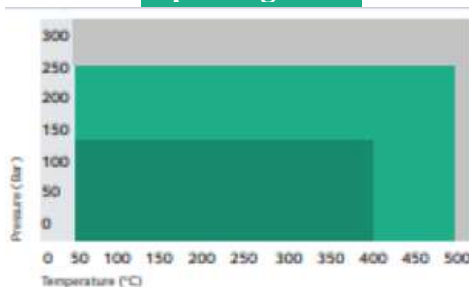


## SIGRAFLEX® HOCHDRUCK

| Material Information         |                                                                                                  |
|------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Manufacturer</b>          | SGL Carbon                                                                                       |
| <b>Composition</b>           | Natural graphite foils (99,85 %), AISI 316L foil inserts                                         |
| <b>Applications</b>          | High temperature, engine industry, power plants                                                  |
| <b>Approvals</b>             | TA Luft, API 607, BS 6755-2, HOBT, HORT, BAM, DVGW DIN 3535-6, EC1935/2004, LFGB, TRD 401        |
| <b>Colour</b>                | Black                                                                                            |
| <b>Thickness (mm)</b>        | 1,0; 1,5; 2,0; 3,0; 4,0                                                                          |
| <b>Sheet dimensions (mm)</b> | 1 000 x 1 000; 1 500 x 1 500                                                                     |
| <b>Other</b>                 | ash < 0,15 %, chloride < 10 ppm, halogens < 40 ppm, sulphur < 300 ppm (lower content on request) |

| Technical Data (1,5 mm thickness)                      |                                                   |                                                      |
|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Density,</b><br>DIN 28090-2<br>(g/cm <sup>3</sup> ) | <b>Compressibility,</b><br>ASTM F36A<br>(%)       | <b>Recovery,</b><br>ASTM F36A<br>(%)                 |
| 1,1 (graphite)                                         | 37                                                | 17                                                   |
| <b>Tensile strength,</b><br>DIN 52910<br>(MPa)         | <b>Stress resistance,</b><br>DIN 52913<br>(MPa)   | <b>Specific leak rate,</b><br>DIN 3535-6<br>(mg/s·m) |
| not defined                                            | 48 (50 MPa, 300 °C, 16 h)                         | 0,05                                                 |
| <b>Thickness increase,</b><br>ASTM F146<br>(%)         | <b>Compression modulus,</b><br>DIN 28090-2<br>(%) | <b>Creep relaxation,</b><br>DIN 28090-2<br>(%)       |
| not defined                                            | 34 ( $\epsilon_{KSW}$ )                           | 5 ( $\epsilon_{KRW}$ )                               |
|                                                        | < 3 ( $\epsilon_{WSW/300\text{ °C}}$ )            | 4 ( $\epsilon_{WRW/300\text{ °C}}$ )                 |
| <b>Peak temperature</b><br>(°C/°F)                     | <b>Continuous temperature</b><br>(°C/°F)          | <b>Maximum pressure</b><br>(bar/psi)                 |
| 550/1 022                                              | 400/842                                           | 250/3 626                                            |

