



KLINGER Engineering Plastics

- » PTFE Pipe Lining
- » PTFE Coated Glass Cloth
- » Thread Seal Tape

- » PTFE
- » Sealex

- » Engineering Plastics
- » Insulation Sets
- » Spray Shield



GLOBAL LEADER

LOCAL PARTNER

PVC

- » Lightweight, durable & low cost
- » High chemical resistance
- » White in colour
- » Temperature: 0°C to 60°C
- » Applications – pipes, sheeting, flange covers
- » Media – resistant to all inorganic chemicals
- » Media – not resistant to ketones
- » Limitation – temperature restrictions

HDPE

- » High strength to density ratio
- » Temperature: -50°C to 80 °C
- » Applications – pipes, fittings & containers
- » Media – resistant to solvents, alcohols & dilute acid/alkalis
- » Media – not resistant to hydrocarbons
- » Limitation – temperature restrictions



CLEAR PTFE

- » Clear PTFE centre strip allows for complete visual inspection
- » Sides constructed of Premium PTFE coated glass cloth
- » Resistant to most media
- » Fire and tear resistant
- » All sizes and ratings
- » 204°C
- » Spray shields are designed to prevent accidents or injuries and to temporarily contain a leak



STAINLESS STEEL

- » 304/316 stainless steel construction
- » Up to 200bar
- » All sizes
- » 1090°C

- » Recommended for steam, flammables, and fire protection
- » Layers of stainless netting absorb and dissipate pressurised spray
- » No tools required, installs quickly via adjustable quick latch
- » Excellent for high temperature and pressure



ORANGE VINYL

- » Resistant to all inorganic chemicals. It has very good resistance against diluted acids, diluted alkalis and aliphatic hydrocarbons
- » Reinforced polyvinyl chloride fabric
- » 3-ply multi-layered construction
- » Standard colour is safety orange
- » All sizes and ratings
- » 75°C
- » Spray shields are designed to prevent accidents or injuries and to temporarily contain a leak

POLYPROPYLENE

- » Resistant to chemicals
- » High stiffness, hardness & strength
- » Milky translucent in colour
- » Temperature: 0°C to 110 °C
- » Applications – piping, bushes, bench tops & wear strips
- » Media – resistant to weak inorganic acid, alkali & alcohols
- » Media – not resistant to strong oxidising agent
- » Limitation – poor UV, impact & scratch resistance



PTFE (POLYTETRAFLUOROETHYLENE)

- » Excellent in chemical industry
- » Non-stick
- » Harmless to humans (unless burnt)
- » Hydrophobic
- » Weather resistant
- » Temperature: -200°C to 260 °C
- » Applications – pipe linings, bellows, gaskets etc
- » Media – resistant to most media
- » Media – not resistant to molten alkali & gaseous fluorine
- » Limitation – prone to creep & not abrasion resistant

UHMWPE

- » Extremely tough
- » High abrasion & wear resistance
- » Durable, low friction & chemical resistance
- » Temperature: -50°C to 90 °C
- » Applications – mechanical duties in water, oil, hydraulics & pneumatics
- » Media – resistant to concentrated acid, alkali & organic solvents
- » Media – not resistant to strong oxidising agents
- » Limitation – temperature restrictions



ACETAL

- » High mechanical strength, hardness & stiffness
- » Low friction coefficient
- » Excellent creep resistance
- » Opaque in colour
- » Temperature: -20°C to 105°C
- » Applications - pump parts, bearings & bushes valve & control elements
- » Media – resistant to organic solvents, oils & petrol
- » Media – not resistant to strong acids & oxidising agents
- » Limitation – poor resistance to weathering

NYLON

- » High mechanical strength and fatigue resistance
- » Wear resistant & long lasting
- » Resistant to chemicals
- » Opaque/white in colour
- » Temperature: -40°C to 110 °C
- » Applications – bearings & bushes, gears, sleeves, wear plates and seal rings
- » Media – resistant to petrol, oil & grease
- » Media – not resistant to inorganic acids & concentrated formic acids
- » Limitation – poor resistance to weathering & sunlight

PTFE WITH FILLERS

- » Bronze – thermal conductivity – applications subjected to load in high temperatures
- » Carbon – increases hardness – abrasion resistance
- » Glass – positively reduces creep or cold flow
- » Graphite – excellent wear properties – very low coefficient of friction



ENGINEERING PLASTICS



STANDARD INSULATION KIT (FULL FACE OR RING GASKET)

- » Insulation sets are used to limit corrosion in pipeline systems. Where dissimilar metals are present, the sets remove the possibility of the system acting as a galvanic cell and reduce the risk of galvanic corrosion of the pipework.
- » Each flange insulation set comprises one gasket, one insulation sleeve, two insulating and two plated steel back-up washers per bolt.
- » The sets also offer cathodic protection by isolating protected piping systems and preventing the flow of electro-static charges.
- » Media can range from water to oil, gas, petroleum or chemicals.
- » Can be made up for most flange options.



