生产实力
Production Capacity

In order to better meet customers' requirements for high quality products, the company has built the largest and most advanced roller coating, special equipment for spraying and processing. And equipped with a set of advanced and complete measuring instruments, such as coating thickness meter, electric spark detector, adhesion test complete equipment and so on.

The spinning and anti-corrosion equipment produced by the company is a professional manufacturing equipment imported from abroad, and the vacuum degree can reach 0.098 mp°, therefore, can be widely used in the reaction kettle, tower, storage tank, pump, valve, filters, pipes, pipe fittings and other products of anti-corrosion lining, we can also according to customer's requirement scale processing, special-shaped complex equipment lining and on-site installation and debugging.

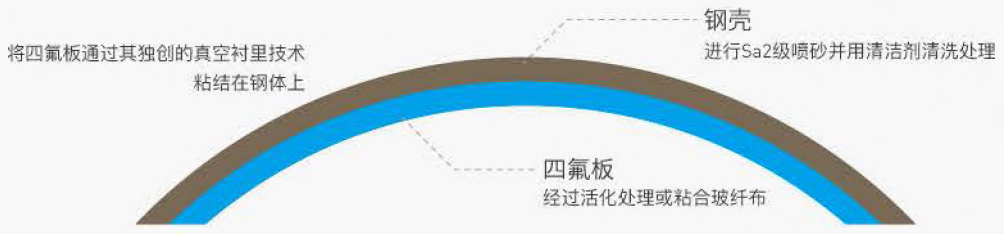
品质控制
Production Capacity

Our company has one of the most stringent quality control systems, from our feed testing and product inspection to the final inspection process. Strict quality process control and management ensures product quality and accountability.

防腐设备 四氟紧衬(板衬)工艺
Teflon Anticorrosion Tight Lining Process

工艺介绍
Process Description

Tight lining using teflon panels which has been activating treatment or covered with fiberglass cloth, then sandblasting the equipment to Sa2 level, and cleaned with detergent, then paste teflon panels inside the equipment. Resistance to negative pressure up to 0.095 Mpa. We choose the most appropriate lining material and thickness according to the different requirements of customers. Thistechnique is not limited by the size and shape of the equipment, but also solve the problems of cleanliness, temperature and corrosion resistance in the chemical industry and electronic chemicals industry. It haswell anti-permeability, glossy surface, small COF, long service life etc.



板衬材料及特性
Lining Materials & Properties

Our PTFE, PFA panels is imported from the European Union, it has glossy surface and unifor thickness, Width of 1.2 meters, length of 25 meters. Compared with the traditional panels, it can reduce welding cracks.

进口四氟板材和国产四氟板材区别
The Difference Between Imported & Domestic Teflon Panel

- All imported teflon panels are manufactured in clean room,its cleanliness much better than domestic panels, so its effective anticorrsion thickness more than domestic panels.
- The EU's four fluorine has been developed in recent decades, its production processes and procedures is more reasonable than domestic panels', Mainly manifested(3.15-3.2g/cm^3) in the density and thickness (3-3.15mm) of the panel are attach more importance to the balance.
- Activeing treatment effect will directly affect its strength of adhesion sheet. The activation processing technology of EU is the best in the world, its adhesive strength reaches-0.05Mpa without any technical processing, this is domestic panel cannot be achieved.

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板衬材料
Lining Materials

PTFE(聚四氟乙烯-F4)
PTFE (F4)

Longtime working temperature is 120℃~130℃, and able to withstand 150 degree in a moment. Against high pressure capability with equipment and resistance to negative pressure reached -0.07 ~ -0.08Mp, it is the most coast-effective material currently.

PFA (聚全氟乙烯)
PFA

Longtime working temperature is 200℃~220℃,resistance high pressure capability sync with the equipment,covered with glass fabric to reinforced adhesive function,Adopt unique resistance to negative pressure technology of our company,it can reach to-0.09Mp ~ -0.95Mp.

PVDF(聚偏氟乙烯-F2)
PVDF (F2)

Longtime working temperature is 100℃~110℃, against high pressure capability sync with the equipment and resistance to negative pressure reached -0.07 ~ -0.08Mp,its anticorrosion ability less than PTFE.

ETFE (乙烯-四氟乙烯共聚物-F40)
ETFE (F40)

110 ℃ ~ 120 ℃ of heat-resistant, resistant to high positive pressure and synchronous equipment shell, the resistance to 0.07 ~ 0.08 Mp, the impact resistance is fluorine material in one of the best materials, corrosion resistance, less PTFE.

ECTFE (三氟氯乙烯共聚物-F3)
ECTFE (F3)

Longtime working temperature is 100℃ ~ 110℃, against high pressure capability sync with the equipment and resistance to negative pressure reached -0.07 ~ -0.08Mp,Because of the fluorine content low than PTFE,thus its anticorrosion ability less than PTFE.






