

**KYNAR®**  
ADX

**KEPSTAN®**

Durable Coating  
Solutions

Chemical  
Processing  
Industries

# CPI applications and relevant chemicals

## Pulp & Paper

Bleaching chemicals

## Metal Preparation

High temperature acids

## Petrochemicals

Alkylation acids, hydrocarbon mixtures

## Food & Beverage

FDA listing, steam cleaning, acidic foods

## Waste Water

Chemical mixtures, outdoor exposure

## Mining

High abrasion & chemicals

## General Chemicals

pH <1 to 13.5

## Semi-Conductor

High purity water, acids, ozone

## Pharmaceutical/ Biotech

Ozone, steam cleanable, FDA acids

## Plenum Pipe

Acid waste drainage

# Chemical processing ≠ easy

**EXTREME →**

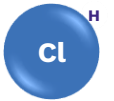
**Temperatures**

**Regulations**

**Corrosion**

**Chemicals**

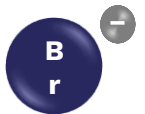
Hydrochloric  
acid



Sulfuric  
acid



Bromide



**Maintenance is costly  
→ both time and money**

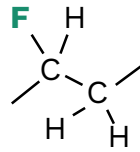
# Many fluoropolymers – one standout

## Homopolymers

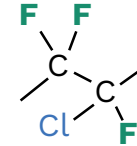
PVDF



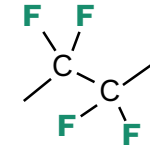
PVF



PCTFE

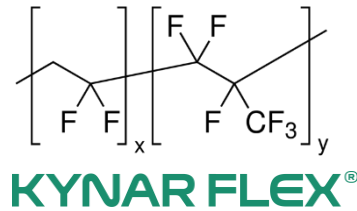


PTFE

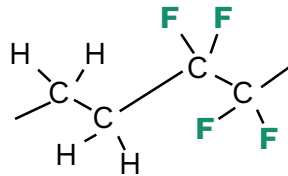


## Copolymers

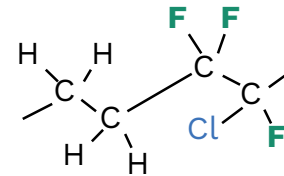
PVDF Copolymer



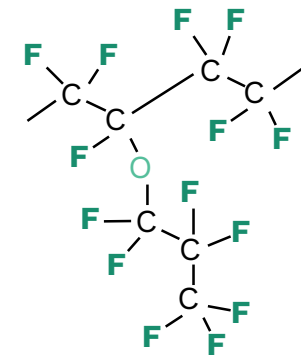
ETFE



E-CTFE

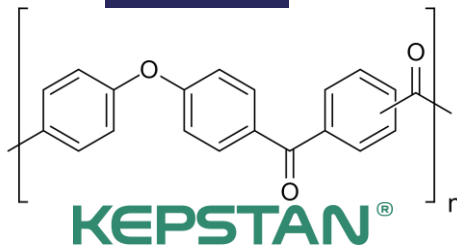


PFA

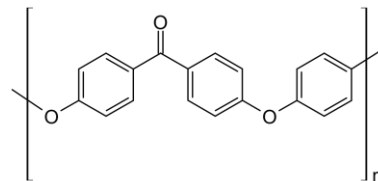


## Homopolymers

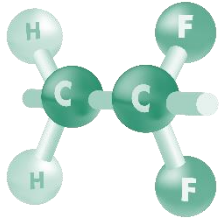
PEKK



PEEK



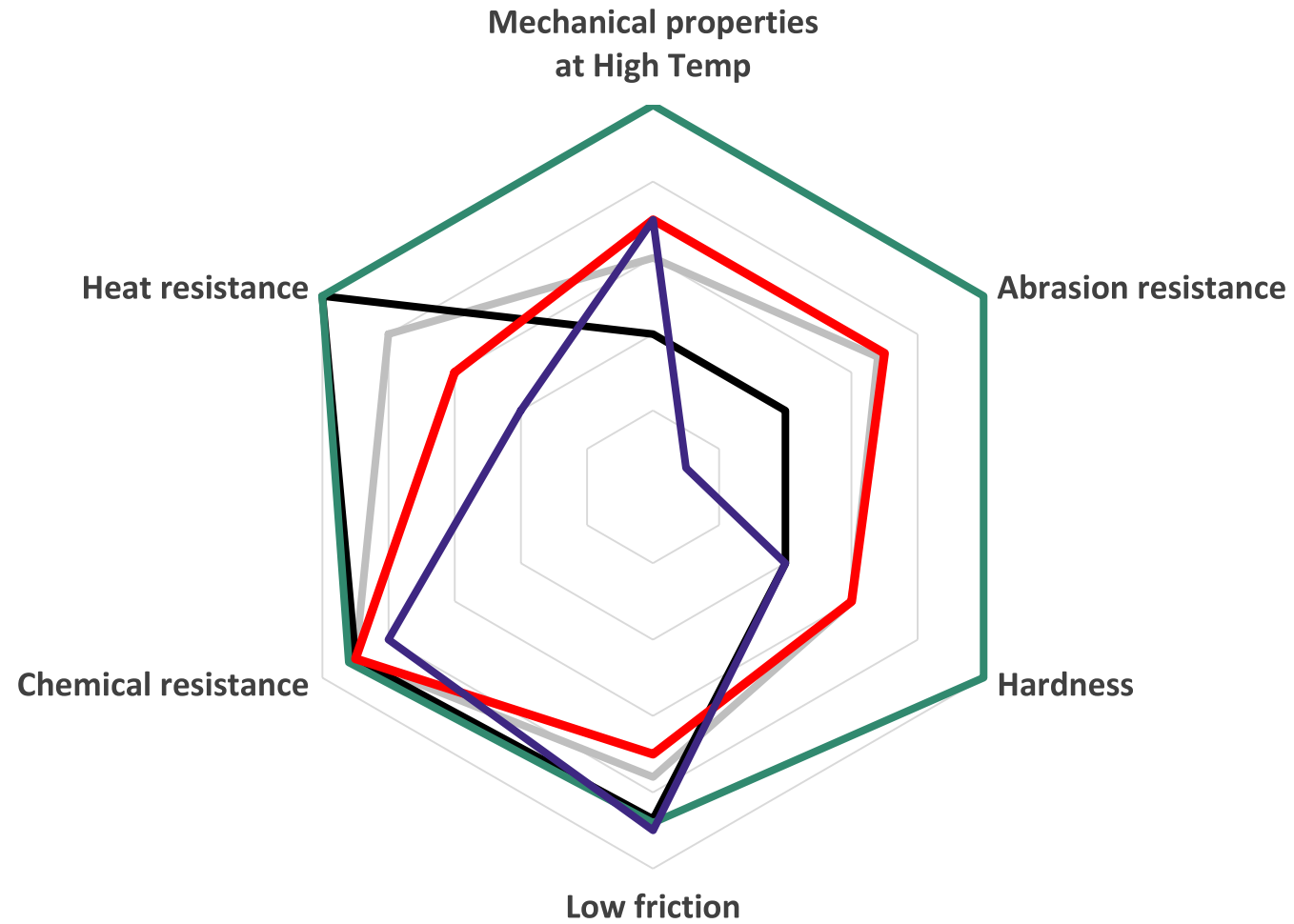
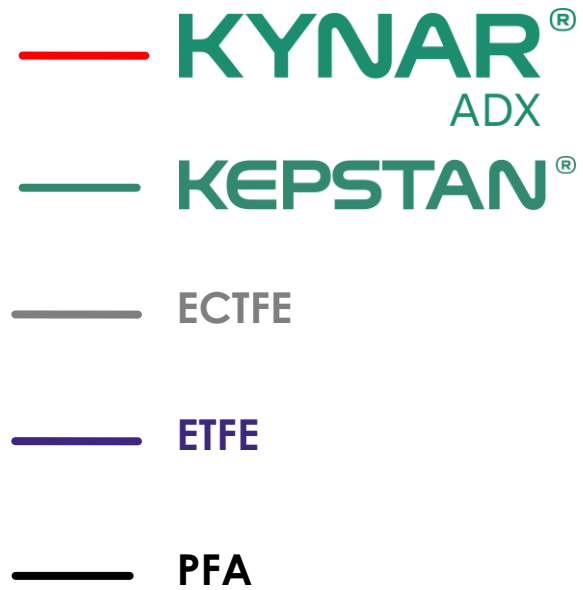
# Many fluoropolymers – one standout



