Technical Data Sheet (TDS)
FJS-41
Flexible Polyurea Foam

FJS 41 is an aromatic foaming elastomer polyurea which can be spray applied using high pressure 2K heated machinery or low-pressure equipment such as a cartridge gun with air atomization.

FJS 41 is a tough durable expanding spray foam material which produces a resilient flexible skin with excellent mechanical and thermally efficient structures. It creates a unitized membrane which bridges gaps on rough terrain, filling voids and skinning non-uniform non-continuous adjoining surfaces, seals around openings and covers surface obstructions. This durable elastic toughness is primarily used in demanding environments such as protecting industrial and commercial roofing from harsh environments, industrial structural surfaces, undercoating/sound protection, waterproofing and underwater containment. Much of these tough skin applications are also utilized within military, aerospace and marine industries. The foamed skin produces a non-hydroscopic closed cell structure which may be formulated to 3 different densities to accommodate for the wide range of versatile applications.

FJS 41 can be sprayed at 2/1, 3/1 and 4/1 volumetric expansions ratio.
FJS 41 may be formulated in both open and closed cell formulas.

Gel time is 15 - 30 sec with a 24-hour full cure. It retains a wide functional temperature range and flexibility from -29°C (-20°F) to 82°C (180°F).

There are zero VOC's in FJS 41, foaming is done using water as the blowing agent. For outside applications a UV stable top coat should be applied such as SILICOAT 750, MG1K, MG-AP Silicoat or fast set CS. Different colors are available.

Please contact us for any questions or to provide direction with specific selection of a material system, questionable target surfaces, operational procedures, material pumping/spray machines, spray/pour guns, safety protection gear and clean-up kits. Please refer to MSDS for material safety information.

Health and Safety

Read the Safety Data Sheet (SDS) and container labels for detailed health and safety information. This product is intended for industrial use by properly trained professional applicators only.

Physical Properties

DENSITY (PCF)		36	25	15
Expansions ratio		2/1	3/1	4/1
Tensile Strength (psi)	ASTM D1623	900 psi	400 psi	200 psi
Elongation	ASTM D3574	250%	250%	250%
Tear Resistance	ASTM D624	250 lb/lin.in	250 lb/lin.in	250 lb/lin.in
Water Absorption (closed cell)	ASTM D194	<2% in 24 hrs	<2% in 24 hrs	<2% in 24 hrs

**values relative to foam density*

Adhesion Results of Typical Substrates per ASTM D-4541 Elcometer

Concrete – clean	> 200 psi	Concrete cohesive failure Excellent substrate bonding
Steel – clean	> 200 psi	Excellent substrate bonding
Wood – dry/dust free	> 200 psi	Wood failure Excellent substrate bonding

Technical Application Data

Application substrates must be clean/dry from contaminates; i.e. free of dirt, loose rust, paint, moisture, oils, etc. Application substrate temperature ranges from 4.4°C (40°F) to 37.7°C (100°F) however ideal conditions are between 21°C (70°F) to 37.7°C (100°F). Functional ambient operation temperature ranges from -29°C (-20°F) to 82°C (180°F). Expansion may depend on substrate temperature, the warmer the substrate the better expansion rate.

FJS 41 requires a two-component reaction dispensing machine or hand-held A/B cartridge dispensing gun for application. Cure times for spray **FJS 41** range from 15-30s. During application, to obtain heavier build thickness, it is important to apply a heavy one-pass delivery. Do not dispense multi-passes as pin-holing will occur. Volumetric expansion of **FJS 41** provides up to X 4 original volume depending on foam density.

FJS 41 yield excellent adhesion characteristics and is water repellent. **FJS 41** retain a high resiliency and impact to foot traffic and do not exhibit a compression set under temporary loads.

Coverage

Spray coverage at 16 mils (400 microns) is 9 sqm (100 sq.ft) / mixed gal. FJS 41 can be color-tinted if desired.

Substrate Surface Preparation

The surface must be clean, dry, stable and without loose areas or parts. All residues of fats, dust, dirt, salts or any other unrelated materials should be fully removed in order to ensure the adhesion of the coating to the surface. Leveled, stable, pollutant free and free from the loose parts is a guaranteed basis for the long lifespan of the system and achievement of the result.

Casting of new **concrete** can be coated 4 weeks (28 days in a temperature of 25°C) following the casting and with humidity content that does not exceed 4% in a 2.5cm depth under the surface. Concrete must have a compressive strength of at least 30Mpa; in case this requirement does not met, other recommended solutions for reinforcing the infrastructure should be applied.
The preparation of the surface should follow the requirements in the SSPC-SP13 standard in order to get a flat concrete surface that is dry, pollutant free, free from cement water loose parts and dust, with mechanical strength and upper level that are sufficiently porous and enable proper absorption of the coating. Remove completely pattern oil, curing materials, salts, efflorescence, cement water or any other materials using sandblasting, shot-blasting, mechanical milling, diamond polish or acidic etching.

Metal must be clean, free of contaminates and dust prior to primer / coating application. Metals should be prepared with a sandblasting, shot blast or machine sanding depending on the severity of the surface condition. Spraying aggregates using compressed air (it is recommended to manually remove peeling layers of paint, rust peels and welding residues using manual or pneumatic scrapers before spraying) to get a surface level in a cleaning level so SA 2.5 (in accordance with the standard SIS 055900) in order to remove rust, loose parts, old paint, fats etc. from at least 95% of the area (in accordance with the standard SSPC-SP10). Perform dust cleaning using air pressure (fat and humidity free) or using a vacuum cleaner. In cases when aggregate spraying cannot be performed use mechanical or manual tools for careful cleaning using a disc, steel brush, sandpaper and scraper to remove mill scales, rust, layers of loose paint and pollutants up to a cleaning level of ST-3 in accordance with the standards SSPC-SP3, SSPC-SP11.

Call or e-mail our Tech Support Group for assistance in application and preparation.

It is always best to perform a test within a small section of the application area prior to full scale engagement.

Warranty

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