防腐设备 **储罐**
Anticorrosion Tank

尺寸 Size	**壳体材质** Housing Material
4.5m×15m	碳钢 & 304不锈钢 Carbon steel & SUS 304
内衬材质 Liner Material	**工艺** Technology
PFA, PTFE, ETFE, ECTFE, PVDF, PO, PE	板衬、三维滚涂、喷涂 Board Lining, Roll Coating, Coating



MACH VALVE
INDUSTRIAL

防腐设备 **移动储罐**
Anticorrosion Movable Tank

尺寸 Size	**壳体材质** Housing Material
4.5m×15m	碳钢 & 304不锈钢 Carbon steel & SUS 304
内衬材质 Liner Material	**工艺** Technology
PFA, PTFE, ETFE, ECTFE, PVDF, PO, PE	板衬、三维滚涂、喷涂 Board Lining, Roll Coating, Coating

设备内衬滚涂防腐工艺
Roll Coating Anticorrosion Technology

工艺介绍
Process Description

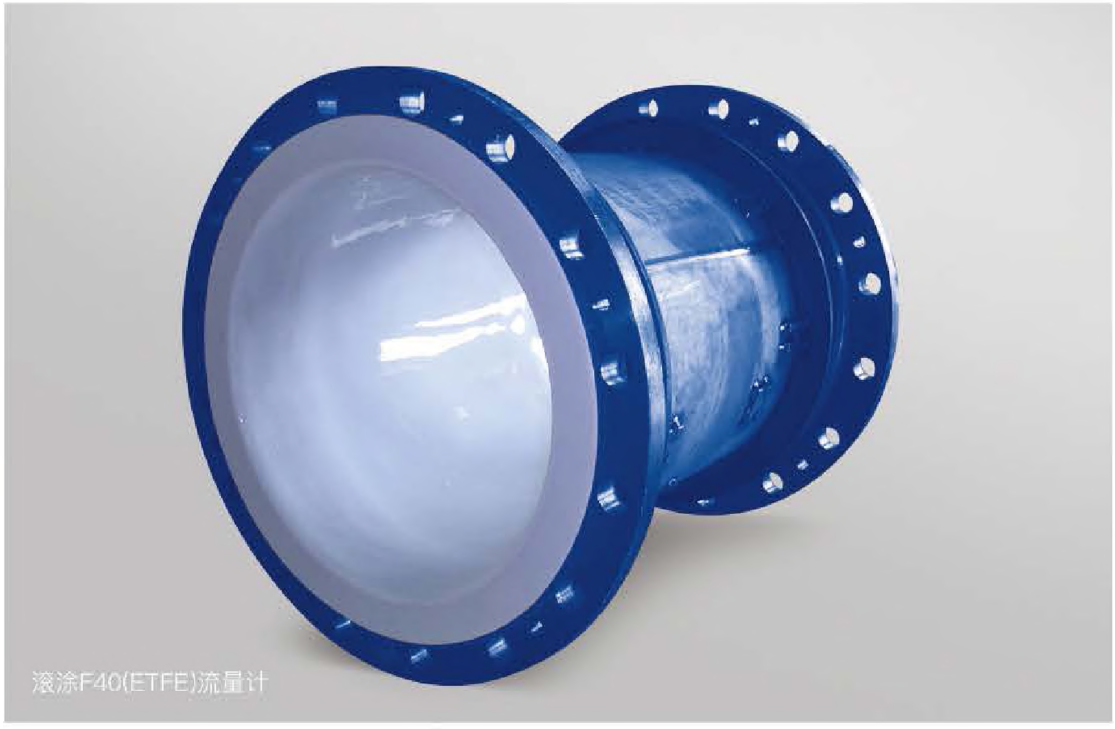
Fluorine plastic and metal composite technology is DuPont' s R & D results, this is a new technology. Using reasonable formula and the best thickness to sinter the plastic and carbon steel together. It's characteristic is the plastic can combined with carbon steel effectively, can be synchronized expansion coefficient, don't need to welding, without air bubbles, well permeability resistance, small coefficient of friction etc.

滚涂材料
Roll Coating Material

- ETFE(F40): Copolymers of tetrafluoroethylene and ethylene. It's derived from the DuPont and Asahi Glass, mainly used in anti-corrosion lining.
- This material not only has the corrosion resistance of tetrafluoroethylene, but also has the strong adhesion properties of metal-specific. Its average expansion coefficient is 1.49×10-4/℃, close to the coefficient of expansion of carbon steel. These features make ETFE become the best compound material.
- This composite technology used in anti-corrosion equipment, it fully demonstrated this technology device has good resistance to negative pressure capability. If welding a steel mesh inside the equipment, its negative pressure resistance numeric can reach to 0.09Mpa.
- Long-term practice has proved that if FRP is not allowed in the working conditions, F40 roll coating will be the best material in high medium temperature.