**Kynar® Flex Grafted PVDF has the best balance of mechanical properties and melt processability among all the fluoropolymers**

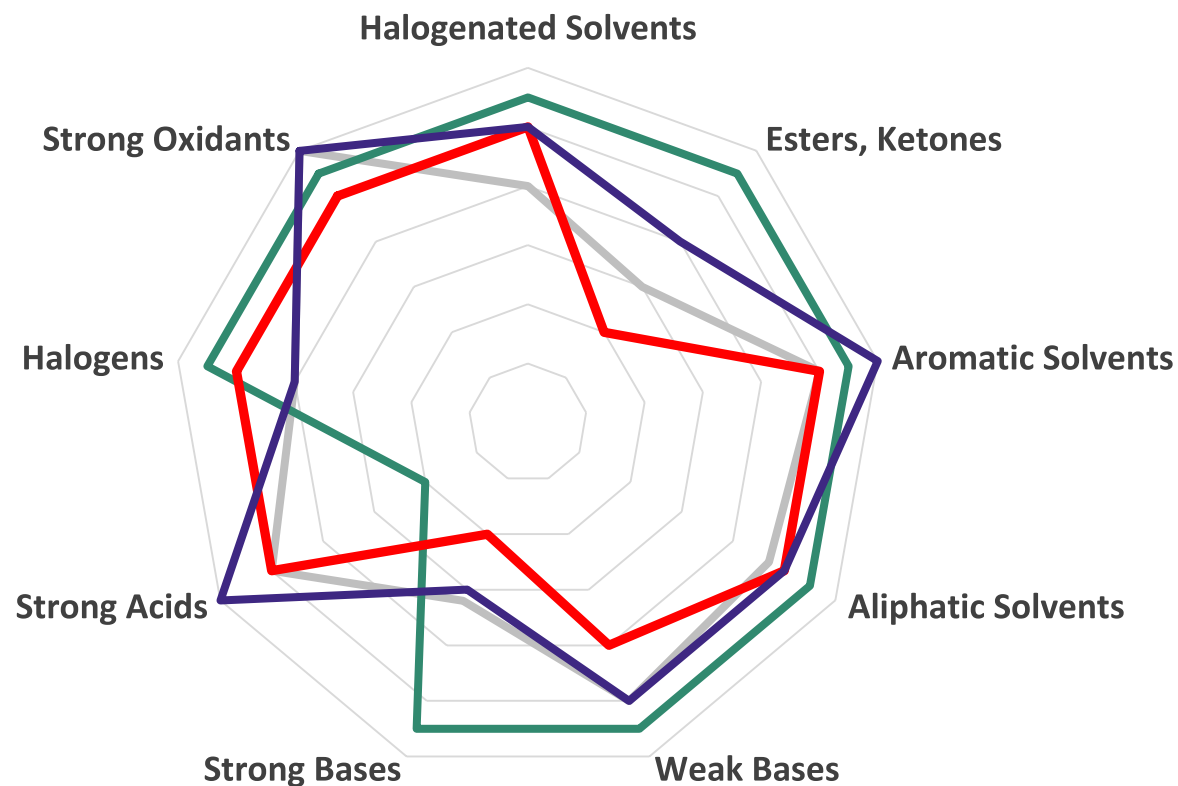
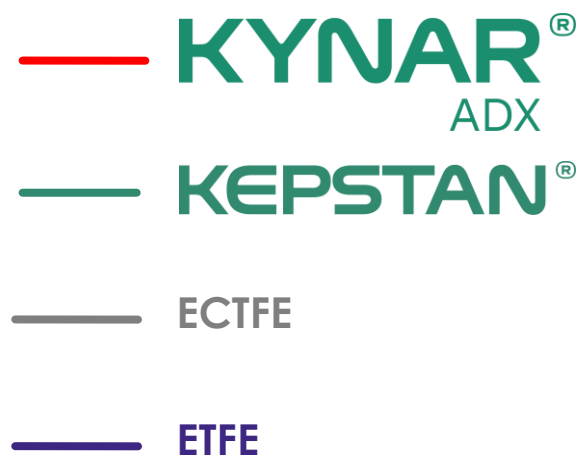
	PVDF	PVDF / HFP	PTFE	PFA	FEP	ETFE	ECTFE	PCTFE
Density	1.79	<b>1,72</b>	2.18	2.15	2.14	1.76	1.68	2.13
Tensile yield strength (MPa)	48	<b>20-35</b>	14	19	15	28	31	40
Flexural modulus (MPa)	2000	<b>1000</b>	550	600	620	1100	1700	1500
LOI %	44	<b>44</b>	90	90	90	30	60	90
Decomposition (°C)	340	<b>340</b>	400	400	~300	360	~320	320
T <sub>m</sub> (°C)	170	<b>152</b>	342	305-307	275-295	270	240-247	214
Friction Coefficient								
- Static	0.2 – 0.4	<b>0.4</b>	0.02	0.05	0.05	0.06	0.2	0.08
- Dynamic	0.2 – 0.35	<b>0.3</b>	0.02	0.05	0.05	0.06	0.2	0.08

