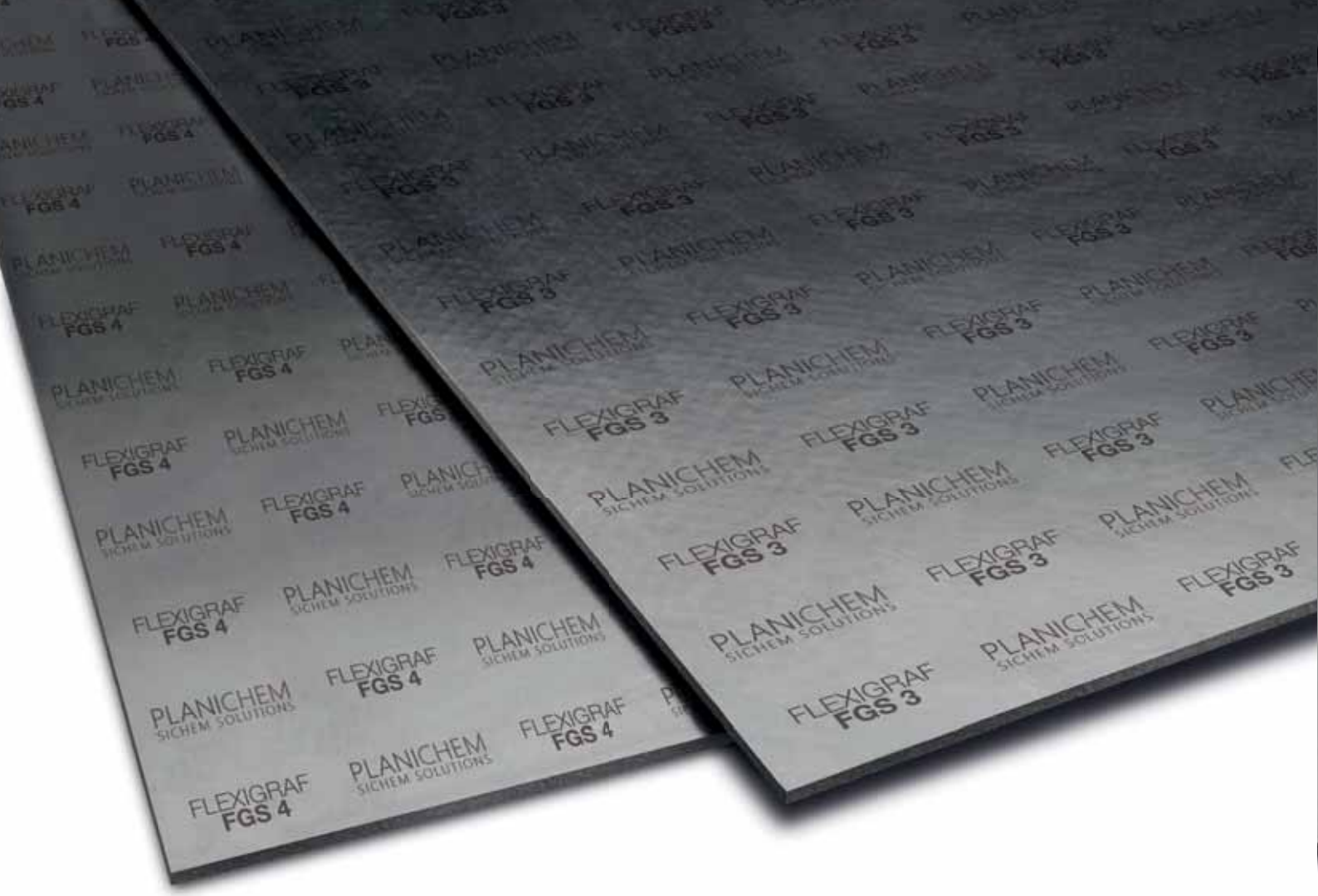
Flexigraf® Unigraph®

Graphite based sheets



PLANICHEM
SICHEM SOLUTIONS



Planichem is an Italian manufacturing company specialised in the processing of PTFE, graphite and all the main asbestos-free materials used for the production of gasketing materials, gaskets and semi finished products of high technical value.

The company's current structure has resulted from progressive developments over the years which have led to the engineering of unique processing and manufacturing methods.

