

SIGMA *Fire* / *Barr* Hydrocarbon

Fire Protection for the Oil & Gas Industry

Protective Coating solutions that cover your needs

SIGMA *FireBarr* 2000
SIGMA *FireBarr* 2000 Mesh
SIGMA *FireBarr* 2000 TB



SIGMA
COATINGS

| Protecting the Future

Sigma FireBarr 2000 – Protection of steel from Hydrocarbon

Sigma Protective Coatings is dedicated to the development, manufacture and supply of coatings to meet the very challenging needs of specific industries. With a heritage of outstanding expertise in coatings technology and decades of international investment in research and development for the protective coatings market, no company could be better placed than Sigma to meet the fast-changing global challenges of this technically demanding sector.



Saving people. Protecting assets.

Sigma FireBarr 2000 offers passive fire protection solutions for the most extreme fire scenarios.

The intumescent properties of Sigma FireBarr 2000 prevent steel structures from heating up rapidly in a fire and thereby delay the loss of load bearing capacity and integrity.

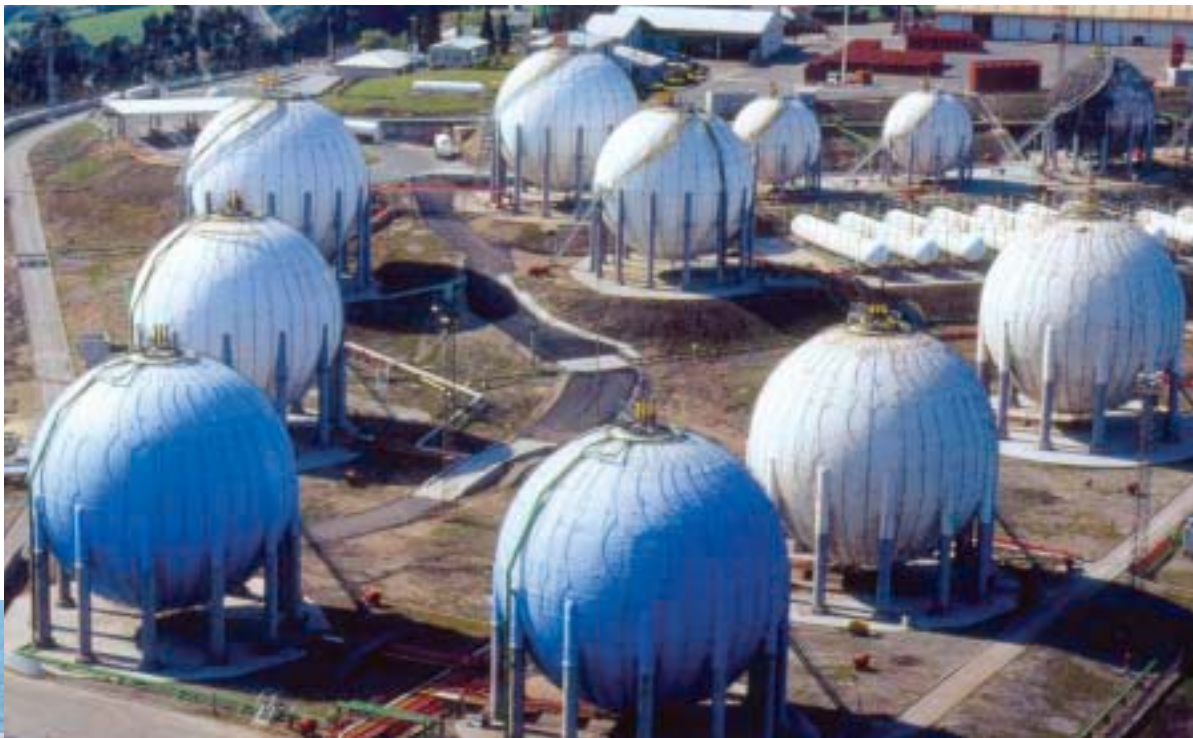
In marine and industrial locations, where hydrocarbon pool and jet fires are a risk, Sigma FireBarr 2000 buys time to enable personnel to evacuate to a safe area.

The additional time provided by Sigma FireBarr 2000 may allow for the fire to be brought under control, contained and extinguished.

Thereby Sigma FireBarr 2000 works helping to save lives and to protect major assets.



Carbon Pool and Jet Fires



Independent certification. International approval.

Sigma FireBarr 2000 has been extensively tested and has comprehensive approval certification for hydrocarbon pool and jet fires from recognised authorities such as:

- Lloyd's Register
- DNV – Det Norske Veritas
- UL – Underwriters Laboratories
- BAM – Bundesanstalt für Materialforschung und –prüfung

Long life. Lower costs.

