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HIGH PERFORMANCE XR-5® 8130 REINFORCED GEOMEMBRANE

[View XR-5® Chemical/Environmental Resistance Chart](#)

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XR-5® 8130 Reinforced	Standard	Metric
Base Fabric Type	Polyester	
Base Fabric Weight (nominal)	6.5 oz/yd ²	220 g/m ²
Thickness ASTM D 751	30.0 mils min	0.75 mm min
Weight ASTM D 751	30.0 ± 2 oz/yd ²	1020 ± 70 g/m ²
Tear Strength ASTM D 4533, Trapezoid Tear	35/35 lb min	155/155 N min
Breaking Yield Strength ASTM D 751, Grab Tensile, Procedure A	550/550 lb min	2450/2450 N min
Low Temperature ASTM D 2136, 4 hr - 1/8" mandrel	Pass @ -30 ° F	Pass @ -35 ° C
Dimensional Stability ASTM D 1204, 212° F - 1 hr	1.5% max each direction	
Adhesion - Heat Sealed Seam ASTM D 751, Dielectric Weld	35 lb/2 in min	150 N/5 cm min
Dead Load - Seam Shear Strength ASTM D 751, 4-hour test	2 in seam, 1 in strip 210 lb @ 70° F 105 lb @ 160° F	5 cm seam, 2.5 cm strip 935 N @ 21° C 465 N @ 70° C
Bursting Strength ASTM D 751, Ball Tip	650 lb min 800 lb typical	2890 N min 3560 N typical
Hydrostatic Resistance ASTM D 751, Method A	800 psi min	540 N/sq cm min
Blocking Resistance ASTM D 751, 180° F/82° C	# 2 Rating max	
Adhesion - Ply ASTM D 413, Type A	15 lb/in min or Film Tearing Bond	65 N/2.5 cm min or Film Tearing Bond
Bonded Seam Strength ASTM D 751 Grab test Method, Procedure A	550 lb min	2450 N min
Abrasion Resistance ASTM D 3389, H-18 Wheel, 1000 g Load	2000 cycles (min.) before fabric exposure 50 mg/100 cycles max weight loss	
Weathering Resistance ASTM G 23 (Carbon-Arc)	8000 hrs (min) - No appreciable changes or stiffening or cracking of coating	
Water Absorption ASTM D 471, Section 12, 7 days	0.025 kg/m ² max @ 70° F/21° C 0.14 kg/m ² max @ 212° F/100° C	
Wicking ASTM D 751	1/8 in max	0.3 cm max
Puncture Resistance ASTM D 4833	250 lb min	1110 N min
Coefficient of Thermal Expansion/Contraction ASTM D 696	8 x 10 ⁻⁶ in/in/°F max	1.4 x 10 ⁻⁵ cm/cm/°C max

XR-5

SECTION B — CHEMICAL/ENVIRONMENTAL RESISTANCE

PART B-1: XR-5® FLUID RESISTANCE GUIDELINES

The data below is the result of laboratory tests and is intended to serve only as a guide. No performance warranty is intended or implied. The degree of chemical attack on any material is governed by the conditions under which it is exposed. Exposure time, temperature, and size of the area of exposure usually varies considerably in application, therefore, this table is given and accepted at the user's risk. Confirmation of the validity and suitability in specific cases should be obtained.

When considering XR-5 for specific applications, it is suggested that a sample be tested in actual service before specification. Where impractical, tests should be devised which simulate actual service conditions as closely as possible.

These all based on 30 days in direct contact

EXPOSURE	RATING
AFFF	A
Acetic Acid (5%)	B
Acetic Acid (50%)	C
Ammonium Phosphate	T
Ammonium Sulfate	T
Antifreeze (ethylene glycol)	A
Animal Oil	A
Aqua Regia	X
ASTM Fuel A (100% Iso-octane)	A
ASTM Oil #2 (Flash pt. 240°C)	A
ASTM Oil #3	A
Benzene	X
Calcium Chloride Solutions	T
Calcium Hydroxide	T
20% Chlorine Solution	A
Clorox	A
Conc. Ammonium Hydroxide	A
Corn Oil	A
Crude Oil	A
Diesel Fuel	A
Ethanol	A
Ethyl Acetate	C
Ethyl Alcohol	A
Fertilizer Solution	A
#2 Fuel Oil	A
#6 Fuel Oil	A
Furfural	X
Gasoline	B
Glycerin	A
Hydraulic Fluid – Petroleum Based	A
Hydraulic Fluid – Phosphate Ester Based	C
Hydrocarbon Type II (40% Aromatic)	C
Hydrochloric Acid (50%)	A
Hydrofluoric Acid (5%)	A
Hydrofluoric Acid 50%	A
Hydrofluosilicic Acid (30%)	A
Isopropyl Alcohol	T
Ivory Soap	A
Jet A	A

EXPOSURE	RATING
JP-4 Jet Fuel	A
JP-5 Jet Fuel	A
JP-8 Jet Fuel	A
Kerosene	A
Magnesium Chloride	T
Magnesium Hydroxide	T
Methanol	A
Methyl Alcohol	A
Methyl Ethyl Ketone	X
Mineral Spirits	A
Naphtha	A
Nitric Acid (5%)	B
Nitric Acid (50%)	C
Perchloroethylene	C
Phenol	X
Phenol Formaldehyde	B
Phosphoric Acid (50%)	A
Phosphoric Acid (100%)	C
Phthalate Plasticizer	C
Potassium Chloride	T
Potassium Sulphate	T
Raw Linseed Oil	A
SAE-30 Oil	A
Salt Water (25%)	B
Sea Water	A
Sodium Acetate Solutions	T
Sodium Bisulfite Solution	T
Sodium Hydroxide (60%)	A
Sodium Phosphate	T
Sulphuric Acid (50%)	A
50% Tanic Acid	A
Toluene	C
Transformer Oil	A
Turpentine	A
Urea Formaldehyde	A
UAN	A
Vegetable Oil	A
Water (200°F)	A
Xylene	X
Zinc Chloride	T

Sodium chloride no problem per B:11

Ratings are based on visual and physical examination of samples after removal from the test chemical after the samples of Black XR-5 were immersed for 28 days at room temperature. Results represent ability of material to retain its performance properties when in contact with the indicated chemical.

RATING KEY:

- A—Fluid has little or no effect
- B—Fluid has minor to moderate effect
- C—Fluid has severe effect
- T—No data-likely to be acceptable
- X—No data-not likely to be acceptable