Transpoxy Resin System 7900

Product code:
TO 4.42

A two pack transparent epoxy coating system for white/refined oil products or crude oil bulk storage tanks. In conjunction with fibre glass mat, Transpoxy Resin System 7900 can be used as a reinforced laminate system to protect bottoms and walls of tanks against corrosion and various hydrocarbons. When combined with laminate reinforcement, Transpoxy Resin System 7900 can be used in systems of 1500-3000µm.

Physical properties:

Colour	Transparent
Gloss / Appearance	Gloss
Volume Solids	Approx. 100 %
Specific gravity	Approx. 1.1 g/ml
VOC	Approx. 22 g/liter
Flashpoint	Both base and hardener > 80 °C

Usage data:

Mixing ratio By volume, base to hardener: 67:33 [2:1]

Film thickness	Dry film thickness per coat (µm)	Wet film thickness per coat (µm)	Theoretical spreading rate (m²/l)
Range	150 - 500	150 - 500	10 - 2
Recommended	200	200	5.0

Curing Times	Substrate temperature		
	10°C	23°C	30°C
Touch dry	8 Hours	4 Hours	3 Hours
Dry to handle	24 Hours	16 Hours	10 Hours
Full cure	7 Days	5 Days	3 Days
Potlife	2 Hours	1 Hour	Minutes

Drying and curing times are determined under controlled temperatures and relative humidity below 85 %, and at average of the DFT range for the product and should be considered as guidelines only.
The actual drying time may be shorter or longer, depending on film thickness, temperature, ventilation, humidity, preceding paint system etc.

Recoating intervals - see application section

	Substrate temperature							
	10°C		23°C		30°C			
Recoated with	Min	Max	Min	Max	Min	Max	Min	Max
Single pack products								
2-pack products	36 Hours	10 Days	24 Hours	4 Days	16 Hours	2 Days		

Recoating information is given for guidance only and is subject to local climate and environmental conditions. Consult your local Transocean representative for specific recommendations.
As a general rule, the best intercoat adhesion is achieved when the subsequent coat is applied before the preceding coat has been fully cured. Extended recoating times should not be considered for other than ambient atmospheric exposure. After prolonged exposure times it may be necessary to roughen the surface to ensure intercoat adhesion.

Surface Preparation:

Steel - Blast cleaning
All surfaces should be clean, dry and free from contamination. Surfaces should be treated in accordance with ISO 8504:2000.
All edges shall be ground to a minimum radius of 2 mm. Remove weld spatter and smooth weld seams by using disc grinders, chipping hammers or other suitable power tools. Sharp edges, weld seams, corners and other areas that are likely to receive less dry film thickness than specified, should be stripe coated.
The surfaces shall be blast-cleaned to min. Sa 2½ (ISO 8501-1:2007). The surface profile and the anchor pattern shall be between 40 µm and 70 µm. The abrasives shall be free from oil, grease, moisture, chloride contamination etc.

Minor repair / Touch-up
All surfaces should be clean, dry and free from contamination. Surfaces should be treated in accordance with ISO 8504:2000.
Any corroded areas should be prepared by power-tool cleaning or water jetting.
Power-tool cleaning to min. St 2, preferably St 3 (ISO 8501-1:2007). Care shall be taken to ensure that power-tool cleaning does not polish the steel surface. If the surface being prepared lies adjacent to a coated surface, the power tool cleaning shall overlap the coated surface by at least 25 mm and the coated surface shall be feathered.
Water jetting in accordance to ISO 8591-4: 2006 to a cleanliness of Wa 2 or better for atmospheric exposure.
Acceptable flash rust degree is M (medium) but degree L (light) is preferred.
A water pressure of at least of 1000 bar (approx. 15.000 psi) is recommended.

Major repair/ Refurbishment
All surfaces should be clean, dry and free from contamination. Surfaces should be treated in accordance with ISO 8504:2000.
Corroded areas to be prepared by blast cleaning or water jetting.
Blast Cleaning: The surfaces shall be blast-cleaned to min. Sa 2½ (ISO 8501-1:2007). The abrasives shall be free from oil, grease, moisture, chloride contamination etc.
Water jetting: Water jetting in accordance to ISO 8591-4: 2006 to a cleanliness of Wa 2,5. Acceptable flash rust degree is M (medium) but degree L (light) is preferred.
A water pressure of at least of 1000 bar (approx. 15.000 psi) is recommended.
Alternatively a suitable priming system can be used. When recoating zinc primed products, ensure the primer has been fully cured. Zinc salts products shall be removed by high pressure fresh water cleaning. Contact your local Transocean office for more information.

Coated substrates
All surfaces should be clean, dry and free from contamination. Surfaces should be treated in accordance with ISO 8504:2000.
Ensure compatibility of the coated substrates with the selected paint system. If the remaining part of the existing coating system needs to be sweep-blasted, fine abrasive shall be used to avoid damage to the coating system.
When recoating aged coated substrates, damaged areas must be removed back to a firm edge. Light abrade or sweep-blast the surface in order to provide a physical key for adhesion.
When recoating zinc primed products, ensure the primer has been fully cured. Zinc salts products shall be removed by high pressure fresh water cleaning. Contact your local Transocean office for more information.

