



MwFoam-SP221

Water-Blown Closed-Cell Spray Polyurethane System

B-component blended polyol for high-density closed-cell spray insulation foam.

Product Introduction

MwFoam-SP221 is a flame-retardant blended polyol using water as the blowing agent. The supplied B-component contains formulated polyether and/or polyester polyols, catalysts, blowing agent and functional additives. When mixed with an approved isocyanate component, it forms rigid polyurethane foam with thermal insulation, water resistance and fire-retardant performance.

Product Features

- Water used as the blowing agent.
- High-density rigid closed-cell spray foam profile.
- Source-reported apparent density of at least 45 kg/m3.
- Source-reported compressive strength of at least 160 kPa.
- B2 fire-retardant classification reported to DIN 4102-1:1998.

Product Specifications

Item	Specification
Product code	MwFoam-SP221
System	Closed-cell spray PU foam
Supplied component	Blended polyol (B-component)
Blowing agent	Water
Free-rise density	32-36 kg/m3 (source)
Applied density	>= 45 kg/m3 (source)

Application Areas

- On-site roof and wall spray insulation.
- Industrial buildings and metal-roof systems.
- High-density thermal-insulation layers.
- Projects requiring a water-blown rigid spray system, subject to technical validation.

MwFoam-SP221 is a water-blown closed-cell spray polyurethane system. Source free-rise density: 32-36 kg/m3; applied density: at least 45 kg/m3. Technical values are retained from the supplied source TDS and require current formulation and batch verification.



Technical Data

Property	Unit / Condition	Typical Value
Appearance	-	Light yellow transparent viscous liquid
Viscosity	mPa.s at 25 C	300-600
Specific gravity	g/mL at 20 C	1.05-1.15
Blowing agent	-	Water
Packaging	-	220 kg steel drum

Reaction Properties

Manual-mix reference temperature: 10-15 C. Actual values vary with processing conditions.

Parameter	Typical Value
Mixing time	3 s
Cream time	3-5 s
Gel time	9-14 s
Free-rise density	32-36 kg/m3

Foam Performance

Parameter / Test	Typical Value
Apparent density ASTM D1622-08	>= 45 kg/m3
Thermal conductivity ASTM C518-10	<= 0.035 W/(m.K)
Compressive strength ASTM D1621-10	>= 160 kPa
Tensile strength ISO 1926:2009	>= 120 kPa
Water absorption ASTM C209-12	<= 1%
Dimensional stability, 48 h ASTM D2126-09	80 C <= 2%; -30 C <= 1%
Fire classification DIN 4102-1:1998	B2

The values above are typical source-TDS values, not sales specifications. Confirm the current batch-specific TDS, SDS, COA, fire-test evidence and processing window before project use.

Processing Guidance

- Condition components and spray equipment within the approved processing window.
- Ensure the substrate is sound, clean and dry; protect adjacent areas from spray mist.
- Use suitable plural-component spray equipment at the formulation-approved ratio.
- Complete an on-site trial before full application.
- Apply in controlled passes and inspect density, continuity and adhesion after curing.

Site Conditions & Safety

- Recommended ambient temperature: 10-40 C.
- Wind speed should not exceed 5 m/s and relative humidity should be below 80%.
- Do not spray in rain; apply approved controls below 10 C.
- Keep containers sealed and protect from moisture, sunlight and rain.
- Use protective clothing, gloves and eye protection; follow the current SDS.

Technical Support

For product selection and project evaluation, contact the MENGWEI technical team.
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