# How to choose in CPI applications?





# Chemical resistance Chart



# KYNAR ADX<sup>®</sup> for Powder



Wire articles



Railway transportation



Exhaust Fume Ducts



Container protection

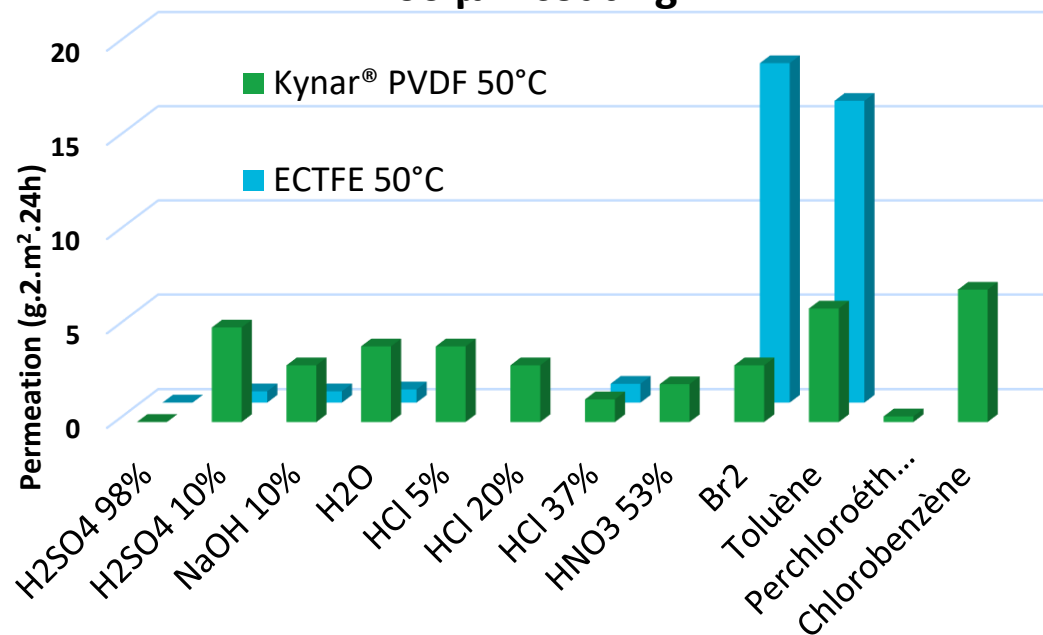


## Temperature



**Hot Water : Until 50°C continuous use**  
**Dry conditions : up to 