

Pumadur Chemical Resistance



This document is intended only as a guide to assist in the selection of the most appropriate product for the chemical exposure conditions likely to be encountered. The data in this guide is based on laboratory immersion tests and on practical experience. All laboratory samples were cured for a minimum of 10 days at 20°C prior to testing.

When used as secondary containment or bunds, limited resistance (L) is usually sufficient to protect the underlying substrate for 72 hours in the event of a major spillage. Pumadur HF or RT should be used in these circumstances.

Many chemicals will stain or discolour the surface of Pumadur flooring without causing any loss of hardness. Common examples are nitric acid, acetic acid, hydrogen peroxide and sodium hypochlorite which are commonly used in food preparation areas. In areas where aggressive chemicals are used and spillages are frequent or prolonged, some surface erosion is possible. This will be exaggerated where mechanical abrasion is also present. Good housekeeping practices should always be observed.

Many aggressive solvents, for example acetone, MEK or methylene chloride, will affect flooring on long-term exposure but are so volatile that spillages usually evaporate before any damage occurs. However, where spillages are large or where evaporation may be slowed or prevented, damage may occur relatively quickly. If doubt exists as to the suitability of Resdev flooring products, please contact our Customer Care Department who will be pleased to give advice based upon experience of previous case histories.

Maximum service temperatures stated in the individual product data sheets should be observed regardless of the temperatures stated in this guide. Some chemicals may concentrate due to evaporation and become more aggressive. Higher temperatures will reduce chemical resistance. Mixtures of chemicals may be more aggressive than their individual components.

Because of their flexibility all joint sealants have lower long-term chemical resistance than flooring. This means that under aggressive conditions the joint sealants may have a shorter service life than the surrounding flooring. It is recommended that joint sealants should be inspected on a regular basis and replaced as soon as signs of deterioration appear.

The following categories are used:

- R - Resistant subject to reasonable standards of housekeeping.
- L - Limited resistance (occasional spillages may be tolerated if the area is washed down promptly with copious amounts of water or if the spillage evaporates quickly).
- NR - Not resistant, failure will occur in most cases fairly rapidly.

| Chemical | Concentration (%) | Temperature (°C) | Pumadur HF, RT, SL and MD |
|--------------------------|-------------------|------------------|---------------------------|
| Acetic acid | 30 | 20 | R |
| | 99 (glacial) | 20 | L |
| | 10 | 60 | L |
| Acetone | 100 | 20 | L |
| Ammonia 0.880 | - | 20 | R |
| Beer | - | 20 | R |
| Benzene | 100 | 20 | L |
| Blood | - | 20 | R |
| Brake fluid | - | 20 | R |
| Brine | Saturated | 20 | R |
| Castor oil | - | 20 | R |
| Citric acid | 60 | 20 | R |
| Coconut oil | - | 20 | R |
| Cod liver oil | - | 20 | R |
| Copper sulphate solution | 30 | 20 | R |
| Crude oil | 100 | 20 | R |
| Deionised water | 100 | 20 | R |

| | | | |
|-----------------------------|-----------|----|----|
| Diesel oil | - | 20 | R |
| Ethanol | 100 | 20 | R |
| Ethylene glycol | 100 | 20 | R |
| Grape juice | - | 20 | R |
| Groundnut oil | - | 20 | R |
| Hydrochloric acid | 36 | 20 | R |
| | 10 | 60 | R |
| | 4 | 20 | R |
| Hydrogen peroxide | 30 | 20 | R |
| Iso-propanol | 100 | 20 | R |
| Kerosene | 100 | 20 | R |
| Lactic acid | 85 | 20 | R |
| | 25 | 60 | R |
| Lard | - | 20 | R |
| Lime juice | - | 20 | R |
| Linseed oil | - | 20 | R |
| Methanol | 100 | 20 | R |
| Methyl ethyl ketone | 100 | 20 | L |
| Methyl isobutyl ketone | 100 | 20 | L |
| Methylene chloride | 100 | 20 | NR |
| Milk | - | 20 | R |
| Mineral oil | - | 20 | R |
| Motor oil | - | 20 | R |
| Nitric acid | 30 | 20 | R |
| | 69 | 20 | L |
| N-methyl pyrrolidone | 100 | 20 | NR |
| Olive oil | - | 20 | R |
| Petrol (unleaded) | - | 20 | R |
| Phosphoric acid | 50 | 20 | R |
| Pine oil | - | 20 | R |
| Potassium hydroxide | 50 | 20 | R |
| Skydrol 500B-4 | - | 20 | R |
| Sodium bicarbonate solution | Saturated | 20 | R |
| Sodium hydroxide | 50 | 20 | R |
| | 50 | 60 | NR |
| Sodium hypochlorite | 15 | 20 | R |
| Sugar solution | 30 | 20 | R |
| Sulphuric acid | 20 | 20 | R |
| | 50 | 20 | L |
| | 98 | 20 | NR |
| Sunflower seed oil | - | 20 | R |
| Toluene | 100 | 20 | L |
| Trichloroethylene | 100 | 20 | L |
| Vegetable oil | - | 60 | R |
| Whiskey | - | 20 | R |
| White spirit | 100 | 20 | R |
| Wine | - | 20 | R |
| Xylene (mixed isomers) | 100 | 20 | R |

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