

Product Description

Lockwell SPF 32 is a two-component, polyurethane spray foam that is available in densities from 27-40 kg per m³. Low viscosities and 1:1 ratio make it extremely easy to apply using standard, high-pressure, high temperature application equipment.

Application Area

Lockwell SPF32 is used for the thermal insulation of building walls, roofs, tanks, vessels and pipes. In roofing systems uses, Lockwell SPF32 meets the requirements of UL 790 (ASTM E-108 in Class A and Class B configurations on combustible and non-combustible decks when covered with approved coatings. For additional information, on UL ratings, please contact Lockwell technical representative. Note a minimum of 40 kg per m³ density foam is recommended for roofing applications.

Please consult with Lockwell for other foam densities, applications and high temperature fire rated foams.

Features

- Low viscosity
- Fast cure
- Easy to apply
- Reduces down time

Technical Data

Solids by volume	100%
Volatile organic compounds	0 gm/ lit
Consumption for 40 kg density	2 kg @ 50 mm thickness
Specific gravity (kg/ litre)	A-1.24, B-1.17
Viscosity at 25°C in cps (ASTM D 412)	A-200-300, B-300-500
Shelf life at 25°C	6 to 8 Months
Dimensional stability(28 days at 71°C, 100% ambient RH, volume change)	< 8%
Closed cell content (ASTM D-1940)	90-95%
K Factor Initial / Aged (ASTM C-177)	0.023 W/m-k
Permeance ASTM E 96	1.82
Water absorption -24 hours (ASTM D 471)	< 0.5%
Tear strength (Die C ASTM 624) (KN/m)	75 to 80
Impact Resistance	> 165 kgs
Fire Rating	Class 2
Flash point pensky martin	> 93°C
Service temperature (dry)	-30°C to 120°C

Processing Properties

Mix Ratio V/V	1: 1
Rise time	2 to 5 seconds
Cream time	2 to 5 seconds
Tack free time (DFT & Temperature dependent)	8 to 15 seconds
Initial cure time	4 hours

Application Guideline

Surface Preparation

Surfaces to receive Lockwell SPF 32 must be clean and dry, free of dirt, oil, solvent, grease, loose particulates, frost, ice and other foreign matter which could inhibit adhesion. Moisture content and surface conditions of substrate are critical to adhesion of foam and need to be verified by installing contractor in small test areas before proceeding with full application. The surface should be dry, smooth, and structurally sound.

All primers must be applied per Lockwell published technical data sheets and product labels. Plywood, OSB, and lumber shall not have greater than 15% moisture content. Generally, a primer is not required for these surfaces. On substrates where the moisture content cannot be determined or exceeds 15%, a suitable primer is recommended. Adhesion spray tests may be performed with insulating foam and the interface line checked upon cure for good cell structure and adhesion. Warming of these surfaces during winter conditions for increase adhesion is recommended. CMU, structural and poured-in-place concrete must have a minimum 28 days cure and moisture content below 15%.

It is recommended to abrasive blast all steel surfaces to SA 2.5 with a good anchor profile. Priming is optional and mandatory in certain cases. Consult Lockwell for primer recommendations.

Painted steel, galvanized steel, and aluminium panels: check surfaces for mill oil used in the manufacturing process and moisture condensate. All oil must be removed and the surface clean and dry before priming. Washed and dry painted steel panels may not require priming. All aluminium and galvanized panels must be primed using Lockwell recommended primers. (Consult Lockwell for primers)

Application

This material must be applied utilizing high-pressure, heated plural component spray proportioning equipment, such as those manufactured by Graco. The proportioning equipment utilized must be capable of supplying correct pressure and heat for the appropriate hose length on a consistent basis. The proportioning equipment shall be capable for heating, mixing, and spray application of polyurethane foam and be able to maintain 1:1 metering with a + 2% variance and adequate main heating capacity to deliver heated and pressurized

materials up to 70°C. Heated hose must be able to maintain pre-set temperatures for the full length of the hose.

Minimum 2:1 ratio feeder pumps are required to supply stored materials through minimum 12 mm supply hoses. Pressurized and heated tanks systems may be used if sized appropriately to provide adequate flow at maximum operating capacity and temperatures. Spray guns such as GX-7, GAP Pro Gun and Fusion gun, are well suited for applications where 10 litres/min or higher volume is desired.

These guns may be fitted with smaller output tips (6-litres/min.) to perform detail work on pipes, curbs, platforms and parapets etc. Priming is not required for Lockwell SPF 32 for most some substrates. Please review your specific project with Lockwell technicians. Lockwell SPF32 should be top coated with suitable finishes. The recommended processing temperatures 'Part A' Main 40-50°C, 'Part B' Main 40-50°C, Hose 40-50°C are critical settings to achieve viscosity to allow balanced pressure during spraying. Balanced chemical output pressures are important to produce a good mix. Foam output pressures greater than 14 bar (200 psi) differential indicate either improper chemical temperatures, or worn gun/packing parts. A critical requirement for good spray mixing requires appropriate tip/module sizing to the proportioner and adequate heating capacity.

Equipment Clean Up

Cured product may be disposed of without any restrictions. The uncured Isocyanate and resin portions should be mixed together and disposed of in a normal manner. "drip-free" containers should be disposed of according to local environmental laws and ordinances.

Mixing

Lockwell SPF 32 should not be diluted under any circumstance. Use appropriate solvent for purge line and flushing of equipment and if spraying stops for a period of time in excess of the pot life of the material. Thoroughly mix part B resin material with air driven power equipment until a homogeneous mixture and color is obtained.

Coverage

Lockwell SPF 32 may be applied at any rate to achieve the desired thickness. The foam densities, thickness have a linear relation to consumption. Theoretical spread rate for a 40 Kg density at 50 mm thickness is 2 kg without any loss factor.

LOCKWELL SPF 32

Storage and Handling Precautions

Six to eight months in factory delivered, unopened drums. Keep away from extreme heat, freezing, and moisture. The use of drum heaters is encouraged to reduce material viscosity at low temperatures. Do not open until ready to use, and store in a sealed container after opening. Adding a nitrogen blanket is strongly recommended for use on the 'A' component for storage after opening.

Packaging

380 liter sets shipped in metal drums of 190 liters each of side A and side B or 38 liter kits shipped in plastic pails of 19 liters of side A and 19 liters of side B.

Chemical Resistance

Consult with Lockwell for more details on product and chemical resistance. Please consult with Lockwell for suitability of product application in chemical contact.

General Information

This product contains Isocyanate and curatives. For safe handling information on this product, please refer to the Material Safety Data Sheet (MSDS). This product contains Isocyanate and curatives.

Additional Information – Disclaimer

The information provided herein, especially recommendations for the usage and the application of our products, is based upon our knowledge and experience. Due to different materials and equipment used, as well as varying working conditions and environments beyond our control we strictly recommend carrying out intensive trials to test the suitability of our products with regard to the required processes and applications. This data sheet is provided free of charge and we do not accept any liability with regard to the above information or with regard to any verbal recommendation, except for cases where we are liable of gross negligence or false intention.