PLEIX-QUIP Africa (Pty)Ltd

PQ NYLEX 2000

Latent heat of fusion	83,7 kJ/kg.
Surface resistivity, ASTM D 257, at 20° C and 8.5% RH at 500 V	2,4 X 10" D
Inflammability, ASTM D 635, (measured at a thickness greater than 3mm to eliminate the influence of substrate	Self extinguishing
Dislectrio constant	
102 Hz	3,9
106 Hz	3,1
Transverse of volume resistivity, ASTM D 257, at 20 °C and 65% RH at 500 V	10" to 10" cm
Tangent of the angle of low (power factor) at 1,000 V.R.M.B with a current of 1, 000 Hz (at 20°C and 65% RH)	0,05
Resistance to surface tracking, DIN 63-450, KA method	Grade KA 30
Dislectric rigidity, ASTM D 149, ES powders thickness ± 100 um	55 to 90 kV/mm
Dipping powders, thickness 350 to 450pm	30 to 36 kV/mm.
Dislectric strength, influence of the thickness studies on natural coating (measured at 20°C and 65% RH)	
0,20 mm	52,8 kV/mm.
0,43 mm	38,4 kV/mm.
0,70 mm	34,7 kV/mm.
0,90 mm	33.1 kV/mm.
Resistance of boiling water (ISO 1521)	Excellent adhesion after 2 000 hours; neither bubbling nor modification.
Resistance to outdoor exposure ASTM D 1235	3 Years florida exposure, adhesion 4 NFT 58-112 without corrosion
Colour evolution	The colour can change according to the type of the powder, please consult our development department for further information.
Resistance to salt spray (ASTM B 117 or AFNOR X 41-002)	No corrosion after 2 000 hours exposure
Resistance to salt water	No corrosion after 10 years exposure.

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PHYSICAL PROPERTIES OF THE COATINGS

Melting point (ISO 1218)	186°C (irrespective of type of powder)
VICAT point (ISO 306)	181°C
Specific gravity at 20°C (ISO 1183)	
Coating in natural powders	1,040 g/cm³
Coating in dipping and ES powders, white	1,065 g/cm³ to 1.25 g/cm³
Water absorption to saturation	
• At 20°C and 65 % RH	0,9 to 1.1% according to the type of powder
• At 20°C and 100% RH	1,6 to 1,9% according to the type of powder
• At 100°C and 100% RH (boiling water)	2,4 to 3% according to the type of powder
Shore hardness (ISO 868) at 20°C measured at a thickness greater than 5mm to eliminate the influence of the substrate	75,85
Hardness measured with a persox pendulum (ISO 1522) At 20°C	180 - 200
Surface hardness according to DIN 53-456 at 20°C 10 sec. under load	80 N/mm
Scratch resistance (ISO 1516) measured with the claman apparatus load necessary to induce a scratch which reaches the underlying metal for a coating of 0,4 mm thickness	59 N
Pertoil hardness ECCA T4	Note: B
Shear strength ASTM d 732	35 – 42 N/mm
Impact resistance	
Projectile with hemispherical head. 25 mm diameter weighing 19.6 N, falling from height of 50 cm on horizontal coating of 0,3 mm thickness	No fracture on the coating and metal not bared after impact
Dip coating powders, ASTM G14 (thickness 350 um.) NFT 30-039	2J 2,6 J
ES powders (thickness 100 µm) ISO 6272	19J
Abrasion resistance	Excellent
Tabar abrasimeter NFT 30 – 015 (Wheel type CS17, load 9,81 N) loss of weight after 1 000 turna.	15 mg
Coefficient of friction, NFT 54 – 112 (8) Black powders	Static K:0,15 – 0.3 Dynamic K:0,05-0,2
Conical mandral folding ISO 6880, ASTM D 522 (ES powders)	35%
Specific heat	2,09 kJ/kg K
Thermal conductivity	0,29W / mK between 323 and 443K

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RESISTANCE OF PQ NYLEX 2000
TO VARIOUS CHEMICALS AS A FUNCTION OF TEMPERATURE

CONDITION AFTER 18 MONTHS CONTACT

G = GOOD, L = LIMITED, P = POOR.

CHEMICALS	RESISTANCE				CHEMICALS	RESISTANCE		
INORGANIC BASES	20°C	40°C	60°C	80°C	OTHER INORGANIC PRODUCTS	20°C	40°C	60°C
Ammonia hydroxide (Concentrated)	G	G	G	G	Agricultural sprays	G	G	
Ammonia (liquid or gas)	G	G			Bleach solution	L	P	P
Lime - wash		G	G	G	Bromine	P	P	
Potassium hydroxide (50%)	G	L	P	P	Chlorine	P	P	P
Sodium Hydroxide (5%)	G	G	L		Flourine	P	P	P
Sodium Hydroxide (10%)	G	L	L		Hydrogen	G	G	G
Sodium Hydroxide (50%)	G	L	P	P	Hydrogen peroxide (20 volumes)	G	L	
					Mercury	G	G	G
					Oxygen	G	G	L
INORGANIC SOLIDS					Ozone	L	P	P
Chromic acid (10%)	P	P	P	P	Potassium permangenate (5%)	P	P	
Hydrochloric solid (1%)	G	L	P	P	Sea water	G	G	G
Hydrochloric solid (10%)	G	L	P	P	Soda water	G	G	G
Nitric acid (all concentrations)	P	P	P	P	Sulphur	G	G	
Phospheric acid (50%)	G	L	P	P	Water	G	G	G
Sulphuric acid (1%)	G	L	L	P				
Sulphuric acid (10%)	G	L	P	P				
Sulphuric trioxide	L	P	P	P				

