Transpoxy Tankguard 461

Product code:
TO 4.61

A polyamine cured phenolic epoxy coating with excellent resistance against most acids, alkalis and various solvents. The product has good flow properties resulting in a smooth, easy to clean surface and therefore reduces the possibility of cargo adsorption.

Physical properties:

Colour	White, Light grey, Redbrown, Sand Yellow
Gloss / Appearance	Semi-gloss
Volume Solids	Approx. 63 %
Specific gravity	Approx. 1.27 g/ml
VOC	Approx. 327 g/liter
Flashpoint	Base >14°C Hardener >4°C

Usage data:

Mixing ratio 80:20 [4:1]

Film thickness	Dry film thickness per coat (µm)	Wet film thickness per coat (µm)	Theoretical spreading rate (m^2/l)
Range	100 - 150	160 - 240	6.3 - 4.2
Recommended	150	240	4.2

Curing Times	Substrate temperature			
	10°C	23°C	30°C	
Touch dry	6 Hours	3 Hours	1 Hour	
Dry to handle	24 Hours	12 Hours	8 Hours	
Full cure	10 Days	5 Days	3 Days	
Potlife	2 Hours	1 Hour	30 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	24 Hours	5 Days	12 Hours	4 Days	6 Hours	1 Day		

Recoating information is for guidance only and varies with local climate and environmental conditions. For specific recommendations, consult your local Transocean representative.
Best intercoat adhesion is achieved when the subsequent coat is applied before the preceding coat has fully cured. Extended recoating intervals apply only to ambient atmospheric exposure. After prolonged exposure, 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.

Coated substrates

All surfaces should be clean, dry and free from contamination. Surfaces should be treated in accordance with ISO 8504. 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.

Stainless Steel

All surfaces should be clean, dry and free from contamination. Surfaces should be treated in accordance with ISO 8504:2000. Blast cleaning shall be carried out by smooth sweep blasting, using a fine non-iron containing abrasive (e.g. aluminium oxide). The abrasives shall be free from oil, grease, moisture, chloride contamination etc. Surface roughness shall be in the range of 20 µm to 30 µm.

Application:

Mixing:

Conditions:

The relative humidity should be <90% during application and curing, unless otherwise specified in the product documentation. The substrate temperature should be ≥5°C and ≥3°C above the dew point of the air. Air temperature and relative humidity should be measured at substrate.
Generally, the maximum recommended surface temperature is 40°C. Higher substrate temperatures are acceptable provided dryspray is avoided by proper spray application and extra thinning if required. In extreme cases it may be necessary to reduce film thickness in order to avoid sagging.

Methods:

Guiding data Airless spray	Pressure at nozzle	180 - 250 bar
		0.53 - 0.66 mm (0.021 - 0.026 in.)
	Spray angle	40 - 80 degrees
	Volume of thinner	0 - 5%
Guiding data Airspray	Pressure	Not applicable
	Nozzle size	-
	Volume of thinner	-
Brush / Roller	Suitable for stripe coats and touch-up work only.	
Thinner	Transocean Epoxy Thinner 6.03 If thinning is necessary, this should be added after mixing of the two components. The recommended level of thinner is dependent on thickness and conditions. In certain circumstances, it may be required to exceed the stated level of thinner. However, as a general rule do avoid excessive thinning as it will result in lower sag resistance and slower cure. In addition it may cause solvent entrapment, possibly risking blistering, pinholing and/or other coating defects.	
Cleaner	Transocean Epoxy Thinner 6.03	

Additional usage instructions

Corners, edges and weld seams should be stripe-coated prior to a full coat application.
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.

Forced cure guidelines:
- ventilate for 4 hours with ambient air followed by 4 hours with hot air to reach a surface temperature of 80 °C.
Or alternatively:
- ventilate for 2 hours with ambient air followed by 10 hours with warm air to reach a surface temperature of 55°C.

Do not apply the coating when ambient temperature will be less than 12°C for more than 48 hours after application of the coating.
If at any time, a greasy appearing film is observed on the surface of the coating, the surface should be thoroughly wiped with clean rags saturated in Transocean Epoxy Thinner 6.03 or Transocean Cleaner 6.13. Allow evaporation of the solvent before recoating.

For coating of internals of tanks or areas not exposed to direct sunlight, the maximum recoating times can be extended to 14-30 days, dependent on conditions. Please consult your local Transocean representative for more information.

Additional Product information:

Storage and shelf life

Storage: Store the product in compliance with national regulations in a dry, cool, well-ventilated area, away from heat and ignition sources. Keep materials in tightly closed original containers until use. Securely re-seal partially used containers and store as recommended. (See Section 7 of the relevant SDS.)

Shelf life: The stated value is a minimum; refer to “Guidance to Transocean Coatings Product Datasheets” for details.
Shelflife: Months

Health and safety

Observe the safety warnings on the container label. A Safety Data Sheet (SDS) is available upon request.Comply with all applicable national and local safety regulations.
For professional use only. Wear appropriate PPE (overalls, gloves, goggles, respiratory protection, etc.) to avoid skin and eye contact.
Spraying should be carried out under well-ventilated conditions. If the product is flammable (see label/SDS), keep away from sparks, open flames, and heat sources. No smoking in the work area.
Avoid inhaling vapors and particulates. Maintain airborne concentrations below Occupational Exposure Limits (OEL) through adequate natural ventilation during application and drying.
In enclosed areas with insufficient ventilation, use local exhaust ventilation. If this is not feasible, wear a suitable respirator. Users must be trained in its proper use and limitations.

Disclaimer

The information in this Product Data Sheet is provided in good faith and based on our current knowledge. However, Transocean Coatings cannot control substrate quality, surface preparation, application conditions, or environmental factors that may affect product application and performance. Accordingly, we accept no liability for the performance of this product or for any loss, damage, or injury arising from its use, whether direct, indirect, or consequential. Should any conflict arise between translations, the English version of this Product Data Sheet is authoritative and binding.

This Data Sheet supersedes all previous versions and must be communicated to all users. Users must:
- Conduct their own trials to verify the product’s suitability for their specific application and intended purpose.
- Confirm compatibility with intended substrates and conditions, which are beyond our control.
- Implement appropriate quality control procedures during application.
- Verify suitability for circumstances not covered in this Data Sheet.

Transocean Coatings maintains a policy of continuous product development. Technical data may be revised as new information or experience becomes available. For further information, contact our Technical Department.

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