Highland Tank® *Technical Data Sheet*

# ACT-100-U® Polyurethane Tank Coating

Polyurethane Corrosion Coating
100% Solids, Two-Component, Fast-Cure
Complies with UL 1746 Part IV

**Description**

Coating is a solvent free, tar-free, two-component polyurethane corrosion coating (1:1 ratio by volume). This product has a very short reaction time and is therefore spray applied using plural component spray equipment.

This coating has been approved by Underwriters Laboratories for the application of underground steel tanks under UL 1746 Parts IV. Application of this product is made directly to surface prepared steel. Primers are not necessary. Unlimited film builds may be achieved in a single coat multi-pass application.

Cured films are free of pores. This coating demonstrates an excellent balance of flexibility, impact strength, abrasion resistance and corrosion resistance. Cured films that are a minimum of 70 mils in thickness will provide permanent and fully effective corrosion protection for many years.

**Properties**

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| Solids, by volume | 100% |
| VOC | None |
| Components | Two (2) |
| Curing Mechanism | Chemical Reaction |
| Color Availability | Unlimited |
| Weight per mixed gallon | 9.5 lbs/gallon (4.3kg/gallon) |
| Theoretical Coverage | 1604 sq. ft. per gallon per mil (149 sq. m/gal per mil) |
| Primer Requirement | None Required |
| Adhesion to Steel | Excellent |
| Application Temperature Range | 35°F-120°F(1°F-49°C) |
| Hardness (ASTM D 2240) | 70 Shore D |
| Impact Strength | >40 in lbs |
| Flexibility | 15 mils bent 180 over 1/8” (3mm) mandrel |
| Abrasion Resistance | 110 mg (C17, 1kg, 1000 cycles) |
| Chemical Resistance | Excellent |

**Cure Times**

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|---|---|
| Cure to the Touch | 6-8 minutes @ 75°F (24°C)/50% relative humidity (15 mils/0.37mm) |
| Cure to Handle | 30-45 minutes @ 75°F (24°C)/50% relative humidity (15 mils/0.37mm) |
| Time to Recoat | 1 hour @ 75°F (24°C)/50% relative humidity (15 mils/0.37mm) |

**Packaging, Storage & Shelf Life**

Polyurethane is supplied in two 55-gallon tight top drums: Components: A and B.
Drums are tightly sealed until ready for use to prevent atmospheric moisture from contaminating material. Material is stored at temperatures between 50-80°F (10-27°C) in a dry well ventilated area.

Material is stored too ensure that component materials do not freeze. Material has a shelf life of 12 months after the date of manufacture if properly stored. Refer to Batch Number on product label for date of manufacture.

**Safety Precautions**

**For Industrial Use Only**

Avoid contact with eyes, and skin; do not inhale or ingest. When working with this material wear goggles, rubber gloves and a respirator. When spraying in a confined area, also wear a fresh air hood and make provision for forced ventilation. Refer to MSDS regarding individual components.

## Application Instructions

(Contact Highland Tank for detailed application instructions)

**A. Surface Prepartion**

1) Ensure that surface is clean, dry and uncontaminated. Proceed only if the substrate temperature is more than 3˚ C (5˚ F) above the dew point temperature during surface preparation and coating application.

2) Abrasive blast clean with sand or grit (G40 or coarser). DO NOT USE steel shot or non-angular media.
For steel surfaces, blast to a Near White Blast (SSPC-SP10; NACE 2; SA 2.5):
- minimum 2.5 mil (65 microns) profile for immersion;
- minimum 2.0 mil (51 microns) profile for buried;
- minimum 1.5 mil (38 microns) profile for atmospheric service.
For concrete surfaces, abrasive blast to remove any latiance.

**B. Application of Coating**

1) Roll or agitate individual components thoroughly before use to disperse pigments and assure homogeneity. Do not thin. Do not mix “A” and “B” together.

2) Spray apply using a plural component, 1:1 mix ratio, heated airless spray unit.

3) Unlimited film thickness can be obtained in one continuous coating operation, using one of several techniques. Typical applied thickness is 70 mils as per SSPC PA2. Contact Highland Tank for detailed instructions.

4) A second coat may be applied over the first, if it is applied within the recoat window. Otherwise, it may be necessary to roughen the surface to ensure good intercoat adhesion.

5) Allow coating to cure completely before putting into service. Follow decontamination procedure to remove any dirt and debris.

**C. Clean-Up and Storage**

1) This material will react with humidity and moisture. Keep containers tightly sealed and store upside down. For clean-up, use M.E.K. or a 50:50 blend of M.E.K. and Xylol. Other solvents may react with product.

2) Store between 10˚ C (50˚ F) and 27˚ C (80˚ F). DO NOT FREEZE. Use product within 6 months of receiving.

**D. Repair and Touch-up**

Unlikely minor scratches and surface damage due to impact or abrasion that may occur during transportation can be easily repaired or touched-up in the field.

**Health and Safety**

ACT-100-U® Polyurethane Tank Lining is intended for industrial use only. It contains no monomeric isocyanates but may nevertheless cause respiratory distress in some people. Provide ample ventilation. Wear a fresh air respirator when using in confined areas or when spraying. Wear rubber gloves, safety goggles and protective clothing. If swallowed, DO NOT induce vomiting as this will cause additional throat irritation; contact physician. If splashed on skin, remove immediately with rubbing alcohol and then wash with soap and water. If splashed in eyes, wash liberally with clean water and contact physician; temporary irritation of eyes may last several days. Contains trace amounts of ingredients which may cause skin cancer following prolonged direct skin contact. Therefore commonly used skin protection is recommended. See MSDS for more information. The finished product is completely inert.

The information contained herein is believed to be accurate as of the date of publication. Highland Tank reserves the right to change product specifications without notice.

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