Product Description: FEUKEM FRC is a water-based fire-retardant coating formulated with special binder, minerals & fillers to provide fire resistance to GI/MS Ducts. FEUKEM FRC provides excellent insulation & fire barrier to Cellulosic Fire (ISO 834 fire curve). It is tested and conforms the requirement of BS 476 Part 20-24 to analyze stability, integrity & insulation performance.

FEUKEM FRC meets the requirement of VOC emissions and content requirement to contribute LEEDv4 EQ credit, hence recommended to use in Green Building Projects.

Intended Uses: It is designed to provide fire protection to GI/MS Ducts in commercial and industrial projects with better aesthetic appeal.

Technical Specification:

Parameters	Test Method
Fire Rating (Stability, Integrity & Insulation)	BS 476 Part 24
Fire Performance (Surface Performance)	Tested from National Test House
	BS 476 Part 6&7
Viscosity @ 29.6 Deg Cel, Torque – 53.2%Spindle Speed – 1.5 rpm Spindle - 04	ASTM D 565
Specific Gravity	ASTM D 1475
Volume Solid	65-70 %
Finish	Matt
Pull off Strength	ASTM D 4145
Impact Resistance	ASTM D 1654
Corrosion Resistance	ASTM D 1654
Artificial Weathering	ASTM G 154
VOC	ASTM D 2369

Color

Off White

Dry Film Thickness (DFT)

600 – 700 micron

Coverage

1.2 kg/sqm at 700-micron DFT. 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.

MS – Mild Steel Ducts

FEUKEM FRC is recommended to be used on MS – Mild Steel Ducts only after the application of Primer on MS Duct surface, before application of FEUKEM FRC the primed surface should be thoroughly cleaned.

Note: Primer Treatment is not required in case of GI Ducts.

System Compatibility

FEUKEM FRC is compatible with Epoxy, Red Oxide and other Zinc rich primers.

Care must be taken to provide recommended timings for the complete dry of previous coat for nextcoat.

Application Conditions

FEUKEM FRC 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.

FEUKEM FRC should only be applied when the air and substate 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 FEUKEM FRC.

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.

Drying & Curing Time

Temperature	Touch dry	Hard dry	Dry to overcoat
10 °C	4 hours	12 hours	12 hours
25 °C	2 hours	6 hours	6 hours
40 °C	1 hours	3.5 hours	3.5 hours

All drying times have been measured at a wet film thickness of 900 µm under controlled temperature and relative humidity below 80 %, wind speed 6 km/hr and pressure 1011 hpa.

Mixing

FEUKEM FRC is supplied ready for use but should be thoroughly mechanically stirred prior to use or contact to our technical team. It is recommended to use hand stirrer to get homogenous mixing.

Note: If material is more viscous to apply, water can be added in controlled form.

Application Advise

The following instructions are for on-site application only. For off-site application, refer to our technical team toensure following:

All damage to the base & top coat should be repaired & re-primed.

Site and weather conditions are within specification.

FEUKEM FRChas been stored correctly.

Surface is clean, dry, and free from contamination.

Correct Brush/Roller/spray equipment is available, if appropriate.

Application instructions have been read prior to commencement of work.

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.

Airless Spraying Application

FEUKEM FRC shall be applied up to a maximum wet film thickness (WFT) of 500-700 micron in thick spray coats comprising of several quick passes.

Specification of Airless Spray Equipment's

Ratio: 63:1

Output per minute (Lts) free flow: 9

Air inlet pressure max (Kg/cm2): 6/87 psi

Output fluid pressure max (Kg/cm2): 378/5481 psi

Fluid inlet size: 1 ¼" BSP

Fluid outlet size: 3/8" BSP

Air inlet: ½" BSP

Specification of Compressor

(1 Gun Connected with Airless)

Minimum Pressure – 140 psi

Power – 5 HP

Tank Size – 225 lts tank

CFM – 17.5

Phase – 3 Phase AC, 50 Hz

Specification of Compressor

(2 Gun Connected with Airless)

Minimum Pressure – 200 psi

Power – 8-10 HP

Tank Size – 400 lts tank

CFM – 30

Phase – 3 Phase AC, 50 Hz

Note: The Power cable used for connection shall be 2.5 mm, Copper or recommended by compressor manufacturer.

Compressor Application

For compressor application use a "move on" technique to avoid heavy accumulation marking.

The mouth of the nozzle (Spray Gun) should be adjusted as per viscosity of material.

The Pressure of compressor shall be set to 10-12 kg/cm2.

The Spray Gun should be "move" continuously throughout the surface of substrate, care must be taken to avoid the accumulation of paint at one point.

The Spray Gun should be moved freely in uniform direction to get uniform thickness.

Maximum wet film in a thick coat when applied using Spray Gun shall be 250-300 Microns.
During application, measure the wet film thickness frequently (after drying) with the WFT gauge provided to ensure the correct thickness is being applied.

To use the gauge, insert the teeth into the wet base coat. The last tooth to be coated indicates the wet film thickness achieved.

In the event of over or under applications, adjustments to the loading rates of subsequent coats will be required.

Nozzle Size

Nozzle Tip size shall be 0.4 to 0.5 mm for either Airless Spray or Compressor application method.

Brush/Roller Application

Recommended for small areas and repairs, multiple coats will be necessary to achieve intended thickness. 300–400-micron DFT can be achieved in single coat.

Dry Time

Drying of **FEUKEM FRC** is dependent upon several factors as follow:

- Temperature
- Air movement
- Humidity
- Method of application
- Thickness of coating

High humidity and low air movement or low substrate temperatures can result in condensation on the metallic surface causing prolonged drying times and possibly poor base coat adhesion.

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 FEUKEM FRC MSDC.

Packaging

25 Kg Plastic Pale

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.

Color Variation

When applicable, products primarily meant for use as primer or antifouling may have slight color variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering. Color and gloss retention on topcoats/finish coats may vary depending on type of color, exposure environment such as temperature, UV intensity etc., and application quality.

Disclaimer

All information is given in good faith on the result gained from experience and test. However, all recommendation 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 surface.