ULTRA-THANE OCX

TWO COMPONENT
WATER BLOWN, LIGHT DENSITY, OPEN-CELL SPF

TECHNICAL DATA SHEET

FOR PROFESSIONAL CONTRACTOR USE ONLY

REV. 10/01/2018

ULTRA-THANE OCX is a two component, water blown (zero ozone depleting chemical) light density, open-cell spray polyurethane foam insulation that is designed to improve the performance of the building envelope for commercial, residential and industrial applications. When installed, expands, seals voids, gaps and crevices. Ideal fit to help fill cavities of any shape, providing an air barrier to reduce air leakage, and a higher R-value than other insulating materials, resulting in increased energy savings and comfort.

TECHNICAL DATA

PROPERTIES AS SPECIFIED	
Specific Gravity @ 77°F Side A Side B	 1.24 ± 0.1 1.2 ± 0.1
Viscosity (Brookfield cps) @ 77°F Side A Side B	 200 ± 30 cps 650 ± 200 cps
PROPERTIES AS CURED	
Core Density - ASTM D-1622	0.5 pcf ± 0.05
Tensile Strength - ASTM D-1623	3.91 psi
R-value @ 1" - ASTM C-518	3.9
R-value @ 3.5" - ASTM C-518	13.6
Air Permeance @ 3.5" ASTM E-2178 @ 50 Pa ASTM E-2178 @ 75 Pa ASTM E-2178 @ 100 Pa	 0.00098 0.00152 0.00205
Dimensional Stability - ASTM D-2126	< 0.03%
Flammability (Class 1) ASTM E-84 at 4"	15 Flame Spread 200 Smoke Development

BASIC USES:

- Walls
- Attics
- Unvented Attics
- Vented Attics
- Ceilings
- Crawl Spaces

LARGE SCALE FIRE TESTING

Ultra-Thane OCX has been tested in accordance to AC 377 Appendix X with 10 inches in wall cavities and 14 inches in ceiling cavities and COMPLIES with 4 min, 18 sec criteria.

Ultra-Thane OCX has been tested and approved in accordance to NFPA® 286 with 18 wet mils – 13 dry mils of DC 315© thermal barrier from International Fireproof Technology, Inc.

PROCESSING PARAMETERS:

Store materials between 65° to 85°F in a dry and well-ventilated area. Material in containers should be maintained at 75°F to 90°F while in use. Conditioned trailers or tanks may be necessary. Material temperature should be confirmed with a thermometer or an infrared gun.

PROCESSING EQUIPMENT

2:1 transfer pumps are recommended for material transfer from container to the proportioner. The plural component proportioner must be capable of supplying each component within ± 2% of the desired 1:1 mixing ratio by volume.

Hose heaters should be set to deliver 115°F to 140°F materials to the spray gun. These settings will ensure thorough mixing in the spray gun mix chamber in typical applications. Optimum hose pressure and temperature will vary with equipment type and condition, ambient and substrate conditions, and the specific application. Some equipment may require you to warm containers to achieve optimum material temperature. It is the responsibility of the applicator to properly interpret equipment technical literature, particularly information that relates to acceptable combinations of gun chamber size, proportioner output, and material pressures. The relationship between proper chamber size and the capacity of the proportion's pre-heater is critical.

To ensure optimum performance, a minimum pass of 1" is recommended with no limit pass thickness. All substrates must be dry at time of apply.

Equipment Settings:

Chemical Drum Temp.	Above 75°F
Pre-Heat: ISO (A)	115°F to 140°F
Pre-Heat: Resin (B)	115°F to 140°F
Hose Heat:	115°F to 140°F
Spray Pressure	1000 to 1400 psi (dynamic)

MIXING:

Ultra-Thane OCX® should be mixed well prior to application. Continue agitation throughout application process. Drum mixer needs to have aggressive agitation, minimum required is Graco® Expanding Blade Bung-Mounted Agitator shown below (part # 24C729).

If the drum temperature is < than 85°F, place a heat blanket on the drum and heat the material to 85°F - 95°F with agitation.

Ultra-Thane OCX® "Part B" side material must be thoroughly mixed 20 to 30 minutes prior to application.

