicone Acid (<20%)</i>	o	<i>Phenol</i>	o	<i>Trichloroethylene</i>	o
<i>Chlorobenzene</i>	o	<i>Hydrogen Bromide</i>	o	<i>Phenylacetic Acid</i>	o	<i>Trichloroacetic Acid</i>	o
<i>Chloroethyl Benzene</i>	o	<i>Hydrogen Chloride</i>	o	<i>Phosphates (Aqueous Salt Solution)</i>	o	<i>Triethylaminoethanol</i>	o
<i>Chloroform</i>	o	<i>Hydrogen Fluoride</i>	o	<i>Phosphoric Acid</i>	o	<i>Woods Alloy (Molten)</i>	o
<i>Chromates (<20%, ACS)</i>	o	<i>Hydrogen Peroxide (<85%)</i>	o	<i>Phthalic Acid</i>	o	<i>Xylene</i>	o

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Completely Resistant o		Moderately Resistant Δ Resistant x			Not		
<i>Chromic Acid</i> (<i><10%, < 95C</i>)	o	<i>Hydrogen Sulfide</i>	o	<i>Potash (Molten Salt)</i>	o	<i>Zinc (Molten)</i>	o



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