



# TECHNICAL DATASHEET

## CHEMI-TECH U.S.R.

### Two Component Solvent Resistant Epoxy Coating



**Thortex Chemi-Tech U.S.R.** is a high performance solvent free coating designed for use where exceptional resistance to organic solvents is required.

**Thortex Chemi-Tech U.S.R.** is based on a special phenolic epoxy resin and a polyamine curing agent system which produces a highly cross linked polymer network. This unique system prevents permeation and subsequent attack of the coating by highly aggressive solvents, allowing the system to be used whenever superior solvent resistance is required.

**Thortex Chemi-Tech U.S.R.** offers excellent adhesion to steel and concrete, has outstanding resistance to a wide range of organic solvents even under total immersion conditions and is ideal for tanks, pipework, containment dykes, bund areas, where contact with solvents is likely.

**Before proceeding, please read the following information carefully to ensure that the correct application procedure is fully understood.**

### SURFACE PREPARATION

**Steel Surfaces** - All surfaces to be coated should be abrasive blast cleaned to a minimum Sa2½ in accordance with BS7079 Part A1:1989 or equivalent with a blast profile corresponding to 'Medium' in accordance with BS7079 Part C3 / ISO 8503 / 1. All loose abrasive dust and debris must be blown clear or vacuum cleaned away. Steel surfaces do not require priming but should be coated within 4 hours of blast cleaning to prevent rash rusting.

**Concrete Surfaces** - All concrete to be coated should either be lightly abrasive blast cleaned using wet or dry abrasive techniques or alternatively high pressure water jetting. Care must be taken not to expose the aggregate in the concrete. All dust and abrasive material shall be removed from the surface prior to coating.

Concrete surfaces should have a maximum moisture content of 7% prior to any coating being applied.

Concrete surfaces should be primed with **Thortex Floor-Tech S.P. Primer** in accordance with the product tech sheet.

### MIXING

**Thortex Chemi-Tech U.S.R.** is a two component material comprising base and activator components which must be mixed together prior to use.

Stir the contents of the base component, continue stirring and gradually add the total contents of the activator container, stir the combined mix until completely homogeneous.

The mixed materials should be used within approximately 30 minutes of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

### APPLICATION

Application should not be carried out at temperatures below 5°C nor when relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point.

Best application results are obtained at a minimum substrate and product temperature of 20°C. For optimum chemical resistance, the system must be applied and cured at a minimum temperature of 20°C for at least 7 days prior to return to service.

Ideally **Thortex Chemi-Tech U.S.R.** should be applied in a single coat by dual feed hot airless spray equipment, full technical details can be supplied on request from the **Thortex Technical Centre**.

If hand application is required then a two coat application should be carried out, however the first coat should be allowed to cure for a minimum of 16 hours and then must be thoroughly abraded or sweep blasted prior to application of the second coat in order to obtain maximum intercoat adhesion.

All equipment should be cleaned IMMEDIATELY after use with **Thortex Universal Cleaner**.

### Theoretical Coverage Rate

1.65 m<sup>2</sup>/kg at 500 microns dft (17.5 ft<sup>2</sup>/kg at 20 mils dft)

### Recommended Film Thickness

Wet 500 microns (20 mils)

Dry 500 microns (20 mils)

Detailed Working Recommendations are available from the Technical Centre on request.

## PHYSICAL CONSTANTS

**Mixing Ratio** 3 parts base to 1 part activator by volume.

**Appearance** Base Viscous coloured liquid.  
Activator Coloured liquid.

**Drying & Cure Times at 20°C (68°F)** Usable Life Approximately 30 minutes  
Full Cure 7 days

**Volume Solids** 100%

**V.O.C.** Nil

**Shelf Life** Use within 5 years of purchase. Store in original sealed containers at temperatures between 5°C (40°F) and 30°C (86°F).

**Food Contact** Meets USDA requirements for incidental food contact.

## PHYSICAL PROPERTIES

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|---|--|
| <b>Abrasion Resistance</b><br>ASTM D 4060     | 60 mgm loss per 1000 cycles<br>-1 kg load-CS17 wheel |
| <b>Impact Resistance</b><br>ASTMG14           | 2.2 joules (19½ in/lbs)                              |
| <b>Dry Heat Resistance</b><br>ASTMD2485       | 177°C (350°F)  |
| <b>Water Vapour Permeability</b><br>ASTMD1653 | 4.69 x 10 <sup>-6</sup> perm.cm                      |
| <b>Salt Fog Resistance</b><br>ASTMB117        | Excellent, unaffected after<br>10,000 hrs exposure   |
| <b>Humidity Resistance</b><br>BS 3900 Part F2 | Unaffected 5,000 hrs exposure                        |

## HEALTH AND SAFETY

As long as normal good practice is observed **Thortex Chemi-Tech U.S.R.** can be safely used.

**Thortex Chemi-Tech USR** reacts exothermically which can generate high levels of heat when left full mixed in containers.

Protective gloves should be worn.

Vapour masks should be worn for spray application.

A fully detailed **Material Safety Data Sheet** is either included with the material or is available on request.

## PACKAGING

Supplied in 2 kg packs

The information provided in this Product Data Sheet is intended as a general guide only and should not be used for specification purposes. The information is given in good faith but we assume no responsibility for the use made of the product or this information because this is outside the control of the company. Users should determine the suitability of the product for their own particular purposes by their own tests.

FOR FURTHER INFORMATION PLEASE CONTACT



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