# Reliable Polymer Industries

A World Class
Coating Technology





Reliable Polymer Industries is an engineering company providing solutions for corrosion to oil & gas, offshore rigs & platforms, shipping, chemical, pharmaceutical and various process industries.

We are specialized in all types of fluoropolymer coatings, linings & mouldings.

We also manufacture high tensile alloy fasteners of all grades as per ASTM / DIN / BS standards.

We have successfully executed various offshore projects for international petrochemical and engineering contractors. Our projects has been commissioned under third party inspection agencies like BV, DNV, GLIS, CEIL & others as per requirements.

### PTFE COATED STUDS, BOLTS AND NUTS

PTFE coated fastener's provides exceptional corrosion resistance, low coefficient of friction, consistent tensioning and subsequent ease of installation and removal.

Extensive testing and field use have proven that the future of coated fastener's lies with Fluoropolymer coatings. Previously hot dip, galvanized, cadium or zinc plated fastener's were considered the standard. But these coatings could not stand up to the corrosive atmospheres prevalent in many industries. The most widely used application is on B7 studs with 2H nuts.







Technical Data				
Use Temperatures	: Working temp. range up to + 260°C			
Corrosioin Resistance	: Salt Spray (ASTM B117)			
	up to 3,000 hrs (Nuts not frozen)			
Pencil Hardness	: 5H - 6H (ASTM D3363-92A)			
Kinetic Friction	: 0.06 - 0.08			
Coefficient				
Thickness	: Nominal 0.001" (1 mil)			
Impact	: 160 in lb (ASTM D2794-93)			
Adhesion	: 5B (ASTM D3359-95)			
Elongation	: 35%-50%			
Tensile Strength	: 4,000 psi			
Operating Pressure	: Up to 100,000 psi			

PTFE coating on fastener's will have a uniform thickness of 20 ± 5 microns to 45± 5 microns thick.

#### HIGH TENSILE ALLOY FASTENERS

We manufacture high tensile fastener's (studs, hex head bolts, sq.hex head, foundation bolts, jack screws, jack bolts and hex heavy series nuts etc.) from alloy, stainless and carbon steel materials to various grades as per the sizes and specifications acc. to ASTM A 193 GR. B7/L7/B7M/B8/B16 & ASTM A 194 GR. 2H/2HM/4/7.

We have all the necessary gauges and tools available for maintaining the sizes and the quality of the material. We have a good capacity of producing goods for more than 80 mt per month.





## FLUOROPOLYMER LINE PRODUCTS PTFE LINED PIPES & FITTINGS

The Lined Pipe System finds use in industries like Chemical, Petrochemical, Pharmaceutical, Food Fertilizers, etc... A majority of these industries make use of highly corrosive and hazardous acids and solvents in their processing applications. Being highly acidic and corrosive in nature, these chemicals tend to corrode and eat away the steel piping used as conveyors, rendering the system useless and unsafe for further use. Corrosion engineers are fast realising the long-term benefits of using high performance fluoropolymers to prevent corrosion of process piping systems.

We do PTFE lined 90° and 45° elbows, tees, reducers, reducing flanges, blind flanges, spacers dip pipes, spargers and thermocouple.

Technical Data		
Pipe Specifications	: ASTM A 106 Gr. B, ANSI B36. 10 SCH 40/80	
Flange Specifications	: ASTM A 105; A 181; ANSI B16.5 ASA 150/300 TYPE	
Fittings Specifications	: ASTM A234 GRWPB, A 106 GR. B; ANSI B16.9; B16.5	
Lining	: As per ASTM F 1545 Type III. Other liner material such FEP/PVDF/PFA available on request	
Lining Thickness	: 2-3 mm. (higher thickness for vacuum service)	
Operating Pressure	: Up to 20 bar / 250 psi	
Operating Temperature	: From -50°c to 250° c.	
Tests	: 10 kv Spart test / Hydro-testing:- From 10 psi to 430 psi.	



### **Material Selection**

Service Condition	Stud - Bolt	Nut
High Pressure High Temperature	ASTM A193 Gr. B5 B6 B7 B7M B16 ASTM A452 Gr. 660 651	ASTM A194 Gr. 3 6 2H 2HM 4 or 7 8C 8C
High Temperature High Corrosive	ASTM A193 Gr. B8 B8L B8M B8ML	ASTM A194 Gr. 8 8L 8M 8ML
High Pressure Low Pressure	ASTM A320 Gr. L7 L43	ASTM A194 Gr. 4 or 7
Low Pressure	ASTM A320 Gr. B8 BBC BBM BBT	ASTM A194 Gr. 8 8C 8M 8T





### **Application Area & Industries**

- Where highly corrosive materials are used in any area of chemical process industries.
- Where product purity is critical.
- Where environmental pollution is to be avoided.
- Where pipe replacement is difficult or impossible.



### OTHER FLUOROPOLYMER COATING'S & LINING'S FOR VARIOUS PROCESS INDUSTRIES

We do PTFE coating on all kinds of rollers, machinery and Pharmaceutical parts, PTFE Coated sealing belts, PTFE lined pressure Gauges, Thermowell, Electromagnetic Flowmeter, Glass Tube Rotameter and PVDF coating on Aluminum section, side mounted level switch & Automation Parts.



### 1) FOOD GRADE COATING'S

Food grade coatings is of great advantage for industries where non-stick property if of main criteria. Because of Non-stick properties, chemical powders do not stick to the tray. It is widely used in chemical and pharmaceutical industries.

Thickness: 25 to 100 Microns Working Temp.: upto +250°C

### Food Grade Non-Stick Coated Panels



### 3) PTFE BONDED METALS PARTS

We can bond PTFE on any vessel or any plain plate of various sizes, with the thickness range of 0.2 mm to 6 mm. We do PTFE bonding also as per the customers specifications.



Our PTFE bonding is backed by our Test Certificate for our customers satisfaction.

### 2) ROLLER COATING'S

This industrial grade of coatings are widely used in plastic industries, Textile Drying



Rollers, and Plastic Heat sealing blades etc. It

has excellent non-stick properties.

Thickness: 25 to 100 Microns

Working Temp.: from -50°C to +250°C

We are known for our promptness and exceptional customer service.