防腐设备 **滚涂工艺产品**
Roll Coating Equipment

壳体材质 Housing Material	**内衬材质** Liner Material	**工艺** Technology
碳钢 & 304不锈钢 Carbon steel & SUS 304	PFA, ETFE(F40), PO, PE	三维滚涂 Roll Coating



滚涂F40(ETFE)流量计

防腐设备 喷涂防腐工艺
Spray Costing Anticorrosion Technology

工艺介绍
Process Description

Spray Coating technology has been used in domestic for many years. Before spray coating, sandblasting the equipment to SA2 level, spray a layer of special primer, then electricize the fluorine plastic powder with high voltage static, to make sure it can distributed on the inner wall of the equipment uniformly, after high temperature baking, Plastic particles will melt and covering the inner wall of the equipment. In generally, spray coating thickness is 3mm.

喷涂材料
Coating Material

PTFE、ECTFE、PFA、FEP、PVDF、ETFE，经过喷涂不同原料的涂层具有以下特点：
PEFE, ECTFE, PFA, FEP, FEP, PVDF, ETFE, spraying coating has the follow characteristic:

- There has a strong binding force between the coating and metal, it could' t blister because of lack of binding.This advantage will be more prominent in the frequent changesin temperature conditions.
- Overcome the limitations of traditional craft.
- Well corrosion resistance.
- Well cleanliness, it have a great advantage in Polysilicon Industry、Electroplating industry etc.
- Non-toxic.It has been widely used in food industry、pharmaceutical industry etc.
- Spraying equipment should be impacted,and it should be cautious to use in quicksand medium.

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防腐设备 **喷涂工艺产品**
Coating Equipment

壳体材质 Housing Material	**内衬材质** Liner Material	**工艺** Technology
碳钢 & 304不锈钢 Carbon steel & SUS 304	PTFE, ECTFE, PFA, FEP, PVDF, ETFE	喷涂 Spray Coating

防腐设备 **其它产品**
Other Products

防腐设备**管道** 管件 | 阀制作工艺
Piping | Accessories | Valve Technology

防腐管道紧衬、松衬工艺
Pipe Tight lining & Loose lining Anticorrosion Process

Tight lining process, the outer diameter of the plastic pipe slightly larger than the inner diameter of the carbon steel tube, traction it into the carbon steel tube by mechanical.

Loose lining process, the outer diameter of the plastic pipe slightly less than the inner diameter of the carbon steel tube, insert it into the carbon steel manually.

主要材质
Main Material

PTFE (Polytetrafluoroethylene-F4)
Applicable temperature: ≤120℃
Applicable medium: Strong corrosive medium. Such as HCL, HNO3, H2SO4, HF, NaOH etc.

PE (polyethylene)
Applicable temperature: ≤80℃, Transmission for general corrosive medium.

PP (polypropylene)
Applicable temperature: ≤100℃, Transmission for Weaker corrosive medium.

PO (Copolymer of polypropylene and polyethylene)
Applicable temperature: ≤100℃, Transmission for Weaker corrosive medium.

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防腐管道、管件模压工艺
Pipe Squeeze Casting Anticorrosion Process

Put the mold into the steel pipe, and pour the powder into it, then sintered at high temperature until melted, finally cooled to molding.

Main Material

PTFE(聚四氟乙烯-F4)

PTFE (Polytetrafluoroethylene-F4)

·Applicable temperature: ≤150℃

Applicable medium: Strong corrosive medium. Such as HCL, HNO3, H2SO4, HF, NaOH etc.

·Anti-negative pressure (room temperature): -0.07~-0.08Mp

·Anti-negative pressure (high temperature ≥100℃): -0.04~-0.06Mp

·Applicable dimension: DN≤600, Length≤10m, Ptfe thickness ≥ 10mm

PFA（聚全氟乙烯）

PFA (Perfluorinated ethylene)

·Applicable temperature: ≤200℃, the other characteristic as the same as PTFE.

防腐管道、管件滚涂工艺
Pipe Squeeze Casting Anticorrosion Process

Will first fitting preprocessing, and then to heat pipe fittings, stay after reaching a certain temperature will ETFE powder into, through 3D rotation will melt.

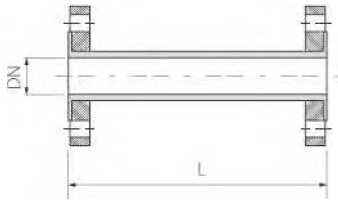
主要材质
Main Material

ETFE(乙烯四氟乙烯共聚物-F40)

PTFE (Ethylene tetrafluoroethylene copolymer-F40)

·Suitable for conveying 130 ℃ or less strong corrosive medium, such as: dilute HCL, HNO3, - H2SO4, HF, NaOH, etc.

