THERMA - TITE® | 3004 2.5

PRODUCT DESCRIPTION

THERMA-TITE® 3004 2.5 is a closed-cell, spray-applied polyurethane roofing foam that forms a seamless, water-resistant barrier, effectively preventing air infiltration while offering superior insulation. The THERMA-TITE® 3004 2.5 roofing system is self-flashing and leak-resistant without the need for mechanical fasteners or seams. Additionally, it boasts a low global warming potential (GWP < 1) with an EPA-approved, zero-ozone-depleting blowing agent, making it an environmentally responsible choice.

THERMA-TITE® 3004 2.5 is a two-component system processed only with IPS A-Side (ISO), compatible with most common construction materials, and available in three reactivities matched to ambient conditions: F (50 - 75°F), R (65 - 90°F), and S (85 - 120°F). Nominal in-place density 2.4 - 2.6 pcf.

PRODUCT PERFORMANCE DATA

PROPERTY	TEST METHOD	VALUE
Core Density	ASTM D1622	2.4 - 2.6 pcf
K-Factor (aged)	ASTM C518 (calculated)	0.161 Btu·in/ft²·hr·°F
R-Value (aged)	ASTM C518	6.2 per inch
Compressive Strength	ASTM D1621	40 +/- 5% psi (minimum)
Tensile Strength	ASTM D1623	90 - 110 psi (minimum)
Shear Strength	ASTM C273	40 - 60 psi (minimum)
Dimensional Stability	ASTM D2126	+1.5% @ 158°F / 97% RH / 168 hrs
Closed-Cell Content	ASTM D6226	>90%
Water Vapor Permeability	ASTM E96	0.95 perm-inch; <1.0 perms @ 1" (calculated, Class II vapor retarder)
Flame Spread Index	ASTM E84 / UL 723	<75
Flame Spread Value	CAN/ULC-S102 (including S127)	<500
Mixing Ratio (volume:volume)		1:1
Code Compliance Standard	ICC 1100; ASTM C1029 Type III; ASTM D7425; UL 1256 / ULC S126	Compliant

PROCESSING PARAMETERS

PARAMETER	RECOMMENDED RANGE
Dynamic Fluid Pressure	1000 - 1300 psi spray pressure (proportioner set pressure 1250 - 1550 psi)
Mixing Ratio	1:1 by volume
Hose Heat	Cold conditions 120 - 135°F; warmer conditions 110 - 125°F
Preheat Temperature	"A" & "B" Components: cold conditions 120 - 135°F; warmer conditions 110 - 125°F
Storage Temperature	50 - 80°F
Ambient Range	F reactivity 50 - 75°F; R reactivity 65 - 90°F; S reactivity 85 - 120°F
Ambient Temp During Spray	
Moisture Content (Substrate)	<19%
Max Lift per Pass	1-1/2" maximum (1/2" minimum)

GENERAL PRODUCT INFO

ITEM	DESCRIPTION
Product Color	White
Packaging	55-gallon drum
Theoretical Yield	3,300 - 3,500 board feet per set

THERMAL RESISTANCE

THICKNESS (INCH)	R-VALUE
Per inch	6.2

PROCESSING GUIDELINES

PRECONDITIONING:

Warm material to a minimum of 70°F at least 24 hours prior to installation and maintain 70 - 75°F during the install. Cold material may thicken and cause cavitation.

MIXING:

Process only with IPS A-Side (ISO) at a 1:1 mixing ratio by volume.

PRESSURE SETTINGS:

Set proportioner pressure to 1250 - 1550 psi and maintain spray pressure between 1000 - 1300 psi.

TEMPERATURE SETTINGS:

Hose & preheater: 120 - 135°F in cold conditions; 110 - 125°F in warmer conditions (both A & B). Adjust in ± 3°F increments based on substrate, ambient temperature, and humidity.

RECOMMENDED APPLICATIONS

EXTERIOR ROOFING APPLICATIONS:

Spray-applied roofing insulation over roof decks and substrates of wood, wood-based products, plastics, metal, and concrete, in new construction and re-roofing.

NOT RECOMMENDED:

Not designed for use as an interior insulation system. Not for cold-storage structures such as coolers and freezers unless the structure was designed by a design professional for that use.

APPLICATION STEPS

Applied at 1/2" minimum to 1-1/2" maximum per pass.
Substrate temperature range: down to 50°F on wood using flash passes; down to 60°F on metal or concrete using a flash pass; upper limit
Once installed material has cooled, additional passes may be applied to increase total thickness.

1. Clean surfaces per "Substrate Preparation."
2. If required, apply primer and allow it to cure fully.
3. Flush the proportioner before switching materials.
4. Spray a mock-up or sample area before starting the full-scale project; test the pattern before spraying.
5. Allow each lift to cool before applying the next.
6. Regularly inspect foam appearance and adhesion.