VCS INSULATION KIT



- » Pikotek Flange Insulation Kits are designed to have a complete electrical insulation of a flanged assembly.
- » What makes the VCS unique among insulating gaskets is its strength and durability.

- » Spring-energized PTFE internal face seals are installed in the dovetail-shaped seal grooves to provide the trademark pressure-activated sealing that distinguishes the VCS from all other high-pressure insulating gaskets. (Viton O-rings can also be used).

- » The Insulation Kits consist of one full-length insulating sleeve, two insulating washers, and two steel washers for each of the bolts in the flange assembly, much like a normal insulation kit.
- » The unique and patented design of the very critical service (VCS) gasket incorporates high-strength, glass-reinforced epoxy laminate bonded to a stainless-steel core.

MONOLITHIC JOINTS

- » A monolithic isolation joint (MIJ) is a piece of structural equipment that provides electrical isolation between parts of a pipeline.
- » Such joints appear in the form of a solid block, and can be a simple piece of equipment due to the fact that they have no moving parts and is supplied fully assembled and ready to be welded into the pipeline.
- » Specially designed to be shock absorbent and insulated against electrical charge, they isolate sections of pipeline so that currents can only pass so far.
- » A MIJ will serve as a positive leak-proof, long-lasting block against the flow of electric current in all piping systems.



- » Bolts, sleeves and washers – the major source of short circuits in most isolation assemblies are eliminated. Because there are no flanges, gaskets, nuts, bolts, sleeves or washers to handle there are no fluid leaks due to improper field assembly.

INSULATION SETS



GASKETS

- » PTFE gaskets (ring/full face)
- » PTFE gaskets are widely used in chemical plants
- » High temperature, corrosion and aging resistant qualities
- » PTFE envelope gaskets (various fillers)
- » PTFE envelope gaskets comprise of a compressed synthetic fibre gasket material insert with a PTFE envelope
- » The envelope protects the gasket from chemical attack
- » The insert provides the strength and resilience needed for a demanding sealing operation
- » Excellent chemical resistance under moderate conditions of temperature and pressure
- » Applications in virtually all media

PTFE BILLETS, RODS & TUBES

- » Supply of PTFE billets
- » Machined to specification

PTFE UNSINTERED CORD

- » Diameter 4mm to 20mm
- » Per kg

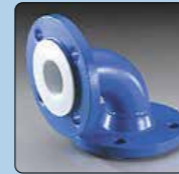
PTFE SHEETS

- » PTFE skived sheets
- » 1200mm wide per running metre
- » From 0.25mm to 6mm thick
- » *1700mm & 2250mm (Wide) X 3mm ONLY
- » PTFE moulded sheets
- » 1200mm by 1200mm
- » From 8mm to 50mm thick



PTFE COATED GLASS CLOTH

- » PTFE glass fabrics consist of a woven fibreglass that has been coated with a PTFE resin.
- » These fabrics have a non-stick surface, perform well under temperatures ranging from -70°C to 260°C.
- » They are also chemically inert, have high tensile strength and have outstanding electrical properties.
- » They are designed for a wide range of applications and come in several grades to meet specific performance requirements.
- » Typical applications include thermal insulation for high-temperature and chemical-resistant environments, gaskets & seals.
- » A variety of industries use PTFE glass fabrics, including packaging, aerospace, electronics and petroleum processing.



- » Elbows
- » Spools
- » T-Pieces

- » Standard: 10mm x 10m (50 microns)
- » Standard: 12mm x 10m (75 microns)
- » Oxygen grade: 12mm x 10m (50 microns)
- » Premium: 12mm x 10m (100microns)



- » Suitable for non-metallic flanges, large diameter vessels and irregular geometry flanges.
- » Good mechanical properties at low temperatures.
- » Soft, highly compressible PTFE gasket material on a roll, with excellent chemical resistance and good creep properties.





