



Technical Data Sheet

BOVIA 279 II



Product Description: BOVIA 279 II is a medium density gypsum based cementitious fireproofing material to provide fire resistance for structure steel elements. BOVIA 279 II provides excellent insulation barrier to Cellulosic Fire, ISO 834 firecurve. It is tested and UL Classified according to the requirement of UL 263.

Intended Uses: It is designed to provide fire protection to structural steel beam, columns, bulkheads, underdecks and risers in industrial, petrochemical, oil and gas, offshore and refining industries with excellent durability.

Performance Data:

Parameters	Test Method	Test Results
Finish	-	Textured
Fire Rating	UL 263	Up to 4 hours
Density	ASTM E 605	432 kg/m ³
Durometer Hardness (Shore D)	ASTM D 2240	14
Surface Burning	ASTM E 84/UL 723 CAN/ULC-S102)	Flame: 0 Smoke: 0
Combustibility	ASTM E 136	Non-Combustible
Compressive Strength	ASTM E 761	38 psi (262 kPa)
Bond Impact	ASTM E 760	Pass
Thermal Conductivity	ASTM C 518	0.095 W/mk
Fungal Resistance	ASTM G 21	0/None

Color

Brownish Grey



Finish

Textured

Dry Film Thickness (DFT)

The thickness of coating can be estimated by FEUKEM Technical Team based on the profile of sections & fire rating requirement (1h, 2h, 3h,4h).

In one pass, maximum recommended DFT is 11 mm-18 mm.

Coverage

6.48 kg/sqm at 15 mm DFT, coverage can be better estimated based on required coating DFT for specific fire rating (1 h, 2h, 3 h,4h). FEUKEM Technical Team shall estimate the coverage sequel as project requirement.

Surface Preparation

The surfaces to be coated shall be clean, undamaged and dry.

The surfaces shall be free from mud, oil and grease.

In case of oil and grease on substrate, the suitable solvent can be used for cleaning.

Structures with primer coat

BOVIA 279 II is recommended to be used on anticorrosive coated surface, before application of BOVIA 279 II the primed surface should be thoroughly cleaned. The primer must be applied to surface within 1 hours of surface Blasting.

System Compatibility

Before application of BOVIA 279 II, the applied primer must be tested to confirm its alkali properties.

Alkali primer, especially alkyd-based primer should be avoided to be used with BOVIA 279 II.

Based on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product.



Compatible Products

Compatible with FEUPRIME, FEUPRO & FEUCOSHIELD Series of FEUKEM Coatings.

The Compatibility of BOVIA 279 II can be checked with other products as well.

Note: To ensure fire performance & better results, primers and topcoats must be compatible with BOVIA 279 II, the uses of primer and topcoat must be with the consultation of FEUKEM Technical Team.

Application Conditions

BOVIA 279 II is recommended for application and use on dry protected substrate only.

If base coat is allowed to get wet, it is likely to be damaged – blistering and wrinkling may occur.

BOVIA 279 II should only be applied when the air and substrate temperature are above 5 °C and below 55°C Relative humidity should be below 85% for successful application. Steel surface temperature should be a minimum of 3 °C above the dew point, Ensure the substrate is dry and free from contact with rain or condensation during the application and drying of BOVIA 279 II.

Please note that rain may cause surface patterning if the material has not formed a skin. Heavy rain or water running over the surface can damage recently applied (6 - 8 hours) coating and hence it should be protected if this is a potential risk.

Density

Target dry density is 432 kg/m³.

Target wet density required to achieve final dry density is 750-850 kg/m³.

Note: To know the procedure to calculate the wet & dry density at site, contact FEUKEM technical team.



Drying & Curing Time

Temperature	Dry to overcoat
10 °C	4 hours
25 °C	2 hours
40 °C	1 hours

All drying times have been measured at a wet film thickness of 25 µm under controlled temperature, and relative humidity below 80 %, wind speed 6 km/hr and pressure 1011 hpa.

Fresh BOVIA 279 II must be protected from rain or running water for 24 hours at 25°C. In low humidity, high temperature, direct sun or wind, the BOVIA 279 II surface should be kept damp for at least 12 hours by applying a water mist or wrapping in plastic sheets to reduce rapid water loss.

Mixing

Mixer: Use a heavy-duty mortar mixer rotating at 40-50 rpm with rubber tipped blades that will scrape the sides and bottom of the mixer.

Mixing: Add 20-27 liters water to a mortar mixer with rubber tipped blades. With mixer running slowly, add powder and mix for 2 minutes until a homogeneous mortar-like consistency is achieved.

Pot Life: 2 hours at 25°C and less at higher temperatures. Pot life ends when the material thickens and becomes unusable. Do not re-temper material.

Application Advise

The following instructions are for on-site application only. Please refer below recommendations for better fire protection system:

- The substrate shall be cleaned, free from dust, oil and particles.
- BOVIA 279 II shall be applied by spray machine for better finish.
- The curing time shall be provided as recommended.
- Product must be dampened with water before application of additional coats.



- Site and weather conditions are within specification.
- BOVIA 279 II does not have anticorrosive property, in case of adverse environment conditions,
Compatible primers & top coats are recommended.
- BOVIA 279 II has been stored correctly.
- BOVIA 279 II shall be applied up to a maximum wet film thickness (WFT) of 16-18 mm in thick spray.
- coats comprising of several quick passes.
- Application instructions have been read prior to commencement of work.
- The wet density must be checked to ensure the targeted dry density.
- Ensure different base coats are not applied on the same surface.
- Equipment should be clean and free from contaminants or dried material. Wet film gauges are available.

Application Machineries & Equipment's

Hose Pipe – 25 mm I.D. hose with 300 psi minimum bursting pressure. For lengths over 15 m use 38 mm I.D. hose. Do not reduce hose diameter by more than 6.4 mm per 7.6 m unless a tapered conical reducer equipped with swivel fitting is used.

Nozzle Size: 9.53 mm - 12.70 mm

Pump: 8 hp machine

Compressor: Minimum 130 psi with 22 cfm

Packaging

20 kg bags



Safety Precautions

This product is for professional use only. The applicators and operators shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to FEUKEM technical documentation.

Applicators and operators shall use appropriate personal protection equipment when using this product. This guideline is given based on the current knowledge of the product.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

For further details, please refer BOVIA 279 II MSDC.

Storage

Keep the containers in a dry, cool, well-ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

When storing and transporting, the temperature must be between 3 °C and 40 °C. Outside of this, it is advisable to use climatic control. Protect from freezing at all times during storage and transport.

Shelf Life

12 months from date of manufacturing, subjected it is stored as per FEUKEM recommendations.

Disclaimer

All information is given in good faith on the result gained from experience and tests. However, all recommendations or suggestions are made without guarantee since supplier does not have any control on site conditions and its uses. Color variation may be possible on the surface.
