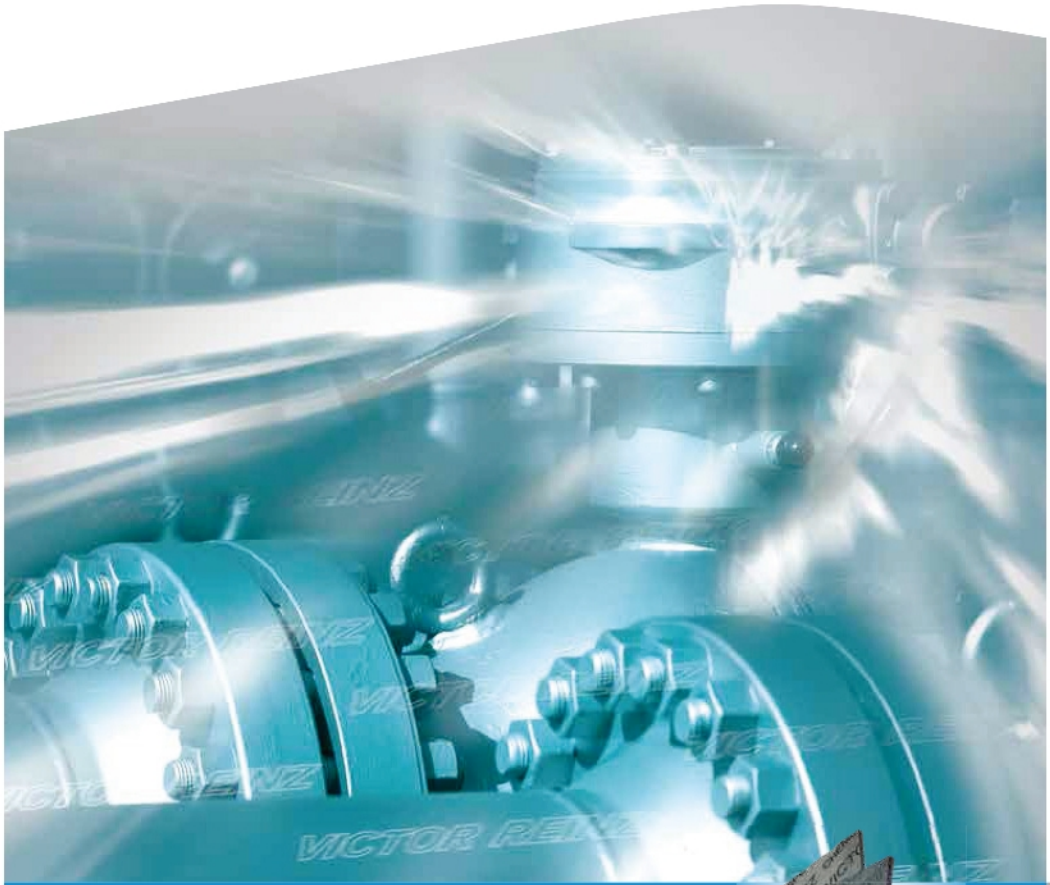
DANA VICTOR REINZ®
Sealing Products



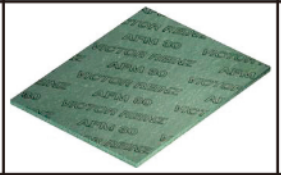
# Victor Reinz密封垫片材料

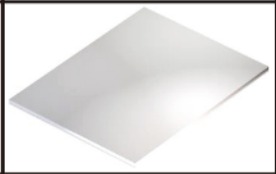
www.txjintai.com


江苏金泰密封科技有限公司
地址：江苏省泰兴市元竹工业园区兴园路
总机：0086-523-87888844 0523-87883998
传真：0086-523-87218667 0523-87888819
网址：www.txjintai.com
E-mail:13801437849@163.com