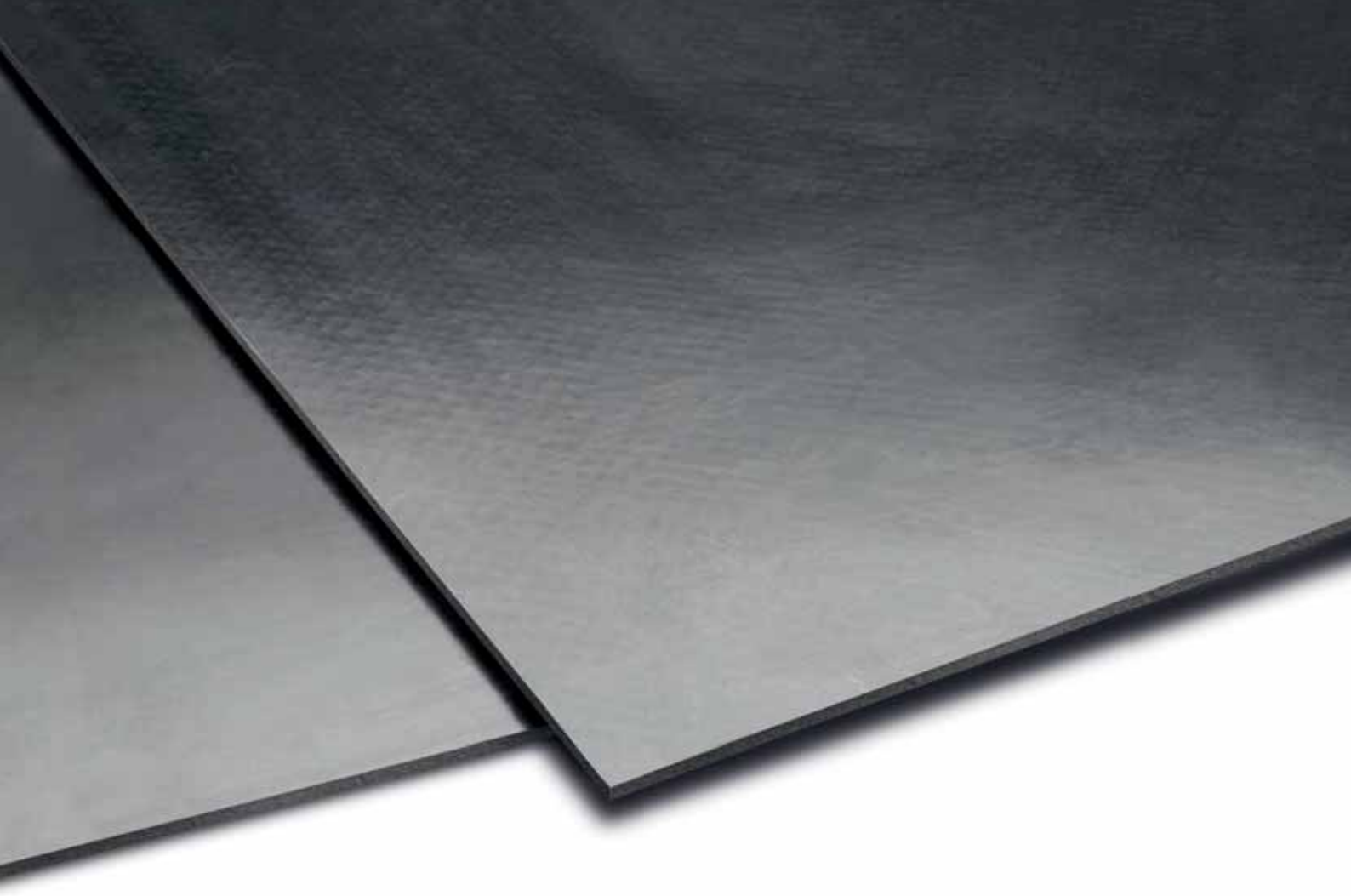
Planichem manufactures leading-edge products and innovative solutions which are protected by international patents.

Planichem's underlying goal is to provide the best quality, as certified by all major independent examination institutes.

Our products are our best guarantee suitable for all types of customers and applications, both standard and critical.

For a detailed list of the approvals, please visit our dedicated area on www.planichem.com







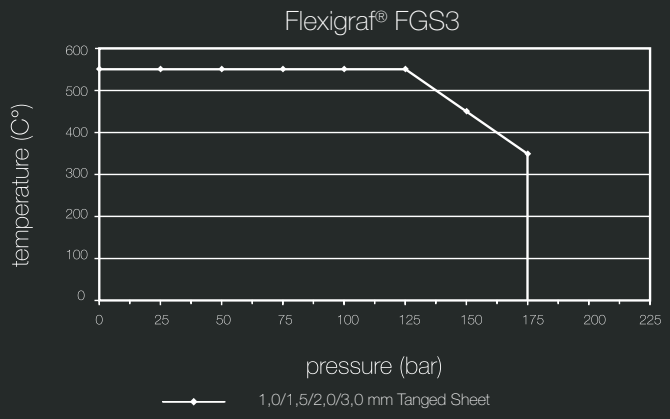
Planichem has developed two families of graphite-based products manufactured with different grades of graphite in terms of purity and sulphur contents, which are able to seal a wide range of chemicals at extreme temperatures and pressures. All our products are available with added corrosion and oxidation inhibitors.

Flexigraf® FGS is the range of products based on high purity graphite laminate reinforced with stainless steel, nickel, aluminium, and many other materials. This product family is particularly suitable far the sealing of saturated steam at high temperature and of aggressive non-oxidising chemical agents, up to 700° C and pressures of 200 bar.
MULTIFLEX is the multilayers solution which endows this material with excellent resistance up to a pressure of 300 bar.

Unigraph® is the family of products based on high purity graphite which are available in different densities, compressed and coated with special technopolymers to withstand high temperatures. This product family offers exceptional ease of processing and cutting and is suitable far the sealing of saturated steam even at high temperature and of aggressive non-oxidising chemical agents, up to of 650° C and pressures of 1 20 bar.

Flexigraf® and Unigraph® graphite based gasketing materials suitable for demanding applications at higher temperatures.

