

DESCRIPTION

General Coatings Manufacturing Corp. (GCMC) Tank Insulation System provides a tough, light-weight, robust protective tank insulation vapor barrier that helps tanks maintain a constant cooling temperature while efficiently reducing energy costs. This GCMC solution improves the tank's energy efficiency and offers an economic lifecycle cost with low environmental impact.

GCMC's versatile, high performance wine tank insulation solutions are credentialed, certified (UL, ICC, ESR, CRRC / Cool Roof, Title 24 Listed, and Energy Star Rated), and are installed at numerous wineries across the U.S. GCMC products are helping maintain desired internal wine tank storage temperatures while protecting external tank surfaces from rust, age, and harsh weather.

SYSTEM STEPS

Primer

Step 1 is a GCMC stainless steel primer that aggressively bonds with the substrate and is fast curing.

Spray Polyurethane Foam (SPF)

Step 2 is GCMC's ULTRA-THANE 250 T, a rigid, two-component, closed-cell, 2.5 lb spray polyurethane foam specifically formulated to externally insulate the tank and give it a durable, light-weight protective membrane ideal for hot and cold storage insulation.

Polyurea Coat

Step 3 is GCMC's a coat of either ULTRA-TUFF 2200 or 2400. Both are strong, two-component, 100% solid polyureas with fast setting characteristics. Both provide a durable, high performance protection membrane for storage tanks.

ULTRA-TUFF 2200 is a high build, 1:1 pure polyurea. ULTRA-TUFF 2400 is an aromatic hybrid polyurea.

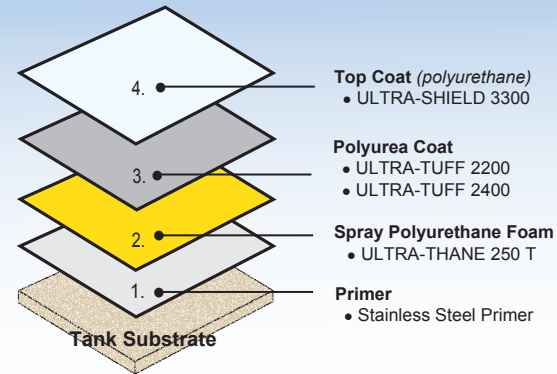
Polyurethane Top Coat

Step 4 is GCMC's ULTRA-SHIELD 3300, a single-component, high-solids, aliphatic, moisture cured, polyurethane coating. It provides outstanding UV weathering protection, color and gloss retention, chemical and abrasion resistance.

FEATURES & BENEFITS

- Durable, light-weight, energy efficient
- High R-value, robust vapor barrier
- Cost-effective, low operating & maintenance costs
- Seamless, self-flashing & easily repaired
- Protective membrane for hot and cold storage tank insulation
- Superior to traditional tank insulation materials
- Excellent UV weathering protection
- Outstanding color and gloss retention
- Strong chemical and abrasion resistance

GCMC TANK INSULATION SYSTEM



TYPICAL PHYSICAL PROPERTIES

ULTRA-THANE 250 T

PROPERTY	VALUE
Sprayed-in-place Density	2.5
R-Value (1-inch thickness)	6.62
K-Factor Aged	0.15
Compressive Strength	45 psi
Tensile Strength	60 psi
Shear Strength	45 psi
Closed Cell Content	95%
Water Vapor Transmission	1.8 perms
Water Absorption	0.017
Wind Uplift	>I-450

ULTRA-TUFF 2200 & 2400

PROPERTY	2200	2400
Solids by Weight (ASTM D-2697)	100%	100%
Solids by Volume (ASTM D-2369)	100%	100%
Hardness: Shore D (ASTM D-2240)	43 ± 3	50 ± 5
Tensile Strength (ASTM D-412)	3500 ± 300 psi	2700 ± 300 psi
Elongation (ASTM D-412)	250% ± 50	225 ± 20%
Tear Resistance (ASTM D-624)	400 ± 50 psi	400 ± 40 psi
Flash Point (ASTM D-56)	>200°F	>200°F
Pot Life @ 150°F	4-5 sec.	2-5 sec.
Tack Free Time (150 mils thick)	40-60 sec.	10-30 sec.
Recoat Time	0-12 hrs.	0-12 hrs.
Service Temperature	-20°F to 250°F	-20°F to 250°F