DANA VICTOR REINZ®
Sealing Products

www.txjintai.com

| 材料型号 | | | AFM 34 | AFM 30 | AFM 31 | AFM 37 | AFM 38 | AFM 39 |
|---|---|---|---|---|---|---|---|---|
| | | |  |  |  |  |  |  |
| 主要特点 | | | 优异的耐化学性能 | 广泛的应用范围 | 高压缩率对液体、气体有非常好的密封性 | 高质量、高性价比产品 | 优异的适应性 | 应用于食品与卫生行业 |
| 应用范围 | | | 化工厂、机械工程、食品加工行业、船舶、能源、法兰、设备、压力容器、散热器、压缩机、泵、热交换器 | 机械工程、船舶、建筑、汽车、能源行业<br>建筑，汽车生产、法兰、泵、压缩机、煤气、换热器、油底壳、变速箱 | 密封接头、阀盖、油底壳、内燃机、压缩机、管道、设备、变速箱、发动机、液压和冷冻油、燃料、水、防冻液、腐蚀性液体的工况 | 机械工程、船舶、建筑、机械设备、变速箱、化工行业、法兰、压缩机、泵 | 机械工程、船舶、建筑、机械设备、发动机、法兰、压缩机、泵、油底壳、变速箱 | 食品与卫生行业、机械工程、建筑、饮用水行业、热水锅炉、浪费、泵、变速箱、压力容器 |
| 性能 | | | 优异的耐化学性能<br>非常均匀的纤维结构<br>高剪切阻力<br>优异的气密性<br>广泛的使用范围 | 非常好的柔软性<br>优异的气密性<br>优异的机械性能及耐热性<br>很好的抗电阻性能 | 高压缩率<br>良好的密封性<br>耐油、防冻液、腐蚀性混合液体<br>垫片表面有不粘、高摩擦涂层，易于清理 | 适合应用于均匀的热载荷及机械加工性能 | 非常好的适应性、柔软<br>在低表面压力时具有优异的气密性<br>非常适合于低流速的热流体及优秀的机械加工性能 | 优异的耐化学性能<br>非常好的适应性、柔软<br>非常适合于低流速的热流体及优秀的机械加工性能 |
| 通过认证 | | | DIN-DVGW, SVGW, ÖVGW<br>FDA<br>KTW<br>WRAS<br>VP 401, HTB, Firesafe<br>BAM<br>Grade X (BS 7531)<br>UVV 61<br>TA Luft<br>Germanischer Lloyd | DIN-DVGW<br>VP 401 (all stages), HTB<br>BAM<br>Germanischer Lloyd | - | DIN-DVGW<br>Grade Y (BS 7531)<br>Germanischer Lloyd | Germanischer Lloyd | DIN-DVGW, SVGW<br>KTW (incl. W270)<br>Germanischer Lloyd |
| 技术参数（以2mm厚度为例） | | | | | | | | |
| 拉伸强度（横向） | DIN 52910 | N/mm² | >12 | >9 | >6 | >6 | >5 | >5 |
| | ASTM F 152 | N/mm² | >18 | >12 | >8 | >8 | >7 | >7 |
| 应力松弛 | DIN 52913 | | | | | | | |
| | 175℃ | N/mm² | 36 | 36 | 24 | 32 | 20 | 25 |
| | 300℃ | N/mm² | 25 | 25 | - | 22 | - | - |
| 气体泄漏率 | DIN 3535-6 | mg/(s.m) | 0.02 | 0.05 | <0.01 | <0.1 | <0.01 | 0.05 |
| 压缩率 | ASTM F 36 J | % | 5~8 | 7~15 | 14~23 | 7~15 | 15~20 | 9~18 |
| 回弹率 | ASTM F 36 J | % | >55 | >50 | >50 | >50 | >60 | >55 |
| 耐介质性 | | | | | | | | |
| IRM903 油 150℃*5小时 | ASTM F 146 | % | <7 | <10 | <10 | <10 | <10 | <25 |
| 燃料油B 室温*5小时 | ASTM F 146 | % | <10 | <10 | <15 | <10 | <15 | <25 |
| 水/防冻液 100℃*5小时 | ASTM F 146 | % | <10 | <5 | <5 | <5 | <5 | <10 |
| 具体泄漏率 | DIN 28091-2 | mg/(s.m) | <0.1 | <0.1 | <0.025 | <0.1 | <0.1 | <0.1 |
| 持续工作温度 | - | ℃ | **250** | **250** | **250** | **250** | **200** | **220** |
| 极限工作温度 | - | ℃ | **400** | **400** | **400** | **400** | **300** | **300** |
| 最大工作压力 | - | bar | **150** | **100** | **80** | **100** | **50** | **60** |
| 供货尺寸 | | | | | | | | |
| 尺寸 | - | mm | 1500*1500<br>1500*4500 | 1500*1500<br>1500*4500 | 1500*1500<br>1500*4500 | 1500*1500<br>1500*4500 | 1500*1500<br>1500*4500 | 1500*1500<br>1500*4500 |
| 厚度 | - | mm | 0.3~5.0 | 0.3~5.0 | 0.3~2.0 | 0.3~3.0 | 0.3~3.0 | 0.5~3.0 |
| 其他 | - | mm | 可根据客户要求制作 | 可根据客户要求制作 | 可根据客户要求制作 | 可根据客户要求制作 | 可根据客户要求制作 | 可根据客户要求制作 |