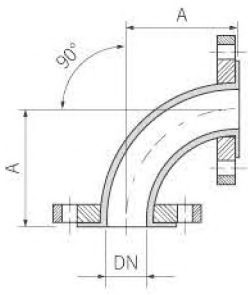
·Under normal pressure, compressive micronegative pressure.



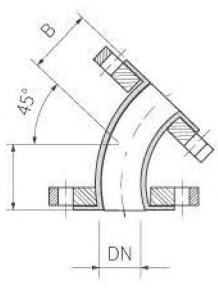
直管
Straight Pipe

衬里直管参数
Lining and Straight Parameter

公称直径DN		L		衬里厚度
mm	in	Max	Min	Min
25	1	6000	100	2
32	1-1/4	6000	100	2
40	1-1/2	6000	100	2
50	2	6000	100	2
65	2-1/2	6000	100	2.5
80	3	6000	100	3
100	4	6000	100	3
125	5	6000	100	3
150	6	6000	100	4
200	8	6000	120	5
250	10	6000	120	5
300	12	6000	120	5
350	14	6000	120	5
400	16	6000	150	5
450	18	6000	150	5
500	20	6000	150	5



90°弯头
90° Elbow



45°弯头
45° Elbow

衬里弯头参数
Lining Elbow Parameter

公称直径DN		A	B	衬里厚度
mm	in			Min
25	1	98	44	3
32	1-1/4	108	51	3
40	1-1/2	115	57	3
50	2	125	64	3
65	2-1/2	137	76	3
80	3	144	76	3
100	4	156	102	3
125	5	173	114	4
150	6	191	127	5
200	8	220	140	5
250	10	257	165	5
300	12	285	190	5
350	14	350		5
400	16	400		5
450	18	450		5
500	20	500		5

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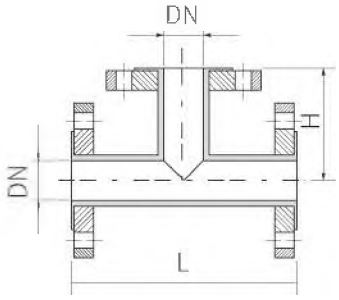
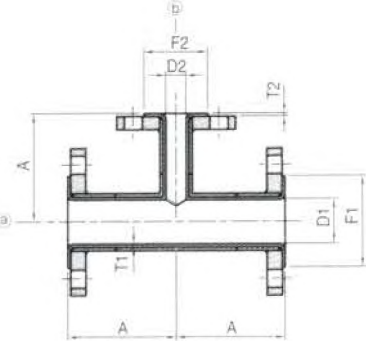
衬里三通参数
Lining Tee Parameter

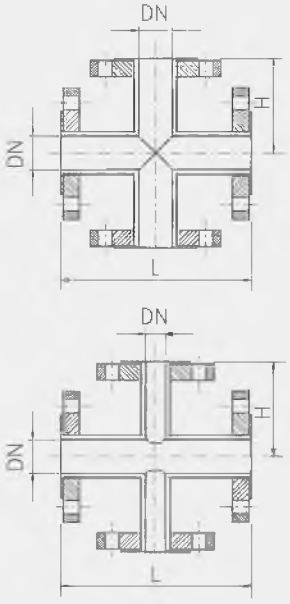
公称直径DN		等径三通		衬里厚度
mm	in	L	H	Min
25	1	196	98	3
32	1-1/4	216	108	3
40	1-1/2	230	115	3
50	2	250	125	3
65	2-1/2	274	137	3
80	3	288	144	3
100	4	312	156	3
125	5	346	173	3
150	6	382	191	4
200	8	440	220	5
250	10	514	257	5
300	12	570	285	5
350	14	600	300	5
400	16	650	325	5
450	18	700	350	5
500	20	760	380	5



衬里异径三通参数
Three-Pass Parameters of the Liner

公称直径DN		异径三通			衬里厚度
mm	in	L	H	小端公称尺寸DN1	Min
25	1	196	98	20	3
32	1-1/4	216	108	25	3
40	1-1/2	230	115	25 32	3
50	2	250	125	25 32 40	3
65	2-1/2	274	137	25 32 40 50	3
80	3	288	144	25 32 40 50 65	3
100	4	312	156	25 32 40 50 65 80	3
125	5	346	173	25 32 40 50 65 80 100	3
150	6	382	191	25 32 40 50 65 80 100 125	4
200	8	440	220	32 40 50 65 80 100 125 150	5
250	10	514	257	40 50 65 80 100 125 150 200	5
300	12	570	285	50 65 80 100 125 150 200 250	5
350	14				5
400	16				5
450	18				5
500	20				5





