



TECHNICAL DATA SHEET

ULTRA-THANE 202 HL HIGH LIFT WALL FOAM

RIGID POLYURETHANE FOAM

PRODUCT DESCRIPTION

ULTRA-THANE 202 HL is a two component spray-in-place closed-cell, rigid, monolithic polyurethane foam insulation. This product can be applied in thicknesses up to 6 inches in one pass. All ULTRA-THANE 202 HL systems are blown with HFC-245fa and contains no ozone- depleting chemicals.

BUILDING AND FIRE CODES

ULTRA-THANE 202 HL used as insulation material on building interior applications must be protected by a 15-minute rated thermal barrier or other construction assembly specifically permit-ted by model building codes.

USES

COLD STORAGE: ULTRA-THANE 202 HL is the insulation of choice for maintaining the rigid climatic conditions of many cold storage buildings.

TANK INSULATION: ULTRA-THANE 202 HL is an excellent insulation for hot and cold storage vessels.

Fire Hazard Classifications*

SURFACE BURNING ASTM E-84/UL 723		FLAME SPREAD CLASSIFACATION	
Flame Spread	25	NFPA CLASS	A
Smoke	250	UBC CLASS	1

*These numerical flame spread ratings are not intended to reflect hazards presented by this or any other material under actual fire conditions.

Liquid Component Properties

PROPERTY	Component A	Component B
Color	Dark Brown	Amber/Brown
Viscosity 25°C (cps)	200 +/- 100	650 +/- 50
Specific Gravity 25°C	1.24	1.18-1.20
Mix ratio by volume (A/B)	50/50	50/50

Processing Characteristics

PROPERTY	72°F(HAND MIX)	SPRAYED*
	Regular	Regular
Cream Time	5 sec.	1-2 sec.
Rise Time	18 sec.	5-6 sec.
Tack Free	On Rise	On Rise

*Nominal 1" thickness sprayed through Graco Reactor E-30 proportioner with Fusion AP Gun, AR 4242 mixing chamber: preheat set at 120°F, hose heat set to maintain 120°F at the spray gun. Reaction times are influenced by mix efficiency of the spray gun, temperature of the components, ambient conditions and thickness of the foamed mass.

Nominal Cured Physical Properties

PROPERTY	ASTM TEST METHOD	DENSITY ³ 2.0
Sprayed-in-place Density	D-1622	2.2
R-Value initial (1-inch thickness)	C-518	6.7
Compressive Strength	C-1621	35 psi
Tensile Strength	D-1623	58 psi
Shear Strength	C-273	45 psi
Closed Cell Content	D-1940	93%

This information is intended only as a guide for design purposes. The values shown are the average values obtained from laboratory prepared samples and results may vary with application conditions, equipment and technician.

K-Factor varies depending on age and use conditions.

Typical density for "High Lift" wall foam is 2.2 pcf. For higher density, exterior foams, see [ULTRA-THANE 230 ROOF FOAM](#) data sheet.

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<u>Dimensional Stability Properties</u>				
<u>ASTM D-2126</u>				
DAYS	°F	°C	%R.H.	AV
28	-20	-29	DRY	N/C
28	158	70	100%	+5.0%
28	158	70	DRY	+0.5%

SHELFLIFE

Shelf life of [ULTRA-THANE 202](#) is 6 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.

FREIGHTCLASSIFICATION

Liquid Plastic Material -- NOIBN

CAUTION

The use of foamed plastic in interior applications on walls or ceilings may present an unreasonable fire hazard unless the foam is protected by an approved, fire-resistive thermal barrier which has a finish rating of not less than 15 minutes.

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Processing Guide

DESCRIPTION AND GENERAL USE

ULTRA-THANE 202 HL systems are light density spray polyurethane insulations designed to be fluid-applied to construction surfaces to effect a permanent, monolithic and dimensionally stable thermal insulation.

ULTRA-THANE 202 HL systems are a sophisticated plural component building product which should be applied only by trained and manufacturer-approved insulation experts familiar with the properties of this material.

ULTRA-THANE 202 HL systems are specifically designed for construction applications where the end use ambient temperature range will be maintained between -100°F and 225°F. When considering any other use for this product, consult **General Coatings Manufacturing Corp.** for specific application recommendations.

SUBSTRATE PREPARATION

For optimum results, surfaces to receive ULTRA-THANE 202 HL 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 the application of ULTRA-THANE 202 HL.

Porous substrates such as wood and concrete may not require priming if surfaces are clean and dry with less than 10% moisture content. **FOR BEST RESULTS ON SURFACES WHERE MOISTURE CONTENT CANNOT BE DETERMINED OR CONTROLLED, PRIMING IS RECOMMENDED.** Consult **General Coatings Manufacturing Corp.** for specific application requirements.

SUBSTRATE TEMPERATURE

ULTRA-THANE 202 HL systems may be applied to surfaces with temperatures as low as 45 deg F. in most instances. Please consult with General Coatings technical representatives for certain requirements.

AMBIENT AIR TEMPERATURE

Regular
Above 45°F

GENERAL COATINGS MANUFACTURING CORP. TECHNICAL SERVICE PERSONNEL SHOULD BE CONSULTED IN ALL CASES WHERE APPLICATION CONDITIONS ARE MARGINAL.