| 材料型号 | | | AFM 44 | Xtreme plus (Mica material) | REINZOFLON E (100%多向膨胀PTFE) | CHEMOTHERM SPE (Graphite material) | AFM 34 IGV | AFM 34 Metall |
|---|---|---|---|---|---|---|---|---|
| | | |  |  |  |  |  |  |
| 主要特点 | | | 碳纤维和丁晴橡胶密封板材，耐高温 | 耐高温云母板材，极端高温工况使用 | 完美的耐化学性能 | 增强石墨板材，高温工况使用 | 镀锌钢网增强板材，增机械强度 | 不锈钢网增强，超高的机械强度 |
| 应用范围 | | | 石油、化工行业、法兰、机械设备、泵、热交换器、压力容器 | 内燃机的排气歧管（汽车、船用柴油机、发动机）、涡轮增压器、EGR管垫片、燃烧器的加热装置、燃气涡轮机 | 化工与制药<br>食品与饮料工业<br>过程工业，在强腐蚀介质的玻璃管道法兰 | 化工厂、炼油厂、发电厂、能源发电机、船舶与机械工程、法兰、泵、压缩机 | 化工厂、机械工程、造船、法兰、设备、压力容器、散热器、压缩机、泵、换热器 | 化工厂、机械工程、造船、食品行业、法兰、设备、压力容器、散热器、压缩机、泵、换热器 |
| 性能 | | | 非常好的耐热性能及抗氧化性能<br>高机械强度<br>优异的耐化学性能<br>柔韧的材质易于处理及加工 | 耐高温云母增强板材<br>良好的适应性<br>低设置的趋势 | 优异的抗蠕变和冷流性能<br>非常好的机械性能<br>良好的适应性 | 优秀的耐化学性能、耐高温和机械稳定性、良好的气密性 | 优秀的耐化学性能<br>均匀的结构<br>非常高的剪切强度<br>增强的机械性能<br>具有非常好的加工性能 | 优异的耐化学性能<br>均匀的结构<br>高气密性<br>吹出安全 |
| 通过认证 | | | Grade X (BS 7531) | Germanischer Lloyd | FDA | DIN-DVGW<br>BAM ($O_2$, 200 °C/130 bar and liquid $O_2$)<br>UVV61<br>Germanischer Lloyd | Germanischer Lloyd | UVV 61 «Gases» |
| 技术参数（以2mm厚度为例） | | | | | | | | |
| 拉伸强度（横向） | DIN 52910 | N/mm² | >10 | - | | >40 | 20 | >45 |
| | ASTM F 152 | N/mm² | >15 | - | | - | - | - |
| 应力松弛 | DIN 52913 | | | | | | | |
| | 175℃ | N/mm² | 36 | 38 | - | 48 | 35 | 40 |
| | 300℃ | N/mm² | 25 | - | 20 | - | 25 | 25 |
| 气体泄漏率 | DIN 3535-6 | mg/(s.m) | 0.1 | 0.5(50MPa) | 0.01 | 0.08 | 0.25 | 0.05 |
| 压缩率 | ASTM F 36 J | % | 6~10 | 5~15 | 60 | 30~45 | 5 | 5 |
| 回弹率 | ASTM F 36 J | % | >60 | >40 | 10 | 10~20 | >60 | 60 |
| 耐介质性 | | | | | | | | |
| IRM903 油 150℃*5小时 | ASTM F 146 | % | <10 | <5 | - | <5 | <10 | <10 |
| 燃料油B 室温*5小时 | ASTM F 146 | % | <10 | <5 | - | <10 | <10 | <10 |
| 水/防冻液 100℃*5小时 | ASTM F 146 | % | <7 | - | - | - | <5 | <5 |
| 具体泄漏率 | DIN 28091-2 | mg/(s.m) | <0.1 | - | - | - | <0.2 | <0.1 |
| 持续工作温度 | - | ℃ | **270** | **950** | **230** | **450** | **250** | **250** |
| 极限工作温度 | - | ℃ | **440** | **950** | **230** | **550** | **400** | **400** |
| 最大工作压力 | - | bar | **130** | **-** | **50** | **100(450℃)** | **170** | **200** |
| 供货尺寸 | | | | | | | | |
| 尺寸 | - | mm | 1500*1500<br>1500*4500 | 宽度500mm的卷材供应 | 1500*1500 | 宽度500mm的卷材供应 | 1500*1500<br>1500*4500 | 1250*1500 |
| 厚度 | - | mm | 0.5~3.0 | 1.2/1.6 | 1.0~4.0 | 1.0/2.0 | 0.8~3.0 | 1.0~2.0 |
| 其他 | - | mm | 可根据客户要求制作 | - | 可根据客户要求制作 | - | 可根据客户要求制作 | 可根据客户要求制作 |