四通 Cross

衬里四通参数
Lining Cross Parameter

公称直径DN		等径四通		异径四通			衬里厚度
mm	in	L	H	L	H	小端公称尺寸DN1	Min
25	1	196	98	196	98	20	3
32	1-1/4	216	108	216	108	25	3
40	1-1/2	230	115	230	115	25 32	3
50	2	250	125	250	125	25 32 40	3
65	2-1/2	274	137	274	137	25 32 40 50	3
80	3	288	144	288	144	25 32 40 50 65	3
100	4	312	156	312	156	25 32 40 50 65 80	3
125	5	346	173	346	173	25 32 40 50 65 80 100	3
150	6	382	191	382	191	25 32 40 50 65 80 100 125	4
200	8	440	220	440	220	32 40 50 65 80 100 125 150	5
250	10	514	257	514	257	40 50 65 80 100 125 150 200	5
300	12	570	285	570	285	50 65 80 100 125 150 200 250	5
350	14	600	300				5
400	16	650	325				5
450	18	700	350				5
500	20	760	380				5

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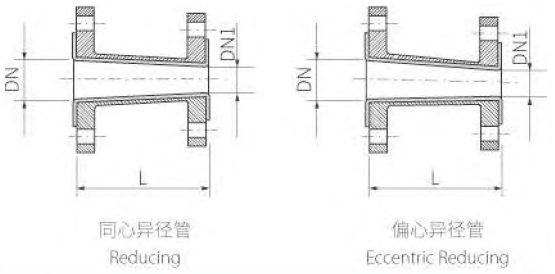
专业防腐解决方案提供商

Professional anti-corrosion solutions provider



衬里异径管参数

Lining Reducer Parameter

公称直径DN		小端公称尺寸DN1	同心异径管	偏心异径管	衬里厚度
mm	in	mm	L	L	Min
25	1	20	150	150	3
32	1-1/4	25	150	150	3
40	1-1/2	25 32	150	150	3
50	2	25 32 40	150	150	3
65	2-1/2	32 40 50	150	150	3
80	3	40 50 65	150	150	3
100	4	50 65 80	150	150	3
125	5	65 80 100	150	150	3
150	6	80 100 125	150	150	4
200	8	100 125 150	180	180	5
250	10	125 150 200	180	180	5
300	12	150 200 250	180	180	5
350	14	200 250 300	250	250	5
400	16	250 300 350	250	250	5
450	18	300 350 400	250	250	5
500	20	350 400 450	250	250	5