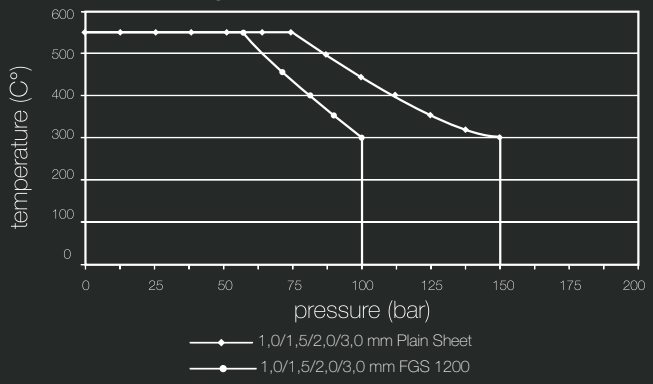
FLEXIGRAF®	FGS3	FGS4	FGS1
Colour			
Composition	Graphite laminate reinforced with a tanged stainless steel core	Graphite laminate reinforced with a flat stainless steel core	Graphite laminate reinforced with a pure nickel foil core
Density DIN 28090-2 (g/cm3)	1,2 - 1,5	1,15 - 1,45	1 - 1,2
Min/Max recommended Peak Temperature (°C)	-200/+550	-200/+550	-200/+550
Max operating pressure (Bbar)	200	150	150
Leakage DIN 3535-6 (mg*s-1*m-1)	≤ 0,1	≤ 0,1	≤ 0,1
Creep relaxation DIN 3535-6 (%)	≤ 5	≤ 5	≤ 5
Conformability DIN 3535-6 (%)	30 - 45	30 - 45	30 - 45
Recovery DIN 3535-6 (%)	3 - 7	3 - 7	3 - 7
Availability			
Sheets size (mm)	1.500x1.500 1.000X1.000 1.500X1.000	1.500x1.500 1.000X1.000 1.500X1.000	1.500x1.500 1.000X1.000 1.500X1.000
Thickness (mm)	0,5 to 3	0,5 to 3	0,5 to 3
Tolerances			
Sheets size (mm)	+/- 50	+/- 50	+/- 50
Thickness (%)	+/- 10	+/- 10	+/- 10



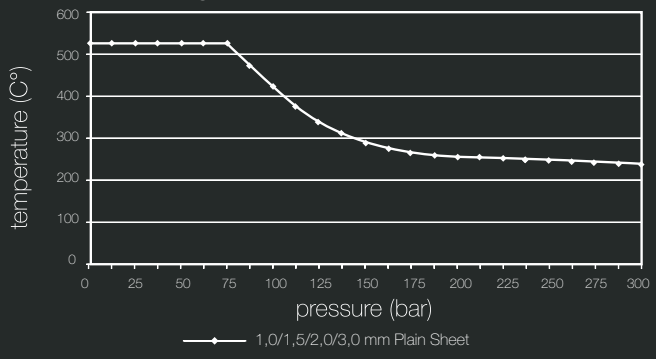
For a detailed list of approvals, please visit the dedicated area on our website www.planichem.com

FGS1200	MULTIFLEX	MULTIFLEX HPT	UNIGRAPH 500	UNIGRAPH 500 HD	UNIMETAL
					
Graphite laminate reinforced with a pure alluminium alloy core	Graphite laminate reinforced with a flat stainless steel multilayers core	Graphite laminate reinforced with a tanged stainless steel multilayers core	Graphite based with polymer coating both sides	Graphite based with polymer coating both sides	Graphite based wire mesh reinforced with polymer coating both sides
1 - 1,2	1,3 - 1,6	1,4 - 1,6	0,9 - 1,1	1,3 - 1,5	0,9 - 1,1
-200/+550	-200/+550	-200/+550	-200/+450	-200/+450	-200/+450
100	300	300	100	100	150
≤ 0,1	≤ 0,1	≤ 0,1	≤ 0,1	≤ 0,1	≤ 0,1
≤ 5	≤ 5	≤ 5	≤ 8	≤ 8	≤ 8
30 - 50	30 - 45	30 - 45	40 - 50	25 - 35	40 - 50
3 - 7	3 - 7	3 - 7	3 - 7	3 - 7	3 - 7
1.500x1.500 1.000X1.000 1.500X1.000 0,5 to 3	1.500x1.500 1.000X1.000 1.500X1.000 1 to 6	1.500x1.500 1.000X1.000 1.500X1.000 1 to 6	1.500x1.500 1.500X1.000 0,5 to 3	1.500x1.500 1.500X1.000 0,5 to 3	1.500x1.500 1.500X1.000 0,5 to 3
+/- 50 +/- 10	+/- 50 +/- 10	+/- 50 +/- 10	+/- 50 +/- 10	+/- 50 +/- 10	+/- 50 +/- 10

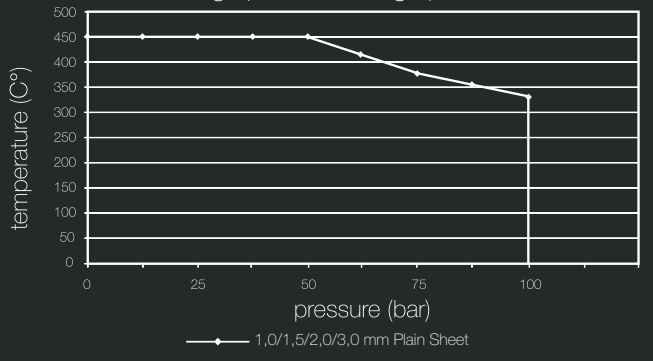
Flexigraf® FGS4 - FGS1 - FGS1200



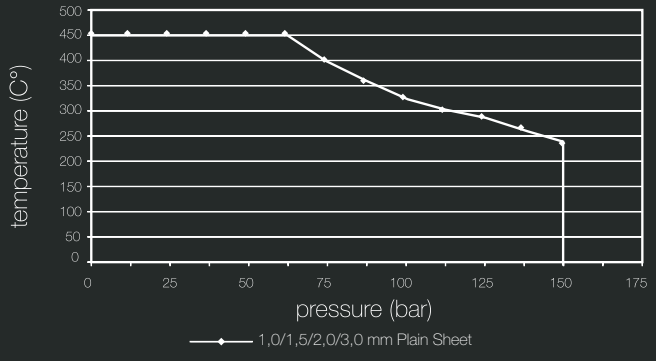
Flexigraf® MULTIFLEX - MULTIFLEX HPT



Unigraph500® - Unigraph500HD®



Unimetal®



Other sheet sizes and thicknesses available upon request.
Maximum temperature and pressure values cannot be used simultaneously.
Typical parameters of 1.5 mm thickness jointing.

