



Technical Data

Fusion Bonded Epoxy Coating

DESCRIPTION

Fusion Bonded Epoxy (FBE) is a thermosetting barrier coating and is formulated to satisfy the utmost requirements for corrosion protection and long term adhesion. The epoxy is applied to internal and external surfaces of preheated steel, with or without primer as a dry powder which melts and cures to form a continuous insulative corrosion barrier. This bonding process provides excellent adhesion and coverage on pipe, fittings, valves, couplers, pumps etc., exposed to corrosive soils, hydrocarbons, harsh chemicals and sea water.

APPLICATIONS

FBE is particularly suited to protecting metallic components exposed to corrosive chemicals, sea water, Sour Gas / Crude, Brine, Wasia water, potable water, etc. Typical applications have included protection of pipes, valves, fittings, chemical vessels, etc. FBE has excellent adhesion and toughness, whilst resisting soil stresses and backfill compaction. It is used extensively in the Construction, Chemical Industries, Refineries, Gas Processing Plants, Pipelines, Water Treatment Plants, etc.

To be fully effective it is crucial that FBE is only applied over a previously pretreated substrate, in order to ensure total adhesion. FBE coatings are used in conjunction with Cathodic protection systems to reduce cost and improve efficiency. FBE resists cathodic disbondment and has a long-term performance history in the water, sewage and other service environments. It is approved for coating Drinking Water System Components.



PRODUCT SPECIFICATIONS

Gloss	70 – 90
Generic Type	Thermosetting epoxy powder
Dry Film Thickness	Nominal 625 microns
Adhesion (Lap Shear) (ASTM D 1002)	433 Kg / cm²
Adhesion (Tested as per Saudi Aramco 09-SAMSS-091)	Pass
Buchholz Hardness (DIN 53153 / ISO 2815)	80
Shore Hardness	80 shore D
Abrasion Resistance (ASTM D 1044, 1000g load 3000 cycles, CS-17 wheels)	Less than 0.200g weight loss
Impact resistance (ASTM G14 - modified)	160 in-lbs
Dielectric Strength ASTM D149-95a	1306 volts / mil
Chemical resistance	Very good (Contact S3C's technical department for further details).
Water Immersion (ASTM D-870, distilled water)	3000 hours No blistering or loss of adhesion

Note:

- (1) External FBE coating can be done as per Saudi Aramco specification 09-SAMSS-089.
- (2) Internal FBE coating can be done as per Saudi Aramco specification 09-SAMSS-091.

OTHER PRODUCTS

S3C can also apply a vast range of other coating materials including epoxies, polyethylene, nylon, PVC, PTFE (fluorocarbons), EVA as well as a range of acrylic, SDIP, Polyester and PVDF architectural finishes.

For more information, please visit our website at <http://www.s3c.net> or e-mail us at sales@s3c.net. You can write or contact us too at:



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