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CHEMICALS	RESISTANCE				CHEMICALS	RESISTANCE		
INORGANIC BASES	**20°C**	**40°C**	**60°C**	**80°C**	**OTHER INORGANIC PRODUCTS**	**20°C**	**40°C**	**60°C**
INORGANIC SALTS					**ALDEHYDES AND KETONES**			
Alum	G	G	G		Acetaldehyde	G	L	P
Aluminium sulphate	G	G	G	G	Acetone (pure)	G	G	L
Amonium nitrale	G	G	G		Bensaldehyde	G	L	P
Ammonium sulphate	G	G	L		Cyclohexanone	G	L	P
Barium chloride	G	G	G	G	Formaldehyde (technical)	G	L	P
Calcium organic (concentrated sol.)	G	G	G		Mathylethytketone	G	G	L
Calcium cloride	G	G	G	G	Methytisobytylkatone	G	G	L
Calcium sulphate	G	G	L					
Copper Sulphate	G	G	G	G	**HYDROCARBONE**			
Diammonium phosphate	G	G	L		Acetylene	G	G	G
Magnesium chloride (50%)	G	G	G	G	Benzene	G	G	L
Potassium ferrocyanide	G	G	G		Butane	G	G	G
Potasium nitrate	G	L	P	P	Cyclohaxana	G	G	L
Potasium sulphate	G	G	G	G	Decalin	G	G	G
Sodium carbonate	G	G	L	P	HFA (Forane)	G		
Sodium chloride (saturated)	G	G	G	G	Hexane	G	G	G
Sodium alticate	G	G	G		Methane	G	G	G
Sodium sulphate	G	L	L		Nephthalene	G	G	G
Trisodium phosphate	G	G	G	G	Propane	G	G	G
					Styrene	G	G	
					Toluene	G	G	L
					Xylene	G	G	L

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CHEMICALS	RESISTANCE				CHEMICALS	RESISTANCE		
INORGANIC BASES	**20°C**	**40°C**	**60°C**	**80°C**	**OTHER INORGANIC PRODUCTS**	**20°C**	**40°C**	**60°C**
ORGANIC BASES					**ALCOHOLS**			
Aniline (pure)	L	P	P	P	Benzyl alcohol	L	P	P
Diathanolamine (20%)	G	G	G	L	Butanol	G	L	P
Pyridine (pure)	L	P	P	P	Ethanol (pure)	G	G	L
Urea	G	G	L	L	Glycerine (pure)	G	G	L
					Glycol	G	G	G
ORGANIC ACIDS & ANHYDRIDES					Methanol (pure)	G	L	P
Acelic acid	L	P	P	P	**CLORINATED SOLVENTS**			
Acctic anhydride	L	P	P	P	Carbon tetrachloride	P		
Citric acid	G	G	L	P	Methyl bromide	G	P	
Formic acid	P	P	P	P	Methyl Chloride	G	P	
Lactic acid	G	G	G	L	Perchloroethylene	G	G	L
Olelc acid	G	G	G	L	Trichloroethane	L	P	
Oxalic acid	G	G	L	P	Trichlorethylene	G	L	
Pleric acid	L	P	P	P	Phenols	P	P	P
Glearic acid	G	G	G	L				
Tartaric acid (saturated solution)	G	G	G	L				
Uric acid	G	G	G	L				

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CHEMICALS	RESISTANCE				CHEMICALS	RESISTANCE		
INORGANIC BASES	**20°C**	**40°C**	**60°C**	**80°C**	**OTHER INORGANIC PRODUCTS**	**20°C**	**40°C**	**60°C**
VARIOUS ORGANIC COMP.					**VARIOUS PRODUCTS**			
Smethole	G				Beer	G		
Carbon disulphide	G	L	P		Cider	G		
Diacetone alcohol	G	G	L	P	Crude petroleum	G	G	G
Dimenthyl formanide	G	G	L		Diesel fuel	G	G	G
Ethylene chlorhyden	P	P			Fruit juices	G	G	
Ethylene oxide	G	G	L	P	Fuel oil	G	G	G
Furfurol	G	G	L	P	Greases	G	G	G
Glucose	G	G	G	G	Ground-nut oil	G	G	
Tetresthyl lead	G				High octane petrol	G	G	G
Tetratrydrofurane	G	G	L		Kerosene (paraffin)	G	G	G
ESTERS, OTHERS					Linseed cake	G	G	G
Butyl sosiate	G	G	G	L	Milk	G	G	G
Butyl sociate	G	G	G	L	Mustard	G		
Diethyl other	G				Normal petrol	G	G	G
Dioctylphosphate	G	G	G	L	Oils	G	G	G
Dioctylphthalate	G	G	G	L	Solutions or emultions. DDT or Lindane, Hydroxyquinoline	G		
Ethyl acetate	G	G	G		Soap solution	G		
Fatty acid	G	G	G	G	Slearin	G	G	G
Methyl acetate	G	G	G	G	Solvent naphtha	G	G	G
Methyl surfate	G				Town gas	G	G	
Tributylphosphate	G	G	G	L	Turpentine	G	G	G
Tricresyphosphate	G	G	G	L	Vinegar	G		
					Wine	G		

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