四氟材料和金属材料特性对比表

PTFE and Metal Materials Comparison Chart

材料名称 Material Name A = 优秀 Excellent B = 良好 Good C = 一般 Fair X = 不合适 Unsuitable			浓度 Concentration	PVC	CPVC	Polypropylene (PP)	Polyproylene Fluoride (PVDF)	Polyproylene (PE)	Polyproylene.crose Linked (XLPE)	Duraplus ABS	Halar (ECTFE)-Solvay	Teflon (PTFE)	环氧树脂 Epoxy	乙烯基 Vinylester	聚砜 Polysulfone	氟橡胶 Viton	EPDM	氯丁橡胶 Neoprene	丁腈橡胶 Buna N(Nitrile)	碳 Carban	陶瓷 Ceramic	304不锈钢 304 Stainess steel	316不锈钢 316 Stainess steel	钛 Titanium	哈氏合金C Hastelloy C
Chemcial		Formulas	%	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F
醋酸	Acetic Acid	CH_3COOH	5	140	140	200	140	X	140	68	250	350	150	200	-	X	200	100	-	-	-	A	A	A	A
醋酸	Acetic Acid	CH_3COOH	30	140	140	200	140	X	140	X	250	350	-	100	-	180	200	-	-	-	-	A	A	A	A
醋酸	Acetic Acid,Glacial	CH_3COOH	100	110	110	180	180	X	70	X	212	350	X	X	-	X	73	X	X	A	A	A	A	A	A
氨水	Ammonia	NH_3	25	100	X	-	210	-	-	-	210	250	70	140	180	70	-	-	70	A	-	-	A	A	A
氨水	Ammonia	NH_3	99	70	X	-	210	-	-	-	210	250	70	-	-	X	-	-	70	A	-	-	A	A	A
氨水	Ammonia Gas	NH_3	-	100	X	100	100	100	140	X	250	250	140	180	-	X	140	70	100	A	A	A	A	X	-
氢氧化氨	Ammonium Hydroide	NH_4OH	20	100	X	180	140	100	140	180	250	350	210	140	180	70	180	140	X	A	A	A	A	A	A
氯化钙	Calcium Chloride	$CaCL_2$	-	140	180	180	250	100	140	180	250	350	300	140	180	140	180	140	100	A	NR	B	A	A	A
二氧化碳	Carbon Dioxide (wet or dryl	CO_2	-	140	180	180	250	100	140	180	250	350	180	70	-	210	180	140	140	A	A	A	A	A	A
二氧化碳	Carbon Disulfide	CS_2	-	X	X	X	70	X	X	X	100	350	X	X	X	100	X	X	X	A	A	A	B	A	A
干氯气	Chlorine Gas dry	CL_2	-	X	X	X	X	70	X	X	180	250	X	70	X	100	X	X	X	A	A	A	A	X	A
湿氯气	Chlorine Gas Wet	-	-	X	100	X	210	-	X	X	180	250	X	210	X	X	X	X	X	A	-	X	X	A	A
盐酸	Hydrochloric Acid	HCl	10	140	180	180	250	100	140	180	250	250	70	210	180	210	140	140	140	NR	-	B	X	B	B
盐酸	Hydrochloric Acid	HCl	20	140	180	180	250	100	140	180	250	250	210	180	180	210	140	140	70	NR	-	X	X	C	B
盐酸	Hydrochloric Acid	HCl	37	140	140	140	210	100	140	70	250	250	210	140	180	100	70	X	X	NR	-	X	X	C	B
氰化氢	Hydrochloric Acid (Prussic acid)	HCN	-	140	140	140	250	100	140	70	250	350	180	180	70	70	70	-	70	A	A	A	A	A	A
氢氟酸	Hydrochloric Acid	HF	5	100	140	140	210	100	140	70	250	350	70	140	180	180	100	100	-	NR	-	-	A	X	A
氢氟酸	Hydrochloric Acid	HF	20	70	140	140	210	100	140	70	250	350	70	140	-	180	100	100	-	NR	-	X	A	X	A
氢氟酸	Hydrochloric Acid	HF	40	70	100	140	210	100	140	70	250	350	X	140	X	180	100	100	X	NR	-	X	X	X	A
氢氟酸	Hydrochloric Acid	HF	50	70	X	140	250	140	140	X	250	350	X	X	X	180	100	100	X	NR	-	X	X	X	A
过氧化氢	Hydrogen Peroxide	H_2O_2	10	140	140	70	210	100	100	70	250	350	140	140	100	180	100	X	X	A	A	B	B	A	A
过氧化氢	Hydrogen Peroxide	H_2O_2	30	100	70	70	210	100	100	-	250	350	140	140	100	100	70	X	X	A	A	B	B	A	A
过氧化氢	Hydrogen Peroxide	H_2O_2	90	X	X	X	-	100	-	X	140	350	X	-	100	100	-	X	X	A	A	A	A	A	A
硝酸	Nitric Acid	HNO_3	10	140	180	170	250	100	140	70	250	350	X	180	70	180	100	X	X	A	A	B	A	A	A
硝酸	Nitric Acid	HNO_3	30	100	140	100	210	100	140	-	250	350	X	100	70	140	-	X	X	A	A	C	A	A	A
硝酸	Nitric Acid	HNO_3	70	X	70	X	100	-	X	X	140	350	X	X	X	X	X	X	X	A	A	B	C	A	A
氢氧化钠	Sodium Hydroxide	NaOH	15	140	140	140	140	100	140	180	250	350	210	180	180	X	180	140	180	NR	NR	X	A	A	A
氢氧化钠	Sodium Hydroxide	NaOH	30	140	140	140	140	100	140	70	250	350	210	180	210	X	180	140	180	NR	NR	X	A	A	A
氢氧化钠	Sodium Hydroxide	NaOH	70	140	140	100	X	100	140	70	140	350	-	-	-	X	70	70	X	NR	NR	A	A	C	A
硫酸	Sulfuric Acid	H_2SO_4	10	140	180	180	X	100	70	180	210	350	100	210	250	250	180	140	140	-	-	X	X	A	B
硫酸	Sulfuric Acid	H_2SO_4	50	140	180	140	250	100	70	70	210	350	210	210	180	210	140	140	70	-	-	X	X	C	A
硫酸	Sulfuric Acid	H_2SO_4	90	70	70	70	210	100	X	X	210	350	X	X	-	140	100	X	X	-	-	X	A	X	A

备注 Note

此表格仅做参考，如需详细信息，敬请联系我们技术部门。

This table is for reference only, for more information, please contact our technical department.