Chemical compatibility guide for Flexigraf® and Unigraph®

	UNIGRAPH 500 UNIGRAPH 500 HD	FGS3 - FGS4 - MULTIFLEX MULTIFLEX HPT UNIMETAL	FGS 1200	FGS1
Acetaldehyde	●	●	●	●
Acetamide	●	●	●	●
Acetic Acid	●	●	●	●
Acetic Anhydride	●	●	●	●
Acetone	●	●	●	●
Acetonitrile	●	●	●	●
Acetophenone	●	●	●	●
Acetylaminofluorene	●	●	●	●
Acetylene	●	●	●	●
Acrolein	●	●	●	●
Acrylamide	●	●	●	●
Acrylic Acid	●	●	●	●
Acrylic Anhydride	●	●	●	●
Acrylonitrile	●	●	●	●
Adipic Acid	●	●	●	●
Adiponitrile	●	●	●	●
Air	●	●	●	●
Allyl Acetate	●	●	●	●
Allyl Chloride	●	●	●	●
Allyl Methacrylate	●	●	●	●
Aluminum Chloride	●	●	●	●
Aluminum Fluoride	●	●	●	●
Aluminum Hydroxide (Solid)	●	●	●	●
Aluminium, Molten	●	●	●	●
Aluminum Nitrate	●	●	●	●
Aluminum Sulfate	●	●	●	●
Alums	●	●	●	●
Aminodiphenyl	●	●	●	●
Ammonia, Gas, 70°C and below	●	●	●	●
Ammonia, Gas, Above 70°C	●	●	●	●
Ammonia, Liquid, Anhydrous	●	●	●	●
Ammonium Chloride	●	●	●	●
Ammonium Hydroxide	●	●	●	●
Ammonium Nitrate	●	●	●	●
Ammonium Phosphate, Monobasic	●	●	●	●
Ammonium Phosphate, Dibasic	●	●	●	●
Ammonium Phosphate, Tribasic	●	●	●	●
Ammonium Sulfate	●	●	●	●
Amyl Acetate	●	●	●	●
Amyl Alcohol	●	●	●	●
Aniline, Aniline Oil	●	●	●	●
Aniline Hydrochloride	●	●	●	●
Aniline Dyes	●	●	●	●
Anisidine	●	●	●	●
Antinomy trichloride	●	●	●	●
Aqua Regia	●	●	●	●
Aroclors or Arochlor	●	●	●	●
Aromatic Hydrocarbons	●	●	●	●
Arsenic Acid	●	●	●	●
Arseneous Acid	●	●	●	●
Asphalt	●	●	●	●
Aviation Gasoline	●	●	●	●
Barium Chloride	●	●	●	●
Barium Hydroxide	●	●	●	●
Barium Sulfide	●	●	●	●
Baygon	●	●	●	●
Beer	●	●	●	●
Benzaldehyde	●	●	●	●
Benzene, Benzol	●	●	●	●
Benezene Sulphonic Acid	●	●	●	●
Benzidine	●	●	●	●
Benzoic Acid	●	●	●	●
Benzonitrile	●	●	●	●
Benzoquinones	●	●	●	●
Benzotrichloride	●	●	●	●
Benzoyl Chloride	●	●	●	●
Benzyl Alcohol	●	●	●	●
Benzyl Chloride	●	●	●	●
Bio-diesel (B100)	●	●	●	●
Biphenyl	●	●	●	●
Bis(2-chloroethyl)ether	●	●	●	●
Bis(chloromethyl)ether	●	●	●	●
Bis(2-ethylhexyl)phthalate	●	●	●	●
Black Sulfate Liquor	●	●	●	●
Blast Furnace Gas	●	●	●	●
Bleach (Sodium Hyprochlorite)	●	●	●	●
Boiler Feed Water	●	●	●	●
Borax	●	●	●	●
Boric Acid	●	●	●	●
Brine (Sodium Chloride)	●	●	●	●
Bromine	●	●	●	●
Bromine Trifluoride	●	●	●	●
Bromoform	●	●	●	●
Bromomethane	●	●	●	●
Butadiene	●	●	●	●
Butane	●	●	●	●
Butanone	●	●	●	●
Butyl Acetate	●	●	●	●
Butyl Alcohol, Butanol	●	●	●	●
Butyl Amine	●	●	●	●
tert-Butyl Amine	●	●	●	●
Butyl Methacrylate	●	●	●	●
Butyric Acid	●	●	●	●
Calcium Bisulfite	●	●	●	●
Calcium Chloride	●	●	●	●
Calcium Cyanamide	●	●	●	●