pT-diagram



- General suitability
- Limited suitability
- Not recommended

| Recommended Media        |                         |                               |                            |
|--------------------------|-------------------------|-------------------------------|----------------------------|
| Acetaldehyde             | Butylamine              | Formaldehyde                  | Octane alcohol             |
| Acetic anhydride         | Butylbenzene            | Formalin                      | Octyl cresol               |
| Aceto acetic ester       | Butyltoluene            | Formamide                     | Oils (essential)           |
| Acetoin                  | Butyraldehyde           | Fruit juices                  | Oils (vegetable)           |
| Acetone                  | Calcium oxide           | Furfuryl alcohol              | Orthoboric acid            |
| Acetone cyanohydrin      | Carbon dioxide          | Gelatin                       | Oxygen                     |
| Acetonitrile             | Carbon disulfide        | Glucose                       | Ozone                      |
| Acetophenone             | Carbon tetrachloride    | Glycerol                      | Palmitic acid              |
| Acetylene                | Coffee                  | Helium                        | Pentane                    |
| Acetylene tetrachloride  | Creosol                 | Heptane                       | Pentene                    |
| Acrolein                 | Creosote                | Heptanone                     | Petroleum                  |
| Acrylamide               | Cresols                 | Hexane                        | Petroleum ether            |
| Acrylic acid ethyl ester | Cumene                  | Hexanetriol                   | Phenol                     |
| Acrylic anhydride        | Cyclohexane             | Hexyl alcohol                 | Phenyl benzene             |
| Acrylonitrile            | Cyclohexanol            | Hydraulic oil (mineral)       | Phenylethyl ether          |
| Adipic acid              | Cyclohexanone           | Hydrazine                     | Phenylhydrazine            |
| Adipic ester             | Decahydronaphthalene    | Hydrocarbons                  | Piperidine                 |
| Adiponitrile             | Decane                  | Isobutyl alcohol              | Potassium hexacyanoferrate |
| Air                      | Dextrin                 | Isodecane                     | Propane                    |
| Alcohols                 | Diacetone alcohol       | Isooctane                     | Propanol                   |
| Acids                    | Dibenzyl ether          | Isopropanol                   | Propylamine                |
| Alkylamine               | Dibutyl ether           | Isopropyl acetate             | Propylene                  |
| Alpha methylstyrene      | Dibutyl phthalate       | Isopropyl ether               | Propylene glycol           |
| Ammonia                  | Dibutylamine            | Kerosene                      | Propylene oxide            |
| Amyl acetate             | Diesel                  | Ketones                       | Pyridine                   |
| Amyl alcohol             | Diethyl ether           | Lauryl alcohol                | Pyrrole                    |
| Argon                    | Diethyl ketone          | Lysol                         | Salicylic acid             |
| Asphalt                  | Diethyl sebacate        | Magnesium carbonate           | Oils, fuels                |
| Barium hydroxide         | Diethyl succinate       | Maleic acid                   | Starch                     |
| Beer                     | Diethylene glycol       | Maleic anhydride              | Steam                      |
| Benzalacetone            | Diisobutyl ketone       | Methacrylic acid methyl ester | Stearic acid               |
| Benzaldehyde             | Diisopropyl ketone      | Methane                       | Styrene                    |
| Benzoic acid             | Dimethyl aniline        | Methanol                      | Succinic acid              |
| Benzol                   | Dimethyl phthalate      | Methyl acetate                | Succinic acid ester        |
| Benzoquinones            | Dimethylamine           | Methyl butyl ketone           | Sugars                     |
| Benzotriazole            | Dimethylformamide (DMF) | Methyl ether                  | Tannic acid                |
| Benzyl alcohol           | Dinitrogen monoxide     | Methyl formate                | Tetrahydrofuran (THF)      |
| Benzyl benzoate          | Dioctyl phthalate (DOP) | Methyl glycol acetate         | Tetralin                   |
| Benzyl iodide            | Dioctyl sebacate        | Methyl isobutyl ketone (MIBK) | Toluene                    |

**MATERIAL DATASHEET**

V. 11/2020

|                   |                  |                         |                      |
|-------------------|------------------|-------------------------|----------------------|
| Bio-diesel        | Dioxane          | Methyl isopropyl ketone | Tributyl phosphate   |
| Bio-ethanol       | Diphenylether    | Methylcyclohexanol      | Tricalcium phosphate |
| Bisphenol A       | Dipropyl ketone  | Methylcyclopentane      | Triethylamine        |
| Bitumen           | Dodecyl alcohol  | Mineral oil             | Trioctyl phosphate   |
| Butadiene         | Ethane           | Molasses                | Trisodium phosphate  |
| Butanedione       | Ethanol          | Natural gas             | Turpentine           |
| Butane            | Ethanolamine     | Neon                    | Urea                 |
| Butanethiol       | Ethyl acetate    | Nitro thinner           | Vaseline             |
| Butanone          | Ethyl acrylate   | Nitrobenzene            | Vinyl chloride       |
| Butin             | Ethylbenzene     | Nitrotoluene            | Water                |
| Butyl acetate     | Ethylene         | Nonane                  | Wine                 |
| Butyl acrylate    | Ethylene diamine | Norbornadiene           | Xenon                |
| Butyl alcohol     | Ethylene oxide   | Octadiene               | Xylenes              |
| Butyl vinyl ether | Fluorobenzene    | Octane                  | Yeast                |