KLINGER
Engineering
Plastics



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ENGINEERING PLASTICS PRODUCT GUIDE

DESCRIPTION AND INFORMATION REQUIRED FOR ENQUIRY

| DESCRIPTION | STANDARD QUESTIONS | | | | INFORMATION REQUIRED TO QUOTE | | | | | |
|----------------------|--------------------|-------|-----|-----|-------------------------------|--------|-----------|---------------|------------|-----------|
| | TEMP | MEDIA | PRE | QTY | OD | ID | THK | | | |
| PTFE GASKETS | TEMP | MEDIA | PRE | QTY | OD | ID | THK | | | |
| ENVELOPE GASKETS | TEMP | MEDIA | PRE | QTY | OD | ID | THK | U/V PROFILE | M/C FORMED | COMPOSITE |
| PTFE SHEETING | TEMP | MEDIA | PRE | QTY | WIDTH | LENGTH | THK | PURE / FILLED | SAMPLE | |
| PTFE STRIPS | TEMP | MEDIA | PRE | QTY | DESCR | DIMS | DRG | PURE / FILLED | SAMPLE | |
| PTFE GASKETS | TEMP | MEDIA | PRE | QTY | DESCR | DIMS | DRG | PURE / FILLED | SAMPLE | |
| PTFE BILLETS | TEMP | MEDIA | PRE | QTY | OD | ID | LENGTH | PURE / FILLED | | |
| PTFE RODS / TUBES | TEMP | MEDIA | PRE | QTY | OD | ID | LENGTH | PURE / FILLED | | |
| MACHINING COMPONENTS | TEMP | MEDIA | PRE | QTY | DESCR | DIMS | DRG | SAMPLE | | |
| SPRAY SHIELDS | TEMP | MEDIA | PRE | QTY | FLG | TABLE | SIZE | SPECIAL REQ | | |
| | | | | QTY | VALVE | TABLE | SIZE | MODEL | MAKE | |
| INSULATION KITS | TEMP | MEDIA | PRE | QTY | TABLE | SIZE | | | | |
| SEALEX | TEMP | MEDIA | PRE | QTY | WIDTH | THK | | | | |
| THREAD SEAL TAPE | TEMP | MEDIA | PRE | QTY | WIDTH | THK | OXY GRADE | ECONOMY | PREMIUM | |
| PTFE GLASS CLOTH | TEMP | MEDIA | PRE | QTY | APP | WIDTH | LENGTH | THICKNESS | PLAIN | ADH |
| UNSINTERED CORD | TEMP | MEDIA | PRE | QTY | OD | KG'S | | | | |
| RUBBER BELLOW | TEMP | MEDIA | PRE | QTY | TABLE | SIZE | FLG MTL | BELLOW MTL | LENGTH | F/F |
| PTFE PIPE LINING | TEMP | MEDIA | PRE | QTY | APP | SIZE | FLG TABLE | FLG MATERIAL | FREE ISSUE | |
| COATINGS | TEMP | MEDIA | PRE | QTY | APP | SIZE | FLG TABLE | FLG MATERIAL | FREE ISSUE | |

SPRAY SHIELD SELECTION GUIDE

| NR - NOT RECOMMENDED ND - NO DATA CORROSIVE | TEMPERATURE RANGE | | | | | | |
|---|-----------------------------------|----|-----|------|---------------|--------------|--------|
| | PVC | PE | PP | PTFE | STANDARD PTFE | PREMIUM PTFE | 316 SS |
| | POTASSIUM HYDROXIDE (10%) CAUSTIC | 60 | 60 | 107 | 148 | 232 | 232 |
| POTASSIUM HYDROXIDE (50%) CAUSTIC | 60 | 60 | 79 | 148 | 232 | 232 | 260+ |
| POTASSIUM HYDROXIDE (60-90%) CAUSTIC | ND | ND | 65 | ND | 232 | 232 | 260+ |
| SODIUM HYDROXIDE (<10%) CAUSTIC | 60 | 60 | 93 | 148 | 232 | 232 | 260+ |
| SODIUM HYDROXIDE (>50%) CAUSTIC | 60 | 60 | 65 | ND | 232 | 232 | ND |
| SODIUM HYDROXIDE (10-50%) CAUSTIC | 60 | 60 | 93 | 121 | 232 | 232 | 260+ |
| SULPHURIC ACID (10%) | 60 | 60 | 107 | 100 | 232 | 232 | 260+ |
| SULPHURIC ACID (16%) | 60 | 60 | 93 | 100 | 232 | 232 | 260+ |
| SULPHURIC ACID (30%) | 60 | 60 | 93 | 100 | 232 | 232 | 260+ |
| SULPHURIC ACID (60%) | 60 | 21 | 93 | 121 | 232 | 232 | 260+ |
| SULPHURIC ACID (85%) | NR | NR | 79 | 121 | 232 | 232 | 260+ |
| SULPHURIC ACID (93-98%) | NR | NR | 22 | 121 | 232 | 232 | 260+ |
| SULPHURIC ACID FUMING (>98%) | NR | NR | NR | ND | 232 | 232 | 260+ |

For any technical support contact us on
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| | | |
|-----|--------------------|-------------------|
| PVC | POLYVINYL CHLORIDE | TEMPERATURE IN °C |
| PE | POLYETHYLENE | |
| PP | POLYPROPYLENE | |



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