	UNIGRAPH 500 UNIGRAPH 500 HD	FGS3 - FGS4 - MULTIFLEX MULTIFLEX HPT UNIMETAL	FGS 1200	FGS1
Calcium Hydroxide	●	●	●	●
Calcium Hypochlorite	●	●	●	●
Calcium Nitrate	●	●	●	●
Cane Sugar Liquors	●	●	●	●
Caprolactam	●	●	●	●
Captan	●	●	●	●
Carbaryl	●	●	●	●
Carbolic Acid, Phenol	●	●	●	●
Carbon Dioxide, Dry	●	●	●	●
Carbon Dioxide, Wet	●	●	●	●
Carbon Disulfide	●	●	●	●
Carbon Monoxide	●	●	●	●
Carbon Tetrachloride	●	●	●	●
Carbonic Acid	●	●	●	●
Carbonyl Sulfide	●	●	●	●
Castor Oil	●	●	●	●
Catechol	●	●	●	●
Caustic Soda	●	●	●	●
Cetane (Hexadecane)	●	●	●	●
China Wood Oil	●	●	●	●
Chloramben	●	●	●	●
Chlorazotic Acid (Aqua Regia)	●	●	●	●
Chlordane	●	●	●	●
Chlorinated Solvents, Dry	●	●	●	●
Chlorinated Solvents, Wet	●	●	●	●
Chlorine, Dry	●	●	●	●
Chlorine, Wet	●	●	●	●
Chlorine Dioxide	●	●	●	●
Chlorine Trifluoride	●	●	●	●
Chloroacetic Acid	●	●	●	●
Chloroacetophenone	●	●	●	●
Chlorobenzene	●	●	●	●
Chlorobenzilate	●	●	●	●
Chloroethane	●	●	●	●
Chloroethylene	●	●	●	●
Chloroform	●	●	●	●
Chloromethyl Methyl Ether (CMME)	●	●	●	●
Chloronitrous Acid (Aqua Regia)	●	●	●	●
Chloroprene	●	●	●	●
Chlorosulfonic Acid	●	●	●	●
Chromic Acid	●	●	●	●
Chromic Anhydride	●	●	●	●
Chromium Trioxide	●	●	●	●
Citric Acid	●	●	●	●
Coke Oven Gas	●	●	●	●
Copper Chloride	●	●	●	●
Copper Sulfate	●	●	●	●
Corn Oil	●	●	●	●
Cotton Seed Oil 10	●	●	●	●
Creosote	●	●	●	●
Cresols, Cresylic Acid	●	●	●	●
Crotonic Acid	●	●	●	●
Crude Oil	●	●	●	●
Cumene	●	●	●	●
Cyclohexane	●	●	●	●
Cyclohexanol	●	●	●	●
Cyclohexanone	●	●	●	●
Diazomethane	●	●	●	●
Dibenzofuran	●	●	●	●
Dibenzylether	●	●	●	●
Dibromo chloropropane	●	●	●	●
Dibromoethane	●	●	●	●
Dibutyl Phthalate	●	●	●	●
Dibutyl Sebacate	●	●	●	●
Dichlorobenzene	●	●	●	●
Dichlorobenzidene	●	●	●	●
Dichloroethane	●	●	●	●
Dichloroethylene	●	●	●	●
Dichloroethyl Ether	●	●	●	●
Dichloromethane	●	●	●	●
Dichloropropane	●	●	●	●
Dichloropropene	●	●	●	●
Dichlorvos	●	●	●	●
Diesel Oil	●	●	●	●
Diethanolamine	●	●	●	●
Diethylaniline	●	●	●	●
Diethyl Carbonate	●	●	●	●
Diethyl Sulfate	●	●	●	●
Dimethoxybenzidene	●	●	●	●
Dimethylaminoazobenzene	●	●	●	●
Dimethyl Aniline	●	●	●	●
Dimethylbenzidine	●	●	●	●
Dimethyl Carbamoyl Chloride	●	●	●	●
Dimethyl Ether	●	●	●	●
Dimethylformamide	●	●	●	●
Dimethyl Phthalate	●	●	●	●
Dimethyl Sulfate	●	●	●	●
Dinitrophenol	●	●	●	●
Dinitrotoluene	●	●	●	●
Dioxane	●	●	●	●
Epichlorohydrin	●	●	●	●
E85 (85% Ethanol, 15% Gas)	●	●	●	●
Epoxybutane	●	●	●	●
Ethane	●	●	●	●
Ethers	●	●	●	●
Ethyl Acetate	●	●	●	●