LIQUID PROPERTIES @77°F

PROPERTY	A-SIDE (ISO)	B-SIDE (RESIN)
Specific Gravity	Refer to IPS A-Side (ISO) documentation	1.18 (at 70°F, ASTM D1638)
Viscosity	Refer to IPS A-Side (ISO) documentation	200 - 500 cps (at 70°F, Brookfield)

SUBSTRATE PREPARATION

WOOD

Ensure the substrate is dry and clean.
Moisture content must be below 19% before spraying.
Remove dust, oil, or debris.
Fill gaps with suitable backer rods or fillers.
Foam may be applied to wood substrates down to 50°F using cold-weather techniques such as flash passes.

STEEL & OTHER METALS

Verify adhesion and suitability through field testing.
Blasting or priming may be required depending on substrate condition.
Heat-sink substrates may be sprayed down to 60°F using a flash pass.

CONCRETE

Must be clean, cured (28 days or more), and free of dust or oil.
Fill voids or cracks before application.
Heat-sink substrates may be sprayed down to 60°F using a flash pass.

PREVIOUSLY APPLIED FOAM

Remove any old or incompatible foam or coatings.
Always test adhesion before full application.

WIRING & PLUMBING

Fully compatible with CPVC piping (Paschal Engineering Study for SPFA).
Safe with standard electrical wiring (NEMA Bulletin 95).

STORAGE & SHELF LIFE

Store between 50 and 80°F.
Shelf life from date of manufacture (original, unopened containers): F and R reactivities 5 months; S reactivity approximately 3 months.
Do not break the product seal during storage.
Store in a covered, secure location and never in direct sunlight. Storage above the recommended range shortens shelf life and may raise headspace pressure within packages.

HEALTH & SAFETY HANDLING

When spraying or handling THERMA-TITE® 3004 2.5 Resin and IPS A-Side (ISO), the following protective measures and equipment are recommended:

Protective Equipment

- Wear protective clothing chosen for the level of activity and exposure
- Use chemical-resistant gloves
- Wear a face shield or tightly fitting chemical safety goggles where a splashing hazard exists
- Wear a NIOSH-certified (or equivalent) organic vapor/particulate respirator as needed
- Always use appropriate respiratory, skin, and eye personal protective equipment (see SDS)

Exposure Precautions

- Avoid all contact with skin and eyes
- Do not ingest
- Do not inhale mists or vapors
- In the event of exposure, refer to the Safety Data Sheet (SDS) for first-aid procedures

Spill Response

In the event of a spill, contain and solidify the material and place it in suitable containers for disposal. Spilled material creates a high risk of slipping.

Disclaimer

The technical information provided herein is intended as general guidance only. Always consult the product label and Safety Data Sheet (SDS) before using this product.

HANDLING & SAFETY

- Provide local exhaust ventilation to control vapors and mists.
- Always wear appropriate respiratory, skin, and eye protection when handling and processing polyurethane chemical systems.
- Avoid contact with eyes and skin; avoid inhaling mist or vapor.
- Dispose of materials per local regulations.
- For full details, consult the Safety Data Sheet (SDS).
- In emergencies, call CHEMTREC: 1-800-424-9300

THERMAL BARRIERS

Exterior roof assembly fire classifications depend on deck type (non-combustible or combustible), foam thickness, roof incline, and the surfacing applied over the foam (acrylic or silicone coating, or granules). Assembly listings: [VERIFY: listing status]. Contact IPS Technical Services for approved roof assemblies.

ADHESION

Substrates must be clean, dry, and free of grease, oil, dirt, and surface moisture. The moisture content of porous materials must be below 19% prior to foam application. Contact IPS Technical Services for guidance on material compatibility, surface preparation techniques, and adhesion to common construction substrates. Spray a mock-up or sample area before starting the full-scale project to see how all materials install and to evaluate their properties.

It is the responsibility of the builder or designer to determine the suitability of this material for each specific project. The installer must verify product compatibility at the time of application, as variations in weather, materials, and site conditions can affect product performance.

PRECAUTIONS

Spray polyurethane foam is combustible. High-intensity heat sources such as welding or cutting torches must not be used in contact with or near the foam. Do not use in areas with a maximum service temperature above 180°F (82°C).

Improper application, including excessive pass thickness, off-ratio material, and spraying into or under rising foam, can produce dangerously high reaction temperatures that may result in fire and in odors that may not dissipate. Improperly installed foam must be removed and replaced with properly installed material. Remove large masses to a safe outdoor area, cut them into smaller pieces, and allow them to cool before disposal.

MAINTENANCE

Regular equipment cleaning ensures consistent performance. Follow the equipment manufacturer's guidelines for long-term maintenance and storage. Report any product or equipment issues to IPS Technical Support.

TECHNICAL SUPPORT

For application questions, troubleshooting, or training:
IPS Technical Support: 812.776.6727
Website: SPRAYIPS.COM

IPS INNOVATIVE POLYMER SYSTEMS

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