## Medium Tables[1]

| | AFM 34, 34 IGV, 34 Metall | AFM 30 | AFM 37 | AFM 38 | AFM 39 | AFM 44 | CHEMOTHERM SPE | REINZOFLON E |
|---|---|---|---|---|---|---|---|---|
| Acetaldehyde | ● | ● | ● | ● | ● | ● | ● | ● |
| Acetic acid | ● | ● | ● | ○ | ○ | ● | ● | ● |
| Acetic acid anhydride, free of water | ● | ● | ● | ● | ● | ● | ● | ● |
| Acetone | ● | ● | ● | ○ | ● | ● | ● | ● |
| Acetylene | ● | ● | ● | ● | ● | ● | ● | ● |
| Alum, aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Aluminium salts[2], aqueous solution | ● | ● | ○ | ● | ● | ● | ● | ● |
| Ammonia | ● | ● | ● | ● | ● | ● | ● | ● |
| Ammonium salts[2], aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Aniline | ● | ● | ● | ○ | ○ | ● | ● | ● |
| Asphalt | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Benzaldehyde | ● | ● | ● | ○ | ● | ● | ● | ● |
| Benzene | ● | ● | ● | ● | ● | ● | ● | ● |
| Bleaching lye, dilute | ● | ● | ● | ● | ● | ● | ○ | ● |
| Borax, aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Boric acid, aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Butane | ● | ● | ● | ● | ● | ● | ● | ● |
| Butanol | ● | ● | ● | ● | ● | ● | ● | ● |
| Butylacetate | ● | ● | ● | ● | ● | ● | ● | ● |
| Butyric acid | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Calcium salts[2], aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Carbon disulphide | ● | ● | ● | ○ | ○ | ● | ● | ● |
| Carbon tetrachloride | ● | ● | ● | ● | ● | ● | ● | ● |
| Caustic potash solution | ● | ● | ● | ▲ | ▲ | ● | ● | ● |
| Caustic soda lye | ● | ● | ● | ▲ | ▲ | ● | ● | ● |
| Chloroacetic acid | ● | ● | ● | ▲ | ▲ | ● | ● | ● |
| Chlorobenzene | ● | ● | ● | ○ | ○ | ● | ● | ● |
| Chlorodiphenyls | ● | ● | ● | ● | ● | ● | ● | ● |
| Chloroform | ● | ● | ● | ● | ● | ● | ● | ● |
| Chrome salts[2], aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Chromic acid | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ● | ● |
| Citric acid, aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |

