

# Chemically Resistant Epoxy Coating EPAR 733HV

## TECHNICAL DATA

### 1.0 DESCRIPTION

EPAR 733HV is a high build, 100% solids, solvent-free epoxy system used to coat steel and concrete structures exposed to a wide range of chemicals. EPAR 733HV is applied in one to two coats to concrete and steel. It has excellent chemical resistance.

EPAR 733HV fully complies with the test requirements of AS/NZS 4020, Products for use in contact with Drinking Water (standard hardener only).

### 2.0 PHYSICAL PROPERTIES

- 2.1 Viscosity Pourable, thixotropic.
- 2.2 Mix Ratio Pre-packaged (3 parts resin to 1 part hardener by volume, 4.3:1 by weight)
- 2.3 Coverage Coverage dependent on surface type, porosity and intended purpose. For optimum long-term performance, apply two coats at maximum 4m<sup>2</sup> per litre.
- 2.4 Pot Life 20 – 30 minutes at 20°C.
- 2.5 Minimum Application Temp. 10°C.
- 2.6 Shelf Life 1 year in original unopened containers.
- 2.7 Cured Properties (Unfilled at 20°C)
  - 2.7.1 Colour Grey (other colours on request)
  - 2.7.2 Specific Gravity 1.1
  - 2.7.3 Compressive Strength 55 MPa 2 days, 87 MPa 7 days.
  - 2.7.4 Compressive Modulus 2 GPa.
  - 2.7.5 Tensile Strength 24 MPa.
  - 2.7.6 Thermal Expansion  $5 \times 10^{-5}$ mm/mm/°C.
- 2.8 Compliance
  - 2.8.1 EPAR 733HV fully complies with the test requirements of AS/NZS 4020:2005 to cover a cold water application up to <40°C, at the recommended 'total immersion' exposure of ~30,000mm<sup>2</sup> per litre of water (using standard hardener only). Compliance testing by AMS Laboratories Pty Ltd, NSW Australia. A copy of the report is available on demand.

#### Chemical Resistance

Chemical	Rating
Acetic acid 5%	R
Lactic Acid 10%	R
Hydrochloric acid 33%	R
Sulphuric acid 5%	R
Sulphuric acid 70%	R
Nitric acid 5%	I
Nitric acid conc.	NR
Citric acid 5%	R
Phosphoric acid 35%	NR

Chemical	Rating
Sodium hydroxide 5%	R
Sodium hydroxide 50%	R
Sodium hydroxide 50% (50°C)	I
Cooking oils and fat	R
Mineral oils	R
Xylene / 25% IPA	R
Toluene	R
Petrol	R

Chemical	Rating
Diesel	R
Aluminium sulphate 5%	R
Hydrogen peroxide 10%	I
Ferrous sulphate 5%	R
Sodium Hypochlorite 30%	R
MEK	NR

# EPAR 733HV

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## TECHNICAL DATA Continued

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Rating definition

R = full exposure (less than 0.1% weight gain after 7 days exposure)

I = intermittent exposure, 24 hours max                      NR = not suitable

Exposure to chemicals will vary dependant on temperature and concentration. In the case of intermittent exposure thorough cleaning is recommended after such exposure.

### 3.0 USES

Use EPAR 733HV to protect concrete and steel structures exposed to chemical immersion or contact, including concrete pipes and precast concrete used in sewerage systems. EPAR 733HV is also used to coat concrete or other surfaces for water retaining or reticulation in contact with drinking water.

### 4.0 APPLICATION INSTRUCTIONS

- 4.1 **SURFACE PREPARATION.** Thoroughly clean the jointing surfaces of all extraneous matter, especially oil and grease. Laitance should be removed from concrete surfaces mechanically. For best results steel surfaces should be prepared by sand blasting or grinding. All surfaces should be dry. For proper adhesion to concrete, DO NOT use a curing compound. Concrete should be cleaned by sandblasting or scabbling to a sound surface if required. Where concrete floors have been power-floated, remove the glaze by sandblasting or wire brushing. Vacuum or blow dust away with oil-free compressed air. Any laitance must be removed prior to application of the coating as the laitance will be weak and not provide sufficient strength for the coating. Acid etching of the concrete is not recommended unless conditions prohibit the use of alternative methods. All surfaces should be dry after preparation. For best results steel surfaces should be prepared by sand blasting or grinding, preferably to meet the requirements of BS 7079, Sa3. All surfaces should be dry.
- 4.2 **MIXING.** Accurately proportion required volume of resin and hardener ensuring this amount can be used within its pot life. Mix thoroughly preferably using a paint stirrer fitted to a low speed electric drill. During the mixing process scrape the bottom and sides of the container at least once with a spatula or similar tool to ensure all components are incorporated. Mixing should continue for approximately 5 minutes. Take care to avoid air entrapment.

Ideally, hardener and resin should be stored at above 15°C for 24 hours before use.

#### APPLICATION

- 4.3 **PRIMING.** All surfaces to be coated should preferably be primed with EPAR 226 at 4m<sup>2</sup> per litre. For best results, brush apply a thin coating of EPAR 226, working it well into the substrate. Apply EPAR 733HV while the prime coat remains tacky.
- 4.4 Apply one or two coats as applicable using a nylon brush or roller. If a second coat is required, apply within 6 hours of the first coat. After 6 hours, the surface must be mechanically etched, cleaned and recoated with EPAR 733HV.
- 4.5 Allow EPAR 733HV to cure for 24 hours at 20°C before exposing to traffic (lower temperatures will require longer curing before opening to traffic). EPAR 733HV will fully cure in 7 days at 20°C.



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# EPAR 733HV

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## TECHNICAL DATA Continued

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### 4.0 APPLICATION INSTRUCTIONS (continued)

- 4.6 Where EPAR 733HV is in contact with potable water, after fully curing for 7 days, thoroughly wash the entire coated substrate with clean water and then discard the water.
- 4.7 CLEAN-UP. Tools and equipment may be cleaned before hardening commences by washing with EPAR CLEAN UP SOLVENT. Clean hands and skin with soap and hot water.
- 4.8 Refer to the Product Safety Data Sheet for health and safety and handling information.

### 5.0 ADDITIONAL INFORMATION

EPAR 733HV should only be applied to clean, sound concrete or steel. Do not apply over the top of existing coatings, curing compounds, etc. Minimum application temperature is 10°C.

An Extended Pot Life hardener is available for EPAR 733HV. This hardener provides a longer pot life and therefore a longer working time/application window.

Potable water certification only applies to the standard EPAR 733HV hardener and resin system.

### 6.0 PACKAGING

8 and 16-litre packs.



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