	UNIGRAPH 500 UNIGRAPH 500 HD	FGS3 - FGS4 - MULTIFLEX MULTIFLEX HPT UNIMETAL	FGS 1200	FGS1
Ethyl Acrylate	●	●	●	●
Ethyl Alcohol	●	●	●	●
Ethylbenzene	●	●	●	●
Ethyl Carbamate	●	●	●	●
Ethyl Cellulose	●	●	●	●
Ethyl Chloride	●	●	●	●
Ethyl Ether	●	●	●	●
Ethyl Hexoate	●	●	●	●
Ethylene	●	●	●	●
Ethylene Bromide	●	●	●	●
Ethylene Dibromide	●	●	●	●
Ethylene Dichloride	●	●	●	●
Ethylene Glycol	●	●	●	●
Ethyleneimine	●	●	●	●
Ethylene Oxide	●	●	●	●
Ethylene Thiourea	●	●	●	●
Ethylidine Chloride	●	●	●	●
Ferric Chloride	●	●	●	●
Ferric Phosphate	●	●	●	●
Ferric Sulfate	●	●	●	●
Fluorine, Gas	●	●	●	●
Fluorine, Liquid	●	●	●	●
Fluorine Dioxide	●	●	●	●
Formaldehyde	●	●	●	●
Formic Acid	●	●	●	●
Fuel Oil	●	●	●	●
Fuel Oil, Acid	●	●	●	●
Gasoline, Refined	●	●	●	●
Gelatin	●	●	●	●
Glucose	●	●	●	●
Glycerine, Glycerol	●	●	●	●
Glycol	●	●	●	●
Grain Alcohol	●	●	●	●
Grease, Petroleum Base	●	●	●	●
Green Sulfate Liquor	●	●	●	●
Heptachlor	●	●	●	●
Heptane	●	●	●	●
Hexachlorobenzene	●	●	●	●
Hexachlorobutadiene	●	●	●	●
Hexachlorocyclopentadiene	●	●	●	●
Hexachloroethane	●	●	●	●
Hexadecane	●	●	●	●
Hexamethylene Diisocyanate	●	●	●	●
Hexamethylphosphoramide	●	●	●	●
Hexane	●	●	●	●
Hexone	●	●	●	●
Hydraulic Oil, Mineral	●	●	●	●
Phosphate Esters	●	●	●	●
Hydrazine	●	●	●	●
Hydrobromic Acid	●	●	●	●
Hydrochloric Acid	●	●	●	●
Hydrochloric Acid, dry	●	●	●	●
Hydrochloric Acid 20%	●	●	●	●
Hydrocyanic Acid	●	●	●	●
Hydrofluoric Acid, Anhydrous	●	●	●	●
Hydrofluoric Acid, Less than 65%, Above 70°C	●	●	●	●
Hydrofluoric Acid, 65% to Anhydrous,Above 70°C	●	●	●	●
Hydrofluoric Acid, Up to Anhydrous,70°C & below	●	●	●	●
Hydrofluorosilicic Acid	●	●	●	●
Hydrofluosilicic Acid	●	●	●	●
Hydrogen	●	●	●	●
Hydrogen Bromide	●	●	●	●
Hydrogen Fluoride	●	●	●	●
Hydrogen Peroxide, 10%	●	●	●	●
Hydrogen Peroxide, 10-90%	●	●	●	●
Hydrogen Sulfide, Dry or Wet	●	●	●	●
Hydroquinone	●	●	●	●
Iodine Pentafluoride	●	●	●	●
Iodomethane	●	●	●	●
Isobutane	●	●	●	●
Isooctane	●	●	●	●
Isophorone	●	●	●	●
Isopropyl Alcohol	●	●	●	●
Jet Fuels	●	●	●	●
Kerosene	●	●	●	●
Lacquer Solvents	●	●	●	●
Lacquers	●	●	●	●
Lactic Acid, 70°C and below	●	●	●	●
Lactic Acid, Above 70°C	●	●	●	●
Lime Saltpeter (Calcium Nitrates)	●	●	●	●
Lindane	●	●	●	●
Linseed Oil	●	●	●	●
Liquified Petroleum Gas	●	●	●	●
Lithium Bromide	●	●	●	●
Lithium, Elemental	●	●	●	●
Lubricating Oils, Refined	●	●	●	●
Lubricating Mineral or Petroleum Types	●	●	●	●
Sour	●	●	●	●
Lye	●	●	●	●
Magnesium Chloride	●	●	●	●
Magnesium Hydroxide	●	●	●	●
Magnesium Sulfate	●	●	●	●
Maleic Acid	●	●	●	●
Maleic Anhydride	●	●	●	●
Mercuric Chloride	●	●	●	●
Mercury	●	●	●	●

All technical data is based on laboratory tests.
Planichem reserves the right to modify the characteristics of its entire product range without obligation to anyone.



