Rhino Linings®

CHEMICAL RESISTANCE CHART

Industrial and commercial protective lining applications often have exposure to various chemicals. Rhino Linings® HiChem™ and Rhino Extreme™ protective lining systems have been specially formulated for exceptional resistance to a wide variety of chemicals. Our HardLine® and Rhino Hybrid™ products also offer very good resistance to a number of chemicals commonly found in industrial applications. The following chart summarizes the chemical resistance of these products based on immersion testing conducted in our lab. A guide to interpreting the ratings is shown below.

For applications involving chemicals not listed below, please contact your Rhino® representative for further information. We are continually adding to our chemical resistance database. If necessary, we can assist in conducting chemical exposure testing with the Rhino Linings systems. **It is important to note that higher service temperatures, length of exposure time and other factors can significantly influence the performance of these linings. Each potential application should be carefully evaluated on a case by case basis. Testing coupons with the actual chemical in question is also highly recommended.**

RATINGS INTERPRETATION

A: Suitable for continuous immersion or exposure. Do not see any significant weight gain or swelling and virtually no loss of hardness after full immersion for 6 months at 75°F.

B: Suitable for temporary storage or immersion for up to 3 months. Less than 10% weight gain or loss of hardness after full immersion for 30 days at 75°F.

C: Suitable for temporary exposure to chemical splash or spill, such as secondary containment. Less than 20% weight gain or loss of hardness after full immersion for 3 days at 75°F.

NR: Not recommended for service. Noticeable chemical degradation with more than 20% weight gain and substantial loss of strength and hardness after full immersion for 3 days at 75°F.

CHEMICAL MEDIUM	HiChem 11-70	Rhino Extreme HP 11-50	HardLine HP 11-60 or Rhino Hybrid HP 11-50
Acids			
Hydrochloric, 5%	A	A	A
Hydrochloric, 10%	A	A	A
Hydrochloric, 15%	A	B	C
Hydrochloric, 30%	A	NR	NR
Sulfuric, 20%	A	A	C
Sulfuric, 40%	A	A	C
Sulfuric, 60%	A	C	NR
Phosphoric, 10%	A	A	C
Phosphoric, 24%	A	C	NR
Alkalis			
Detergents	A	A	B
Soaps	A	A	B
Sodium Hydroxide, 25%	A	A	C
Sodium Hydroxide, 50%	A	B	NR
Ammonium Hydroxide, 10%	A	A	A
Ammonium Hydroxide, 20%	A	A	B
Oxidizers			
Bleach (5% Sodium Hypochlorite)	A	A	C
Sodium Hypochlorite, 13%	A	B	C
Salts			
Sea Salt, 25%	A	A	B
Ferric Sulfate, 50%	A	B	B
Ferric Chloride, 35%	A	B	B
Sodium Chloride	A	B	B
Petroleum / Aliphatic Products			
Diesel	A	A	B
Gasoline, Unleaded	A	A	C
Gasoline	A	C	NR
Gasoline 5% MTBE	A	B	NR
Heating Oil	A	A	A
Hydraulic Fluid	A	A	B
JP8	A	A	B
Machine Oils	A	A	B
Motor Oil	A	B	B
Brake Fluid	B	B	C

CHEMICAL MEDIUM	HiChem 11-70	Rhino Extreme HP 11-50	HardLine HP 11-60 or Rhino Hybrid HP 11-50
Solvents			
Chlorinated Solvents >10%	NR	NR	NR
Denatured Alcohol	C	C	NR
D-Limonene	C	C	NR
Ketones (Acetone, MEK)	NR	NR	NR
Xylene	NR	NR	NR
Mineral Spirits	A	A	C
Water and Wastewater			
Water Room Temperature	A	A	A
Water 82°C, 14 Days	A	A	C
10% NaCL + Water Room Temperature	A	A	B
10% NaCL + Water 40°C, 14 Days	A	A	C
Raw Water	A	A	A
Distilled Water	A	A	B
Sea Water	A	A	B
Hydrogen Sulfide Gas	A	A	A
Methane Gas	A	A	B
Raw Sewage	A	A	A
Treated Effluent	A	A	A
Activated Sludge	A	A	A
Others			
Animal Grease/Fats	A	A	B
Antifreeze Solution	A	A	B
Caster Oil	A	A	B
Corn Oil	A	A	B
Diethylene Glycol	A	A	B
Diethyl Toluene Diamine	B	C	C
Dioctyl Phthalate	A	A	B
Methanol	C	NR	NR

LIMITATIONS: The data on this chart must be considered as general guidelines only. It contains information to the best of our knowledge and testing. However, such immersion data is subject to varying interpretations. Application methods and conditions can also greatly affect the performance of the products. Since these factors are out of our control, the buyer assumes all risk of use and handling.

No warranty, express or implied, is made concerning the use of these products or recommendations and no liability for their use, or inability to use, is accepted. The manufacturer's sole responsibility for claims arising out of breach of warranty, negligence, strict liability or otherwise, is limited to the purchase price and/or replacement of the materials supplied by Rhino Linings Corporation. Rhino Linings Corporation reserves the right to modify this data without previous notice or liability.

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