MACH VALVE INDUSTRIAL

氟塑料的典型性质

Typical Properties of Fluorine Plastic

性质 Nature		ASTM标准	单位	PTFE	FEP	PFA	TeflonTMETFE
机械性能	比重	D792	-	2.13-2.22	2.15	2.15	1.70
	拉伸强度	D638	MPa	17-28	23	25	45
	伸长率	D638	%	200-400	325	300	300
	弯曲模量	D790	MPa	186	586	585	12000
	耐折性	D2176	MIT	$>10^6$	$5\text{-}80\times10^3$	5-500×103	6-12×103
	冲击强度	D256	J/m	189	无断裂	无断裂	无断裂
	硬度	D2240	shore D	50-65	56	60	67
	动摩擦系数	D1894	<3m/min	0.1	0.2	0.2	0.4
热学性质	熔点	DTA, E-168	℃(℉)	327 (621)	260 (500)	305(582)	267 (512)
	最高使用温度 (20,000小时)	UL746B	℃ (℉)	260 (500)	204 (400)	260(500)	150 (320)
	阻燃等级**	UL-94	-	Vo	Vo	Vo	Vo
	极限氧指数	D2863	%	>95	>95	>95	>30
	燃烧热	D240	kJ/kg	5.1	5.1	5.3	14
电学性能	介电常数	D150	106Hz	2.1	2.1	2.1	2.6
	耗散因子	D150	106Hz	0.0001	0.0007	0.0001	0.005
	抗电弧性能	D495	s	>300	>300	>180	75
	体积电阻率	D257	Ohm-cm	10^{18}	10^{18}	10^{16}	10^{17}
	表面电阻率	D257	Ohm/m^2	10^{18}	10^{16}	10^{16}	10^{16}
一般特性	耐候性	美国佛罗里达州气候	Years	20	20	10	5
	抗化学/溶剂性	D543	-	优良	优良	优良	优良
	吸水性-24小时	D570	%	<0.01	<0.10	<0.03	<0.007

备注：*此表之数值并不适宜作为产品之规格。除特别说明外，此等待性皆在温度23℃（73℉）下量度。

**任何有关燃烧的说明并不可视为解释此等或其他原料在真实燃烧时所出现之危险。

ETFE材料的耐腐蚀性能表

ETFE Material's Chemical Resistance Data

类别 Categories	介质名称 Media name		浓度 Concentration(%)	使用温度 Temperature ℃					
				25	50	75	100	110	120
气体 Gas	氧化铵	Ammonium oxidation	—	★	★	·	·	·	·
	二氧化碳	Carbon Dioxide	—	★	★	★	★	☆	·
	一氧化碳	Crabon monoxide	—	★	★	★	★	☆	·
醇 Alcohol	正戊醇	Pentanol	100	★	★	★	★	☆	·
	苯甲醇	Benzyl zlcohol	100	★	★	★	★	☆	·
	丁醇	Butanol	100	★	★	★	☆	·	·
	乙醇	Ethanol	100	★	★	★	☆	·	·
	甲醇	Methanol	100	★	★	★	☆	·	·
醚 Ether	乙醚	Ether	100	★	★	★	☆	·	·
	丁醚	Butyl Ether	100	★	★	★	★	☆	·
	苯醚	Phenyl Ether	100	★	★	★	★	☆	·
	二恶烷	The dioxane	100	★	★	☆	·	·	·
	四氧呋喃	Four oxygen furan	100	★	★	★	☆	·	·
酮 Alkone	丙酮	Acetone	100	★	★	★	☆	·	·
	甲基乙基甲酮	Methyl ethyl ketone	100	★	★	★	☆	·	·
	二乙甲基酮	Diethyl ethyl ketone	100	★	★	★	☆	·	·
酯 Esters	乙酯	Ethyl	100	★	★	★	☆	·	·
	甲酯	Methyl	100	★	★	★	★	☆	·
无机酸类 Inorganic acids	硫酸	Sulfuric Acid	25	★	★	★	★	☆	·
			50	★	★	★	★	☆	·
			80	★	★	★	★	★	☆
			95	★	★	★	★	★	★
	盐酸	Hydrochloric acid	10	★	★	★	·	·	·
			35	★	★	★	·	·	·
	磷酸	Phosphorylation	20	★	★	·	·	·	·
			85	★	★	·	·	·	·
	硝酸	Nitrate	5	★	★	★	★	·	·
			60	★	★	★	★	·	·
	铬酸	Chromic Acid	3	★	★	★	☆	·	·
			40	★	★	★	☆	·	·
	氢氟酸	Hydrochloric acid	20	★	★	·	·	·	·
			100	★	★	·	·	·	·
碱类 Bases	氢氟溴化氢	Hydrogen Bromide	10	★	★	☆	·	☆	·
	氢氧化钾	Potassium hydroxide	25	★	★	★	★	·	·
	氢氧化钠	Sodium hydroxide	10	★	★	★	☆	☆	·
			25	★	★	★	★	☆	·
			48	★	★	★	★	·	·
	氢氧化铵	Ammonium hydroxide	10	★	★	★	☆	·	·
			25	★	★	★	☆	·	·