	UNIGRAPH 500 UNIGRAPH 500 HD	FGS3 - FGS4 - MULTIFLEX MULTIFLEX HPT UNIMETAL	FGS 1200	FGS1
Methane	●	●	●	●
Methanol, Methyl Alcohol	●	●	●	●
Methoxychlor	●	●	●	●
Methylacrylic Acid	●	●	●	●
Methyl Alcohol	●	●	●	●
Methylaziridine	●	●	●	●
Methyl Bromide	-	-	●	●
Methyl Chloride	-	●	●	●
Methyl Chloroform	●	●	●	●
4,4-Methylene-Bis(2-chloroaniline)	●	●	●	●
Methylene Chloride	●	●	●	●
Methylene Dianiline	●	●	●	●
Methylene Diphenyldiisocyanate	●	●	●	●
Methyl Ethyl Ketone (MEK)	●	●	●	●
Methyl Hydrazine	●	●	●	●
Methyl Iodide	●	●	●	●
Methyl Isobutyl Ketone (MIBK)	●	●	●	●
Methyl Isocyanate	●	●	●	●
Methyl Methacrylate	●	●	●	●
Methyl Pyrrolidone	●	●	●	●
Methyl Tert. Butyl Ether (MTBE)	●	●	●	●
Milk	●	●	●	●
Mineral Oils	●	●	●	●
Molten Alkali Metals	●	●	●	●
Monomethylamine	●	●	●	●
Muriatic Acid	●	●	●	●
Naphtha	●	●	●	●
Naphthalene	●	●	●	●
Naphthols	●	●	●	●
Natural Gas	●	●	●	●
Nickel Chloride	●	●	●	●
Nickel Sulfate	●	●	●	●
Nitric Acid, Less than 30%	●	●	●	●
Nitric Acid, Above 30%	●	●	●	●
Nitric Acid, Crude	●	●	●	●
Nitric Acid, Red Fuming	●	●	●	●
Nitrobenzene	●	●	●	●
Nitrobiphenyl	●	●	●	●
Nitro-Butanol	●	●	●	●
Nitrocalcite (Calcium Nitrate)	●	●	●	●
Nitrogen	●	●	●	●
Nitrogen Tetroxide	●	●	●	●
Nitrohydrochloric Acid (Aqua Regia)	●	●	●	●
Nitromethane	●	●	●	●
2-Nitro-2-Methyl Propanol	●	●	●	●
Nitromuriatic Acid (Aqua Regia)	●	●	●	●
Nitrophenol	●	●	●	●
Nitropropane	●	●	●	●
Nitrosodimethylamine	●	●	●	●
Nitroso Methylurea	●	●	●	●
Nitrosomorpholine	●	●	●	●
Norge Niter (Calcium Nitrate)	●	●	●	●
Norwegian Saltpeter (Calcium Nitrate)	●	●	●	●
Octadecyl Alcohol	●	●	●	●
Octane	●	●	●	●
Oil, Petroleum	●	●	●	●
Oils, Animal and Vegetable	●	●	●	●
Oleic Acid	●	●	●	●
Oleum	●	●	●	●
Orthodichlorobenzene	●	●	●	●
Oxalic Acid	●	●	●	●
Oxygen, Gas (BAM Approval)	●	●	●	●
Ozone	●	●	●	●
Palmitic Acid	●	●	●	●
Paraffin	●	●	●	●
Parathion	●	●	●	●
Paraxylene	●	●	●	●
Pentachloronitrobenzene	●	●	●	●
Pentachlorophenol	●	●	●	●
Pentane	●	●	●	●
Perchloric Acid	●	●	●	●
Perchloroethylene	●	●	●	●
Petroleum Oils, Crude	●	●	●	●
Petroleum Oils, Refined	●	●	●	●
Phenol	●	●	●	●
Phenylenediamine	●	●	●	●
Phosgene	●	●	●	●
Phosphate Esters	●	●	●	●
Phosphine	●	●	●	●
Phosphoric Acid, Crude	●	●	●	●
Phosphoric Acid, Pure, Less than 45%	●	●	●	●
Phosphoric Acid, Pure, Above 45%	●	●	●	●
Phosphoric Acid, Pure, Above 45%, Above 70°C	●	●	●	●
Phosphorus, Elemental	●	●	●	●
Phosphorus Pentachloride	●	●	●	●
Phthalic Acid	●	●	●	●
Phthalic Anhydride	●	●	●	●
Picric Acid, Molten	●	●	●	●
Picric Acid, Water Solution	●	●	●	●
Pinene	●	●	●	●
Piperidine	●	●	●	●
Polyacrylonitrile	●	●	●	●
Polychlorinated Biphenyls	●	●	●	●
Potash, Potassium Carbonate	●	●	●	●
Potassium Acetate	●	●	●	●
Potassium Bichromate	●	●	●	●

	UNIGRAPH 500 UNIGRAPH 500 HD	FGS3 - FGS4 - MULTIFLEX MULTIFLEX HPT UNIMETAL	FGS 1200	FGS1
Potassium Acetate	●	●	●	●
Potassium Bichromate	●	●	●	●
Potassium Chromate, Red	●	●	●	●
Potassium Cyanide	●	●	●	●
Potassium Dichromate	●	●	●	●
Potassium, Elemental	●	●	●	●
Potassium Hydroxide	●	●	●	●
Potassium Iodide	●	●	●	●
Potassium Nitrate	●	●	●	●
Potassium Permanganate	●	●	●	●
Potassium Sulfate	●	●	●	●
Producer Gas	●	●	●	●
Propane	●	●	●	●
Propane Sultone	●	●	●	●
Beta-Propiolactone	●	●	●	●
Propionaldehyde	●	●	●	●
Propyl Alcohol	●	●	●	●
Propyl Nitrate	●	●	●	●
Propylene	●	●	●	●
Propylene Dichloride	●	●	●	●
Propylene Glycol	●	●	●	●
Propylene Oxide	●	●	●	●
Propylenimine	●	●	●	●
Prussic Acid, Hydrocyanic Acid	●	●	●	●
Pyridine	●	●	●	●
Quinoline	●	●	●	●
Quinone	●	●	●	●
Refrigerant type 10	●	●	●	●
Refrigerant type 11	●	●	●	●
Refrigerant type 12	●	●	●	●
Refrigerant type 13	●	●	●	●
Refrigerant type 13B1	●	●	●	●
Refrigerant type 21	●	●	●	●
Refrigerant type 22	●	●	●	●
Refrigerant type 23	●	●	●	●
Refrigerant type 31	●	●	●	●
Refrigerant type 32	●	●	●	●
Refrigerant type 112	●	●	●	●
Refrigerant type 113	●	●	●	●
Refrigerant type 114	●	●	●	●
Refrigerant type 114B2	●	●	●	●
Refrigerant type 115	●	●	●	●
Refrigerant type 123	●	●	●	●
Refrigerant type124	●	●	●	●
Refrigerant type 125	●	●	●	●
Refrigerant type 134a	●	●	●	●
Refrigerant type 141b	●	●	●	●
Refrigerant type 142b	●	●	●	●
Refrigerant type 143a	●	●	●	●
Refrigerant type 152a	●	●	●	●
Refrigerant type 218	●	●	●	●
Refrigerant type 290 (Propane)	●	●	●	●
Refrigerant type 500	●	●	●	●
Refrigerant type 502	●	●	●	●
Refrigerant type 503	●	●	●	●
Refrigerant type 507	●	●	●	●
Refrigerant type 717 (Ammonia)	●	●	●	●
Refrigerant type 744 (Carbon Dioxide)	●	●	●	●
Refrigerant type C316	●	●	●	●
Refrigerant type C318	●	●	●	●
Refrigerant type HP62	●	●	●	●
Refrigerant type HP80	●	●	●	●
Refrigerant type HP81	●	●	●	●
Salt Water	●	●	●	●
Saltpeter, Potassium Nitrate	●	●	●	●
Sewage	●	●	●	●
Silicon Oil	●	●	●	●
Silver Nitrate	●	●	●	●
Soda Ash, Sodium Carbonate	●	●	●	●
Sodium Bicarbonate, Baking Soda	●	●	●	●
Sodium Bisulfate (Dry)	●	●	●	●
Sodium Bisulfite	●	●	●	●
Sodium Chlorate	●	●	●	●
Sodium Chloride	●	●	●	●
Sodium Cyanide	●	●	●	●
Sodium, Elemental	●	●	●	●
Sodium Hydrogen Sulphite	●	●	●	●
Sodium Hydroxide	●	●	●	●
Sodium Hypochlorite	●	●	●	●
Sodium Metaborate Peroxyhydrate	●	●	●	●
Sodium Metaphosphate	●	●	●	●
Sodium Nitrate	●	●	●	●
Sodium Perborate	●	●	●	●
Sodium Peroxide	●	●	●	●
Sodium Phosphate, Monobasic	●	●	●	●
Sodium Phosphate, Dibasic	●	●	●	●
Sodium Phosphate, Tribasic	●	●	●	●
Sodium Silicate	●	●	●	●
Sodium Sulfate	●	●	●	●
Sodium Sulfide	●	●	●	●
Sodium Superoxide	●	●	●	●
Sodium Thiosulfate	●	●	●	●
Soybean Oil	●	●	●	●
Stannic Chloride	●	●	●	●
Steam , Saturated	●	●	●	●
Superheated	●	●	●	●