EQUIPMENT

Proportioning equipment shall be manufactured by PMC, Graco or other manufacturer specifically designed and built for the application of polyurethane foam. Mixing ratio by volume is 50 parts "A" to 50 parts "B". Equipment shall be heated airless type, capable of maintaining 120°F to 140°F mixed material at the spray gun. Optimum spraying temperature will vary as a function of substrate and ambient conditions.

SPRAYING

ULTRA-THANE 202 HL systems should be deposited in uniform passes ranging from 1/2" to 6". Pass thicknesses will vary as a function of substrate temperature, ambient air temperature and machine output.

ULTRA-THANE 202 HL systems bond best to themselves when the previous pass is still warm (above 70°F). ULTRA-THANE 202 HL performs best when coated the same day of application, however it may be left exposed for up to 24 hours. In the event that ULTRA-THANE 202 is exposed for a period greater than 24 hours, please contact **General Coatings Manufacturing Corp.** for recommendations.

CLIMATIC 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.

PROTECTIVE COATING

ULTRA-THANE 202 HL, when applied to exterior weathering surfaces, must be top coated with an approved elastomeric coating. All coatings shall be applied in accordance with **General Coatings Manufacturing Corp.** or other coating manufacturer's instructions.

SPECIAL NOTE

*Particular attention must be paid to coating selection in applications where a vapor drive may be present. Consult **General Coatings Manufacturing Corp.** technical service personnel for specific system recommendations.*

STORAGE

Both liquid components of ULTRA-THANE 202 HL systems 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 B component at increased temperatures or in direct sunlight for prolonged periods may cause a build up of pressure in the storage vessel. Use caution in opening containers of ULTRA-THANE 202 HL. Containers should be opened slowly to allow the release of any pressure buildup.

Safety, Health & Toxicity Data

A Safety Data Sheet (SDS) has been prepared on the **ULTRA-THANE 202 HL** systems. All personnel who will come in contact with the product should read and understand the SDS.

PROTECTIVE EQUIPMENT

Since the **ULTRA-THANE 202 HL** systems are atomized into a very fine particle distribution during spray application, it is essential that maximum effort is made to protect the spray mechanic and others near the workplace from undue exposure. Component "A" **ULTRA-THANE** systems are polymeric isocyanate and, as such, can be very sensitizing, particularly from the standpoint of **VAPOR INHALATION**. Some other ingredients may be sensitizing from the stand-point of **SKIN CONTACT OR EYE CONTACT**.

VAPOR INHALATION

The best form of protection against isocyanate or potentially sensitizing vapors in the workplace is a fresh air supply. Numerous manufacturers, including the 3M Company and MSA, make full face fresh air masks. For maximum protection, we recommend use of NIOSH/MSHA approved self-contained breathing apparatus with a full-face piece operated in a positive pressure mode. In well-ventilated application conditions, the use of Type C organic vapor cartridge respirators may be acceptable.

SKIN CONTACT

To prevent excessive skin contact with the sprayed product, the use of fabric overalls and fabric gloves is recommended.

EYE CONTACT

Wear a full face mask or OSHA-compliant protective goggles.

PROTECTION OF THE WORKPLACE

Overspray from **ULTRA-THANE 202 HL** systems can carry considerable distances and attention should be paid to the following:

1. Signs a minimum of 100 feet from the work area.
2. Cover all intake vents near the work area.
3. Minimize or exclude all personnel not directly involved with the spray application.
4. No welding, smoking or open flames.
5. Have CO₂ or other dry chemical fire extinguisher available at the jobsite.
6. Provide adequate ventilation.

FIRST AID CONSIDERATION

Vapor inhalation problems are characterized by coughing, shortening of breath and tightness in the chest. Anyone exhibiting these types of symptoms should be immediately removed from the workplace and administered oxygen or fresh air. If the condition is prolonged or extreme, **SUMMON EMERGENCY TRAINED MEDICAL ATTENTION IMMEDIATELY**.

Skin contact with liquid components can result in a rash or other irritation. Wash any affected skin area with clean water. Wipe residual liquid from the skin with a clean cloth, then wipe the affected area with a 30% solution of rubbing alcohol. Follow the alcohol wipe with repeated washings using soap and water. If a rash or other irritation develops, **SEE A PHYSICIAN**.

Eye contact with liquid or sprayed components can result in corneal burns or abrasions. Upon exposure, eyes should be flushed with water for an extensive period. **SUMMON EMERGENCY TRAINED MEDICAL ATTENTION IMMEDIATELY**.

*The information herein is believed to be reliable, but unknown risks may be present. **General Coatings Manufacturing Corp.** warrants only that the material shall be of merchantable quality; this warranty is in lieu of all other written or unwritten, expressed or implied warranties, and **General Coatings Manufacturing Corp.** expressly disclaims any warranty for a particular purpose, or freedom from patent infringement. Accordingly, Buyer assumes all risks whatsoever as to the use of these materials and Buyer's exclusive remedy as to any breach of warranty or negligence claim shall be limited to the purchase price of the materials. Failure to strictly adhere to recommended procedure shall relieve **General Coatings Manufacturing Corp.** of all liability with respect to the materials or the use thereof.*

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