General Coatings recommends the use of a Graco® Air-Driven Expanding Blade Bung-Mounted Agitator (Part Number: 24C729).

To properly drive the mixer, 22 scfm of air is required. Us-

ing less air volume may require extended mixing times.

A thorough high-speed mix is an essential step in high-quality foam production. UPC 500 OCX® must be continually agitated throughout the entire spraying process to avoid any separation of the "Part B" side material.

To speed up the initial mixing process, open the drum and use a hand-held drill with two-fold out four inch blades (shown below).

SHELF LIFE AND STORAGE:

Ultra-Thane OCX has a shelf life of approximately six months from the date of manufacture when stored in original, unopened containers at 50-80°F. As with all industrial chemicals this material should be stored in a covered, secure location and never in direct sunlight. Storage temperatures above the recommended range will shorten shelf life.

HEALTH AND SAFETY INFORMATION:

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling Ultra-Thane OCX foam forming system. Before working with this product, you must read and become familiar with the available information on its risks, proper use and handling. This cannot be over emphasized. Information is available in several forms, e.g. Safety Data Sheet (SDS).

In addition to reading and understanding the SDS, all contractors and applicators must use appropriate respiratory, skin and eye Personal Protective Equipment (PPE) when handling and processing polyurethane chemical systems.

Personnel should review the following document published by Spray Polyurethane Foam Alliance (SPFA®):

AX-171 Course 101-R Chapter 1: Health, Safety and Environmental Aspects of Spray Polyurethane Foam and Coverings and the following document is available from the Center for the Polyurethanes Industries (CPI): Model Respiratory Protection Program for Compliance with the Occupational Safety and Health Administration's Respiratory Protection Program Standard 29 C.F.R.§1910.134

As with all SPF systems improper application techniques should be avoided. Examples of improper application techniques include, but are not limited to excessive thickness of SPF, off-ratio material and spraying into or under rising SPF.

Potential results of improperly installed SPF include dangerously high reaction temperatures that may result in fire and offensive odors that may or may not dissipate. Improperly installed SPF must be removed and replaced with properly installed materials.

Large masses of SPF should be removed to an outside safe area, cut into smaller pieces and allowed to cool before discarding into any trash receptacle.

SPF insulation is combustible. High-intensity heat sources such as welding or cutting torches must not be used in contact with or near Ultra-Thane OCX or any polyurethane foam.

CAUTIONS AND RECOMMENDATIONS:

Ultra-Thane OCX is designed for an application rate of one inch minimum to 6 inches' maximum per pass. Once installed material has cooled it is possible to add additional applications to increase the overall installed thickness of SPF. This application procedure complies with the Spray Polyurethane Foam Alliance (SPFA®). Ultra-Thane OCX is not designed for use as an exterior roofing system.

Ultra-Thane OCX is designed for installation in most standard construction configurations using common materials such as wood and wood products, metal and concrete.

Foam plastic materials installed in walls or ceilings may present a fire hazard unless protected by an approved, fire- resistant thermal barrier with a finish rating of not less than 15 minutes as required by building codes. Rim joists/header areas, in accordance with the IRC® and IBC® may not require additional protection. Foam plastic must also be protected against ignition by code-approved materials in attics and crawl spaces. See relevant Building Codes for more information.

HANDLING INFORMATION:

Applicators should ensure the safety of the job-site and construction personnel by posting appropriate signs warning that all "hot work" such as welding, soldering, and cutting with torches should not take place until a thermal barrier or approved equivalent is installed over any exposed polyurethane foam.

VAPOR RETARDER:

Ultra-Thane OCX is intended for indoor applications, and is not a vapor retarder. It is vapor permeable and will allow for some diffusion of moisture through the insulation. The following considerations are needed:

(1) A vapor retarder needs to be considered in the design of the building envelope in cold climates, such as zones 4 and higher in the U.S., as defined in 2004 Supplement to the IRC®, Table N 1101.2; (2) A vapor retarder also needs to be considered where high interior humidity conditions exist. Refer to local codes and manufacturer's written specifications to ensure compliance.