125°C continuous use**

### Low Permeation @ 50°C 700 µm coating



## Chemicals



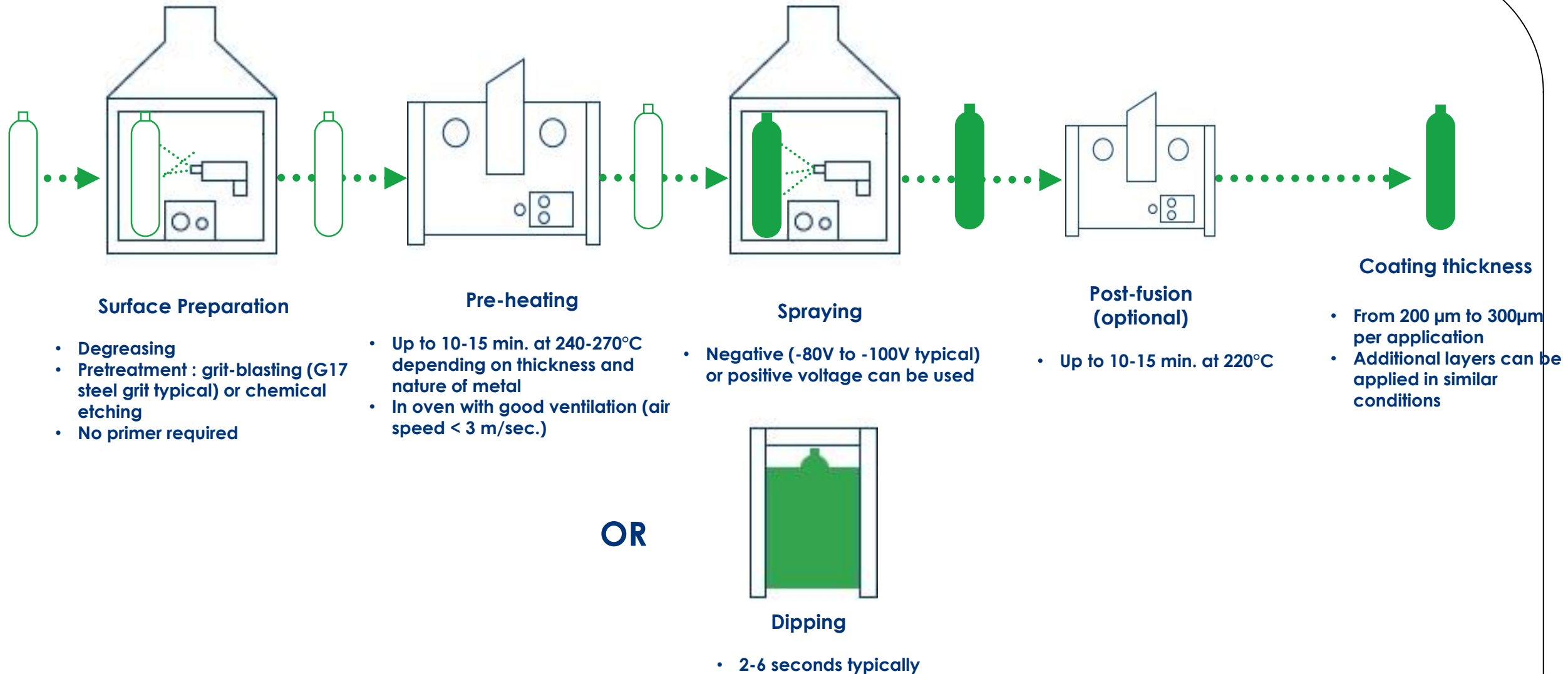
**Resists to most chemicals, solvents and fuels**  
**Very good resistance to UV weathering and nuclear radiation**  
**Low permeability to most gases and liquids**  
**Low flame and smoke characteristics**