| | AFM 34, 34 IGV, 34 Metall | AFM 30 | AFM 37 | AFM 38 | AFM 39 | AFM 44 | CHEMOTHERM SPE | REINZOFLON E |
|---|---|---|---|---|---|---|---|---|
| Cresols | ● | ○ | ● | ▲ | ▲ | ● | ● | ● |
| Crude oil | ● | ● | ● | ● | ● | ● | ● | ● |
| Cyclohexane | ● | ● | ● | ● | ● | ● | ● | ● |
| Cyclohexanol | ● | ● | ● | ● | ● | ● | ● | ● |
| Cyclohexanone | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Dibutyl phthalate | ● | ● | ● | ● | ● | ● | ● | ● |
| Diesel oil | ● | ● | ● | ● | ● | ● | ● | ● |
| Diethyl amine | ● | ● | ● | ▲ | ○ | ● | ● | ● |
| Diethyl ether | ● | ● | ● | ● | ● | ● | ● | ● |
| Dimethyl formamide (DMF) | ● | ● | ● | ▲ | ○ | ● | ● | ● |
| Dioxan | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Engine oils 100 °C | ● | ● | ● | ● | ● | ● | ● | ● |
| Ethane | ● | ● | ● | ● | ● | ● | ● | ● |
| Ethanol | ● | ● | ● | ● | ● | ● | ● | ● |
| Ethanolamines | ● | ● | ● | ● | ● | ● | ● | ● |
| Ether | ● | ● | ● | ● | ● | ● | ● | ● |
| Ethyl acetate | ● | ● | ● | ● | ● | ● | ● | ● |
| Ethyl benzene | ● | ● | ● | ● | ● | ● | ● | ● |
| Ethylene | ● | ● | ● | ● | ● | ● | ● | ● |
| Ethylene glycol | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Fatty acids above C 12 | ● | ● | ● | ● | ● | ● | ● | ● |
| Ferrous salts[2], aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Formaldehyde, aq. sol. (Formaline) | ● | ● | ● | ● | ● | ● | ● | ● |
| Formic acid | ● | ● | ● | ▲ | ▲ | ● | ● | ● |
| Freons, Frigens (CFC, BrCFC) | ● | ● | ● | ● | ● | ● | ● | ● |
| Fuel oil (light or heavy) | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Gasoline | ● | ● | ● | ● | ● | ● | ● | ● |
| Gear oil | ● | ● | ● | ● | ● | ● | ● | ● |
| Gelatine | ● | ● | ● | ● | ● | ● | ● | ● |
| Glycols | ● | ● | ● | ● | ● | ● | ● | ● |

| | AFM 34, 34 IGV, 34 Metall | AFM 30 | AFM 37 | AFM 38 | AFM 39 | AFM 44 | CHEMOTHERM SPE | REINZOFLON E |
|---|---|---|---|---|---|---|---|---|
| Heat transfer oils | ● | ● | ● | ● | ● | ● | ● | ● |
| Hexane | ● | ● | ● | ● | ● | ● | ● | ● |
| Hydraulic oil (Mineral oil based) | ● | ● | ● | ● | ● | ● | ● | ● |
| Hydraulic oil (Rape oil based) | ● | ● | ● | ● | ○ | ● | ● | ● |
| Hydrochloric acid, conc. | ○ | ● | ● | ▲ | ▲ | ○ | ○ | ● |
| Hydrochloric acid, dilute | ● | ● | ● | ○ | ○ | ● | ○ | ● |
| Hydrofluoric acid | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ● |
| Hydrogen | ● | ● | ● | ● | ● | ● | ● | ● |
| Hydrogen peroxide, dilute (3%) | ● | ● | ● | ● | ● | ● | ● | ● |
| Hydrogen sulphide | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Isopropanol | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Jet fuel | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Lead salts[2], aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Lubricating oils | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Machine oils 100 °C | ● | ● | ● | ● | ● | ● | ● | ● |
| Magnesium salts[2], aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Methane | ● | ● | ● | ● | ● | ● | ● | ● |
| Methanol | ● | ● | ● | ● | ● | ● | ● | ● |
| Methyl chloride | ● | ○ | ○ | ○ | ○ | ● | ● | ● |
| Methyl ethyl ketone (MEK, Butanone) | ● | ● | ● | ● | ● | ● | ● | ● |
| Methylene chloride | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Naphtha | ● | ● | ● | ● | ● | ● | ● | ● |
| Natural gas | ● | ● | ● | ● | ● | ● | ● | ● |
| Nickel salts[2], aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Nitric acid, conc. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ○ | ● |
| Nitric acid, dilute | ● | ● | ● | ○ | ○ | ● | ● | ● |
| Nitrobenzenes | ● | ● | ● | ▲ | ○ | ● | ● | ● |
| | | | | | | | | |
| Oxalic acid, aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Oxygen, gaseous | ● | ● | ▲ | ▲ | ▲ | ● | ● | ● |