ULTRA-SHIELD 3300

PROPERTY	VALUE
Coverage Rate	1 gal / 100 sq. ft.
Dry Film Thickness	12 ± 2 mils
Hardness: Shore A (ASTM D-2240)	95 ± 5
Tear Resistance, Die C (ASTM D-624)	400 ± 50 pli
Tensile Strength (ASTM D-412)	3500 ± 300 psi
Elongation (ASTM D-412)	200% ± 50
Solids by Weight (ASTM D-2369)	80 ± 2%
Solids by Volume (ASTM D-2697)	72 ± 2%
VOCS (ASTM-2369-81)	<2.08 lb/gal / <250 gm/liter
Specific Gravity	1%
Viscosity at 75°F (24°C)	3000 ± 1000 cps

SHELF LIFE

Six months from the date of manufacture when stored in original unopened containers at temperatures between 50° - 75°F. Temperatures above 75°F may decrease shelf life.

STORAGE

GCMC Tank Insulation Foam System liquid components should be stored in original unopened containers at temperatures between 50°F and 75°F.

Note: Storage for prolonged periods of time at high temperatures may alter the reactivity profile of the product. Additionally, storing the side-B component at increased temperatures or in direct sunlight for prolonged periods may cause a build-up of pressure in the storage vessel. Containers should be opened slowly to release any pressure buildup.

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PROCESSING GUIDE

Description And General Use

GCMC Tank Insulation Foam Systems are sophisticated plural component building products which should be applied only by trained and manufacturer-approved insulation experts familiar with the properties of this material. GCMC coatings are specifically designed as insulation for construction applications where the end use ambient temperature range will be maintained between -100°F and 225°F.

Adhesion Test

To ensure the successful application of the GCMC Tank Insulation Foam System, always perform an adhesion test with the GCMC primer to ensure that the tank substrate will accept the coatings.

Substrate Preparation

For optimum results, surfaces to receive the GCMC Tank Insulation Foam System should be clean and dry, free of dirt, oil, solvent, grease, loose particles, peeling coating and other foreign matter. Untreated ferrometallic substrates should be sandblasted in accordance with SSPC-SP6. Sandblasted surfaces should be primed immediately with an approved primer. Galvanized and stainless steel surfaces should be treated with an appropriate wash primer prior to application. Porous substrates such as wood and concrete may not require priming if surfaces are clean and dry with less than 10% moisture content.

Substrate Temperature

The GCMC Foam Roof Systems may be applied to surfaces with temperatures as low as 50° in many instances.

AMBIENT AIR TEMPERATURE

Winter	Regular	Summer
50-60°F	65-85°F	Above 90°F

General Coatings Manufacturing Corp. technical service personnel should be consulted in all cases where application conditions are marginal.

Spraying

GCMC tank insulation roof foam should be deposited in uniform passes ranging from 1/2" to 1 1/2". Pass thickness will vary as a function of substrate temperature, ambient air temperature, humidity, and machine output. Bond strength is best when the previous pass is still warm (above 70°F). GCMC tank insulation foam performs best when it is coated the same day of application, however it may be left exposed for up to 24 hours.

Climate Conditions

No spraying should be done when moisture is present in the form of rain, dew or relative humidity greater than 80%, or when there is wind in excess of 15 m.p.h. Exercise caution and due discretion when precipitation or winds are anticipated within 4 hours of intended application.

Protective Coating Barrier

Exercise caution and due discretion when precipitation or winds are anticipated within 4 hours of intended application. When applied to exterior weathering surfaces, GCMC tank insulation foam must be top coated with an approved elastomeric coating.



Your Authorized GCMC Representative



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