### Chemical resistance table

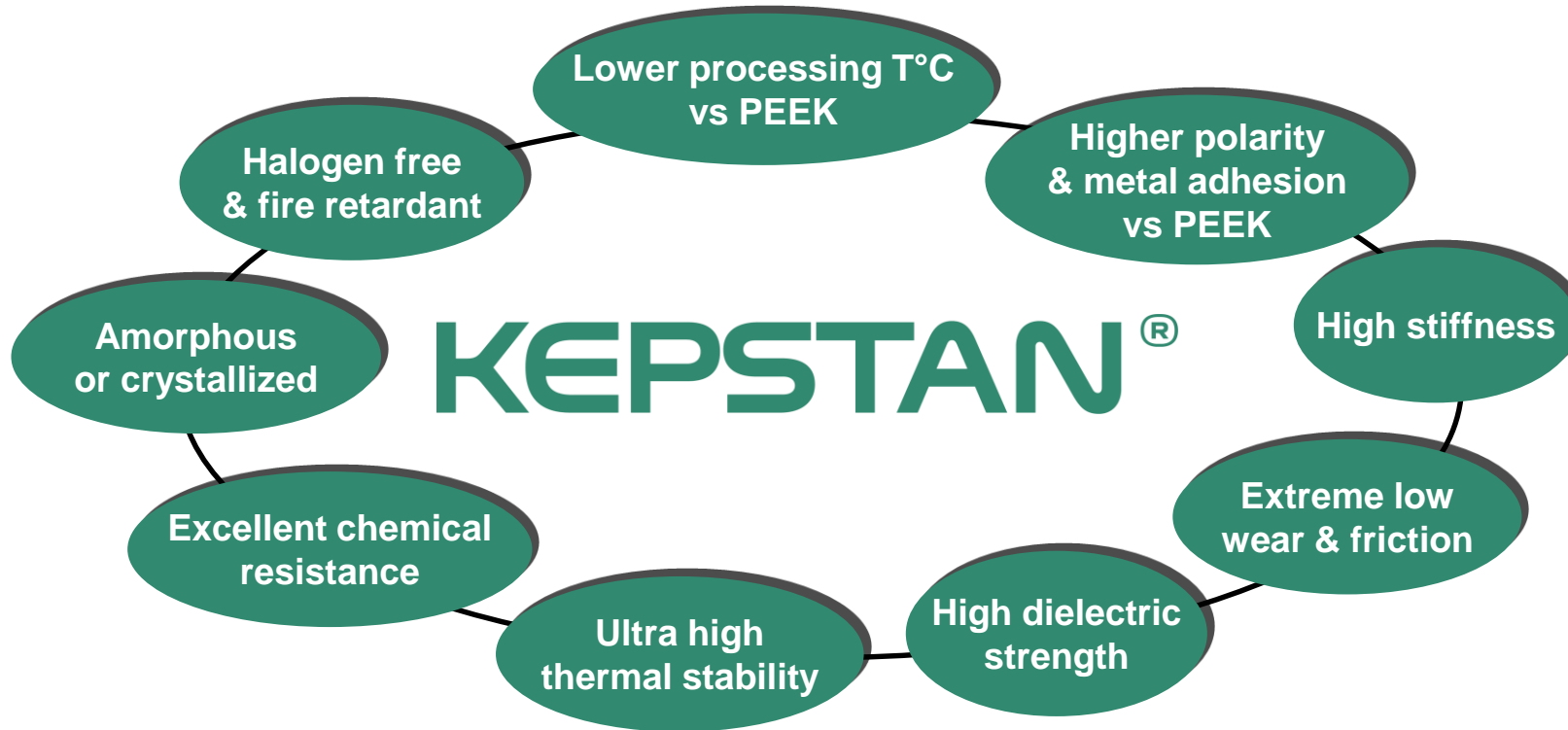
✦ Chlorine	✦ Bromine (Gaseous)
✦ Methyl Chloroform	✦ Bromine Water
✦ Hydrochloric Acid	✦ Hydrobromic Acid
✦ Salt Water	✦ Bromobenzene
✦ Chlorobenzene	✦ Brominated Salts
✦ Sodium Hypochlorite	✦ Iodine
✦ Hot Sugars	✦ Salicylic Acid
✦ Sulfuric Acid <98%	✦ <50% Acetic Acid
✦ Chlorinated Salts	✦ Methyl Alcohol
✦ Phosphoric Acid	✦ Chromic Acid
✦ Hydrofluoric Acid	✦ Nitric Acid
✦ Metallic Chlorides	✦ Deionized Water (DI)
✦ Acid mixtures	✦ Biodiesel; Other fuel mixtures