Application:

Mixing:

The product is supplied in 2 containers as a unit. Always mix a complete unit in the proportions supplied. Do not mix more material than can be used within the specified pot life.
Stir the base (Part A) with a clean mechanical mixer. Then add the entire contents of Curing Agent (Part B) and mix thoroughly. Avoid too vigorous mixing as it leads to in air inclusion, which may result in poor application results.
If thinner is required, only add after mixing of the two components.
Irrespective of the substrate temperature, the advised minimum temperature of the mixed paint is 15 °C. At lower temperatures, more thinner may be required to obtain a proper application viscosity, which may result in lower sag resistance and slower curing.

Conditions:

Unless mentioned separately, the relative humidity should be below 90% during application and curing. The temperature of the substrate should be min. 5°C and at least 3°C above the dew point of the air. Temperature and relative humidity should be measured in the vicinity of the substrate.

Methods:

Guiding data Airless spray	Pressure at nozzle	180 - 250 bar
	Nozzle size	0.53 - 0.58 mm (0.021 - 0.023 in.)
	Spray angle	40 - 80 degrees
	Volume of thinner	0 %
Guiding data Airspray	Pressure	Not applicable
	Nozzle size	-
	Volume of thinner	0 - 15%
Brush / Roller	Suitable for stripe coats and touch-up work only.	
Thinner	This is a solvent free product. Do not use any thinner except for cleaning equipment.	
Cleaner	Transocean Epoxy Thinner 6.03	

Additional usage instructions

When combined with laminate reinforcement, Transpoxy Resin System 7900 can be used in systems of 1500-3000µm, depending on the number of coats and type and number of layers of reinforcement. Density of glass fibre is generally in the range of 300 - 450 g/sq.m except for optional final tissue layer, depending on specification

1. Preferably mix (a full set of) part A and part B with a mechanical stirrer. Do not mix more material than can be used in 1 hour at 20°C.
2. Pitted areas, corners, edges and weld seams should be stripe-coated by brush prior to a full coat application. Where needed, use approved pit-filler and putty to caulk edges and welds to ensure a smooth transfer for the reinforcement without entrappoing air or causing the fibre to kink or break. Transpoxy Resin System 7900 can be combined with approved fumed silica thickening agent to create a putty on site.
3. The laminate system consists of Transpoxy Resin System 7900 with one or two layers of the fibre glass mat plus an optional layer of surfacing tissue.
4. Apply Transpoxy Resin System 7900 by roller or by spray. Apply fibre glass mat onto the Resin System and make sure that the adjacent layer of glass mat will overlap the adjacent mat for at least 15cm.
5. Apply Transpoxy Resin System 7900 preferably by spray and compact by rolling with the spiked roller to force the glass mat into the wet resin. Roll until the glass mat is completely saturated and free of entrapped air. Apply more Transpoxy Resin System if the glass mat cannot be saturated. Repeat this procedure with every layer.
6. Allow ventilation during and after application of the coating system. Temperature of the ventilation air should lie between 20°C and 35°C. Continue ventilation until the system has fully cured.

Do not apply the coating when ambient temperature will be less than 12°C for more than 48 hours after application of the coating.

Additional Product information:

Storage and shelf life

The product must be stored in accordance with national regulations. The cans are to be kept in a dry, cool, well ventilated space and away from source of heat and ignition. Cans must be kept tightly closed and kept in original containers until required for use.
Partly used containers should be re-sealed securely and stored according to the recommended manner. (See section 7 of relevant SDS).

Health and safety

Observe the precautionary notices on the label of the container. A material safety data sheet is available upon request and national or local safety regulations should be followed. This product is intended for use by professional applicators.

As a general rule, avoid skin- and eye contact by wearing overalls, gloves, goggles, mask, etc. Spraying should be carried out under well-ventilated conditions. This product contains flammable materials and should be kept away from sparks and open flames. Smoking in the area should not be permitted. Avoid the inhalation of vapours and particulates by the provisions of good natural ventilation sufficient to keep air-borne concentrations below the Occupational Exposure Standards during the application and drying of paint films.

In operations where natural ventilation is insufficient to achieve this - e.g. painting work in enclosed areas - exposure should be controlled by the use of local exhaust ventilation. When this is not reasonably practicable, suitable respiratory protective equipment must be worn. For spray application or when OES's are likely to be exceeded, use the respiratory equipment as recommended in for instance BS4275:1974. This specification gives advice on selection, use and maintenance of various types of breathing apparatus. Protect other persons in the area.

Disclaimer

The information in this data sheet is provided to the best of our knowledge. However, we have no control over either quality or condition of the substrate and other factors affecting the use and application of this product. Therefore, we cannot accept any liability whatsoever or howsoever arising from the performance of the product or for any loss or damage arising from the use of this product. Users should first carry out their own trials to ascertain the suitability of the product for their intended purpose.

This Data Sheet supersedes all previous Data Sheets supplied to you relating to this product. It contains important information which must be communicated to the user. The user must satisfy himself of the suitability of the product for the intended application and surface, as surface and application conditions are beyond our control. The user must also satisfy himself of the suitability of the product in circumstances other that those set out in this data sheet. The user should also maintain appropriate control procedures. Should further information be required, please contact our Technical Department.

Transocean Coatings employ a policy of continuous development and the technical data could be revised as a result of experience or new information becoming available.

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