	UNIGRAPH 500 UNIGRAPH 500 HD	FGS3 - FGS4 - MULTIFLEX MULTIFLEX HPT UNIMETAL	FGS 1200	FGS1
Stearic Acid	●	●	●	●
Stoddard Solvent	●	●	●	●
Styrene	●	●	●	●
Styrene Oxide	●	●	●	●
Sugar	●	●	●	●
Sulfur Chloride	●	●	●	●
Sulfur Dioxide	●	●	●	●
Sulfur, Molten	●	●	●	●
Sulfur Trioxide, Dry	●	●	●	●
Sulfur Trioxide, Wet	●	●	●	●
Sulfuric Acid, 10%, 70°C and below	●	●	●	●
Sulfuric Acid, 10%, Above 70°C	●	●	●	●
Sulfuric Acid, 10-75%, 260°C and below	●	●	●	●
Sulfuric Acid, 75-98%, 70°C and below	●	●	●	●
Sulfuric Acid, 75-98%, 70°C to 260°C	●	●	●	●
Sulfuric Acid, Sulfuric Acid, Fuming	●	●	●	●
Sulfurous Acid	●	●	●	●
Tannic Acid	●	●	●	●
Tartaric Acid	●	●	●	●
TCDB-p-Dioxin	●	●	●	●
Tertiary Butyl Amine	●	●	●	●
Tetrabromoethane	●	●	●	●
Tetrachlorethane	●	●	●	●
Tetrachloroethylene	●	●	●	●
Tetrahydrofuran, THF	●	●	●	●
Thionyl Chloride	●	●	●	●
Titanium Sulfate	●	●	●	●
Titanium Tetrachloride	●	●	●	●
Toluene	●	●	●	●
Toluenediamine	●	●	●	●
Toluenediisocyanate	●	●	●	●
Toluene Sulfonic Acid	●	●	●	●
Toluidine	●	●	●	●
Toxaphine	●	●	●	●
Transformer Mineral Oil	●	●	●	●
Transmission Fluid A	●	●	●	●
Trichloroacetic Acid	●	●	●	●
Trichlorobenzene	●	●	●	●
Trichloroethane	●	●	●	●
Trichloroethylene	●	●	●	●
Trichlorophenol	●	●	●	●
Tricresylphosphate	●	●	●	●
Triethanolamine	●	●	●	●
Triethyl Aluminum	●	●	●	●
Triethylamine	●	●	●	●
Trifluralin	●	●	●	●
Trimethylpentane	●	●	●	●
Turpentine	●	●	●	●
Urea, 70°C and below	●	●	●	●
Urea, above 70°F	●	●	●	●
Varnish	●	●	●	●
Vegetable Oil	●	●	●	●
Vinegar	●	●	●	●
Vinyl Acetate	●	●	●	●
Vinyl Bromide	●	●	●	●
Vinyl Chloride	●	●	●	●
Vinylidene Chloride	●	●	●	●
Vinyl Methacrylate	●	●	●	●
Water, Acid Mine, with Oxidizing Salt	●	●	●	●
Water, Acid Mine, No Oxidizing Salts	●	●	●	●
Water, Distilled	●	●	●	●
Return Condensate	●	●	●	●
Seawater	●	●	●	●
Tap Water	●	●	●	●
Whiskey and Wines	●	●	●	●
Wood Alcohol	●	●	●	●
Xylene	●	●	●	●
Zinc Chloride	●	●	●	●
Zinc Sulfate	●	●	●	●

● SUITABLE
● DEPENDS ON OPERATING CONDITIONS
● UNSUITABLE
● NO REFERENCE

For a detailed list of approvals, please visit the dedicated area on our website
www.planichem.com



PLANICHEM
SICHEM SOLUTIONS

PLANICHEM Srl
Via Consolare 41/43
25030 Zocco di Erbusco (BS) ITALY
Tel. +39 030 7386033
Fax. +39 030 7386035

www.planichem.com