*Chemical Resistance Chart is available from Arkema*

# Kynar ADX Flex 281 G Application



# KEPSTAN® for powder coatings



Primer is not required



- ✓ Electrostatic
- ✓ Hot spray
- ✓ Dispersion coating



## KEPSTAN® PEKK POWDER OFFER

✦ Electrostatic & hot spray

50µm: 6002PL

20µm: 6002PT

✦ Dispersion coating

10-15µm: 6002PDC



O&G



Aerospace

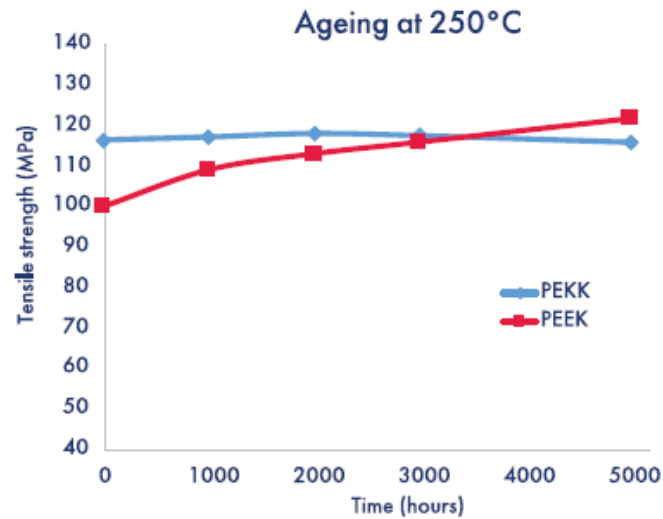


Pictures courtesy Southwest Impreglon (Houston, TX)

## Temperature Until 250°C continuous use



### HEAT AGEING



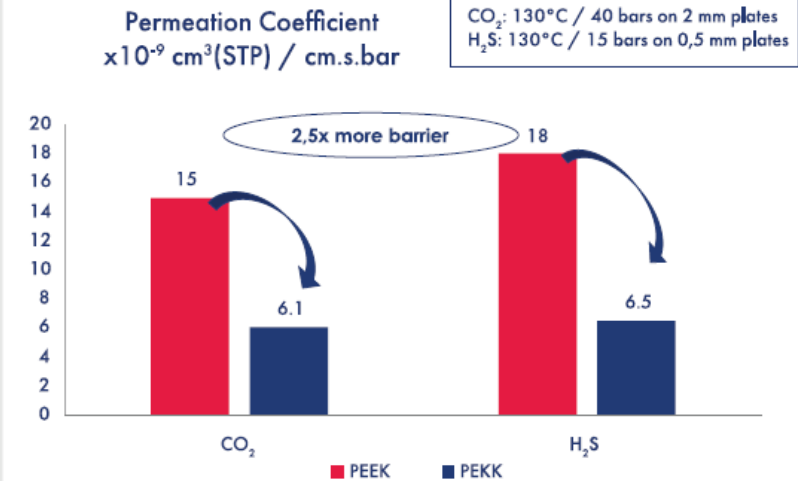
PEKK with a Continuous Use Temperature (CUT) of 250°C maintains good tensile strength and ductility > 4000h.