| | AFM 34, 34 IGV, 34 Metall | AFM 30 | AFM 37 | AFM 38 | AFM 39 | AFM 44 | CHEMOTHERM SPE | REINZOFLON E |
|---|---|---|---|---|---|---|---|---|
| Perchloroethylene | ● | ● | ● | ● | ● | ● | ● | ● |
| Petroleum ether | ● | ● | ● | ● | ● | ● | ● | ● |
| Phenol | ● | ● | ● | ▲ | ▲ | ● | ● | ● |
| Phenylether | ● | ● | ● | ● | ● | ● | ● | ● |
| Phenylhydrazine | ● | ● | ● | ○ | ○ | ● | ● | ● |
| Phosphoric acid | ● | ● | ● | ● | ● | ● | ● | ● |
| Phthalic acid anhydride | ● | ● | ● | ● | ● | ● | ● | ● |
| Potassium salts[2], aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Pyridine | ● | ● | ● | ▲ | ○ | ● | ● | ● |
| | | | | | | | | |
| Refrigerant (CFC, HCFC, FC, HFC) | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Salicylic acid, aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |
| Sea water | ● | ● | ● | ● | ● | ● | ● | ● |
| Styrene | ● | ● | ● | ● | ● | ● | ● | ● |
| Sulphuric acid, conc. | ○ | ▲ | ▲ | ▲ | ▲ | ○ | ○ | ● |
| Sulphuric acid, dilute | ● | ● | ● | ○ | ○ | ● | ● | ● |
| Sulphurous acid | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Toluene | ● | ● | ● | ● | ● | ● | ● | ● |
| Transformer oils (mineral oil based) | ● | ● | ● | ● | ● | ● | ● | ● |
| Trichloroethylene | ● | ● | ● | ● | ● | ● | ● | ● |
| Triethanolamine | ● | ● | ● | ● | ● | ● | ● | ● |
| Turpentine | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Vegetable oils and fats | ● | ● | ● | ● | ● | ● | ● | ● |
| | | | | | | | | |
| Water (also deionized) | ● | ● | ● | ● | ● | ● | ● | ● |
| Water vapour 130 °C | ● | ● | ● | ○ | ○ | ● | ● | ● |
| | | | | | | | | |
| Zinc salts[2], aqueous solution | ● | ● | ● | ● | ● | ● | ● | ● |

● resistant
○ partly resistant: testing under operational conditions recommended
▲ not resistant

[1] Detailed resistance data for the materials AFM 34 and CHEMOTHERM SPE can be obtained upon reference of the appropriate order number 39-00025-01 or 39-00131-01. Also see: www.reinz-industrial.com/datasheet.

[2] **Salts are:** nitrates, nitrites, sulphates, sulphides, chlorides, acetates, tartrates, cyanides, phosphates, oxalates, etc.

**Choice of suitable sealing materials**
The Medium Tables are designed to simplify your choice of a suitable sealing material. These recommendations are based on the current status of our knowledge.
Also see: Material selection program / IGIS: www.reinz-industrial.com/datasheet.

**Evaluation of chemical resistance**
In order to evaluate chemical resistance the sealing materials (if not specified otherwise) were suspended in the medium for 70 hours at room temperature. In the case of dilute acids, alkalis and salts 10 % solutions were used; saturated solutions were used for medium with a low solubility.

**Please note:**
Mixtures or non-aqueous solutions could produce a different result for the chemical resistance evaluation. The thermo-mechanical operating conditions should also be taken into account when selecting a sealing material, as these also influence the resistance of a material to a medium.

For this reason, the recommendations in the Medium Tables are to be considered as a guideline. No warranty can be granted for the use of any material. In case of doubt please consult us and give exact details of the operating conditions.