MACH VALVE INDUSTRIAL

类别 Categories	介质名称 Media name		浓度 Concentration(%)	使用温度 Temperature ℃					
				25	50	75	100	110	120
有机酸类 Organic acid	甲酸	Acid	100	★	★	★	·	·	·
	乙酸	Acetate	10	★	★	★	☆	·	·
			50	★	★	★	☆	·	·
			96	★	★	★	☆	·	·
	氯乙酸	Chloroacetate	10	★	★	★	·	·	·
			50	★	★	★	·	·	·
	乳酸	Lactic Acid	100	★	★	★	★	☆	·
	苯甲酸	Benzoic Acid	8	★	★	·	·	·	·
	柠檬酸	Citric acid	40	★	★	·	·	·	·
	草酸	Oxalate	20	★	★	★	☆	·	·
	苯磺酸	Benzene sulfonic acid	100	★	★	★	★	☆	·
漂白剂 Bleach	次氯酸钙	Calcium hypochlorite	10	★	★	★	☆	·	·
	次氯酸钠	Sodium hypochlorite	6	★	★	★	☆	·	·
	二氧化氯	Chlorine Dioxide	15	★	★	☆	·	·	·
	过氧化氢、双氧水	Hydrogen peroxide,hydrogen perxide	35	★	★	·	·	·	·
	氯水	Chlorine water	饱和	★	★	☆	·	·	·
气体 Gas	氯 Chlorine	干 Stem	—	★	★	★	★	·	·
		湿 Wetlands	—	★	★	☆	·	·	·
	溴	Sulfuric Acid	—	★	☆	·	·	·	·
	二氧化硫 Sulphur Dioxide	干 Stem	—	★	★	★	★	☆	·
		湿 Wetlands	—	★	★	★	★	☆	·
	三氧化硫	Sulf trioxide	—	★	★	☆	·	·	·
卤化物 Halide	二氯化烷	N-dichloride	100	★	★	★	☆	·	·
	氯仿	Chloroform	100	★	★	★	☆	·	·
	四氯化碳	Carbon tetrachloride	100	★	★	★	☆	·	·
	氯乙烷	Chloroethane	100	★	★	★	☆	·	·
	四氯乙烷	4 Chloroethane	100	★	★	★	☆	·	·
	氯苯	Chlorobenzene	100	★	★	★	☆	·	·
卤化物 Halide	乙醛	Acetaldehyde	100	★	★	★	☆	·	·
	苯	Benzene	100	★	★	★	☆	·	·
	二甲苯	Xylene	100	★	★	★	★	☆	·
	硝基苯	Nitrobenzene	100	★	★	★	☆	·	·
	苯胺	Aniline	100	★	★	★	☆	·	·
	丙烯腈	Acrylonitrile	100	★	★	★	☆	·	·
	二乙基邻苯二甲酸酯	Diethyl phthalaate esters	100	★	★	★	★	☆	·
	亚乙基二醇	Ethyl glycol	100	★	★	★	★	☆	·
	乙烷	Ethane	100	★	★	★	☆	·	·
	三乙醇胺	Triethanolamine	100	★	★	★	☆	·	·
	萘	Naphthalene	100	★	★	★	★	☆	·
	石碳酸	Dantansuan	100	★	★	·	☆	·	·

备注 Note

图中★表示耐腐蚀性能好，☆表示耐腐蚀性能较好。
上述材料耐腐蚀性能数据均为在实验中获得。

Tolerance salt spray test conditions: 5% sodium chloride, 35℃.
The table values come from average test, not the norm, for reference purposes only.

Fluoroplastic Penetration Resistance Data

氟树脂的溶出测试例

Fluor Rexin Dissolution Test

溶出液： 浓硝酸
溶出温度：室温
溶出时间：1+6+7（天）
加工方法：PTFE-膏剂挤出法　PFA-螺旋挤出法
分析法： ICP-MS法或无框原子吸光法

Dissolve solution: Nitric Acid(con).
Dissolve temperature: Room tem.
Dissolve Time: 1+6+7 (day)
Drocessing Method: PTFE-Paste squeeze　PFA-Spiral squeeze
Analysis Method: ICP-MS or Atomic Adsorption Analysis

元素 Element	PTFE						PFA					
	No.1			No.2			No.1			No.2		
	1日	6日	7日	1日	6日	7日	1日	6日	7日	1日	6日	7日
Li	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Be	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Na	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Al	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ti	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
V	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cr	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Mn	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ni	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Co	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cu	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zn	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ga	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ge	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sr	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Zr	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Mo	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ag	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cd	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
In	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sn	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ba	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ta	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tl	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pb	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bi	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fe	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ca	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	0.1
K	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Penetration Resistance Data

材料渗透性与所接触的物质有密切关系

Material' penetration relate to contact medium

·部分氟化的氟塑料往往具有更高效的阻隔和渗透性能（例如可以有效的耐氧气，二氧化碳，氯和盐酸的渗透）。
·当然也有例外（例如：热水，和其他一些有机物）。

· Partial fluorizate fluoropastics may have more effective barrier and penetration resistance(For instance, it can effectively penetrate oxygen, carbin dioxide, chlorine and hydrochloric acid).
· Exception (Such as: Hot water and other organics)!