## Chemicals

Resists to most chemicals, solvents

### Low permeation

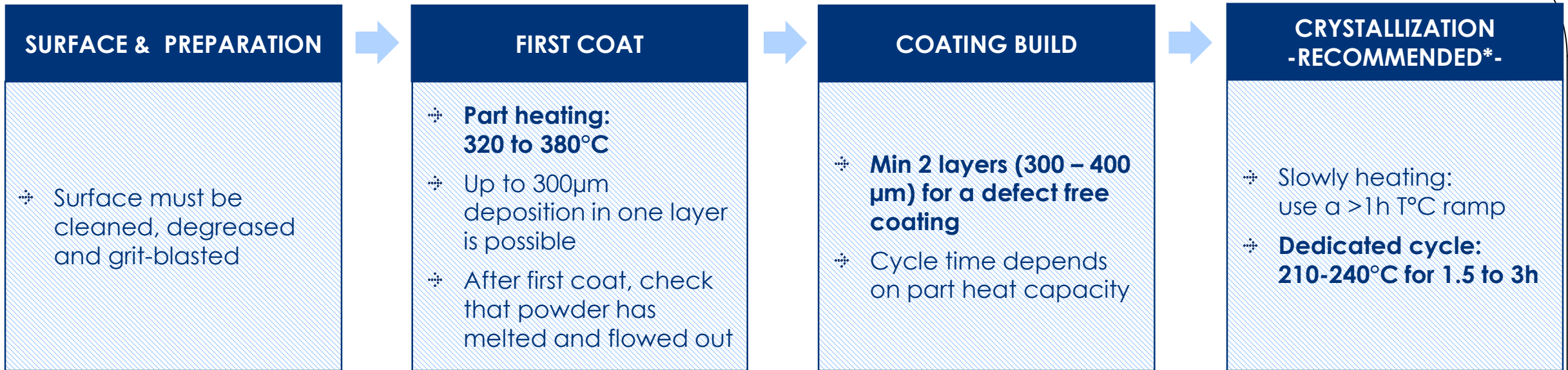
#### HIGH BARRIER PROPERTIES - CO<sub>2</sub> & H<sub>2</sub>S



PEKK shows great barrier performances versus PEEK.

# Kepstan 6002 PL Application

## OT SPRAY



## ✦ DISPERSION COATING

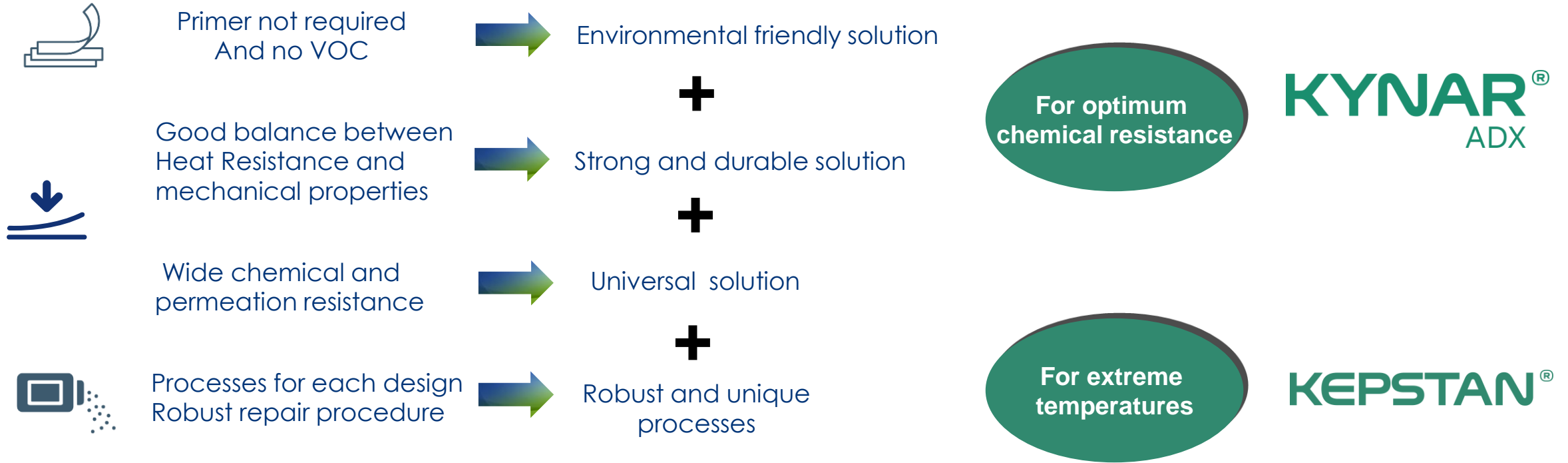
Kepstan® PEKK powders can be used in formulation & with similar process to PEEK dispersion coating.



**Each process has to be fine-tuned & adapted according to your equipment and expertise!**



# Durable coating solutions for Chemical Industry



Railway



Exhaust Fume Ducts



ISO Container



[arkema.com](https://arkema.com)

**ARKEMA**