Meeting Norsok M501 standards, Sigma FireBarr 2000 offers long service lifetime that withstands weathering and aging with no or little maintenance, providing a solution that delivers maximum cost effectiveness.

Sigma FireBarr 2000 has been subject to extensive testing in our R&D facilities comprising not just accelerated weathering but also chemical resistance.

Sigma FireBarr – Range for Hydrocarbon Fires



Sigma FireBarr 2000

A solvent free epoxy intumescent coating for hydrocarbon pool and jet fires.

- **Colour - light blue**
- **Touch dry in 2 hours**
- **Minimum overcoating interval 2 hours**
- **Recommended dry film thickness 1-7 mm applied in one coat; total dft in accordance with approval certification**
- **Highly durable, long lasting fire protection**
- **Excellent resistance to chemical splash and spillage**
- **Excellent resistance to weathering: meets Norsok M501**
- **Approved by Lloyd's, DNV, UL and BAM**

Sigma FireBarr 2000 has obtained comprehensive certification for the protection of structural steel members as well as for bulkhead and deck areas from hydrocarbon pool and jet fires.

Furthermore it has been approved by BAM for protection of LPG storage tanks and is able to withstand explosion overpressure in excess of 1.5 bar.

It also can provide up to 120 minutes fire protection to structural steel in building projects where BS 476 Part 20/21 for cellulosic fires is required.

Sigma FireBarr 2000 Mesh

Special developed scrim cloth

- Colour - black
- Reinforcing mesh for Sigma FireBarr 2000

On structural steel members at film thicknesses below 5 mm no reinforcement is required. For hydrocarbon fire scenarios at higher film thicknesses Sigma FireBarr 2000 Mesh may be used without the need for retention pins.



Sigma FireBarr 2000 TB

A solvent free epoxy insulating coating

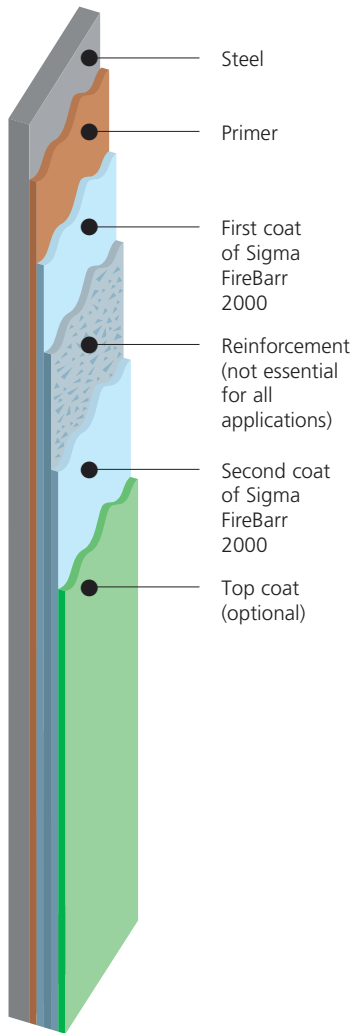
- Insulating coating under Sigma FireBarr 2000 intumescent coating
- Insulating coating for valves and pipework
- Colour - buff
- Touch dry after 8 hours
- Minimum overcoating interval 16 hours
- Can be applied by trowel on flat surfaces up to 20mm per application
- Resistant up to 150°C / 300°F continuous heat
- Thermal conductivity 0.09 W/m²K
- Excellent resistance to chemical splash and spillage
- Excellent resistance to weathering

Intumescent coatings can only be applied to surfaces operating at relatively low temperatures – usually below 80°C / 176°F. Sigma FireBarr 2000 TB provides thermal insulation so that the intumescent coating can be used on steel pipes and structures operating at temperatures up to 150°C / 300°F. It can be applied either as a wet coating or as pre-formed castings.

Sigma FireBarr 2000 TB offers high levels of corrosion resistance and has been subjected to a wide range of tests, including resistance to salt water and fresh water up to 60°C / 140°F with no sign of any defects.

Sigma FireBarr 2000 TB has also been tested in conjunction with Sigma FireBarr 2000 intumescent coating, achieving excellent results in both hydrocarbon pool and jet fires.

Sigma FireBarr 2000 Applications



Sigma FireBarr 2000 is typically applied in film thicknesses from 5 – 25 mm, depending on the massivity of the steel and the relevant certification.

In a fire situation it forms an insulating layer of char, 5 – 8 times as thick as the original coating.

Applications

Onshore including:

- Refineries
- Chemical plants

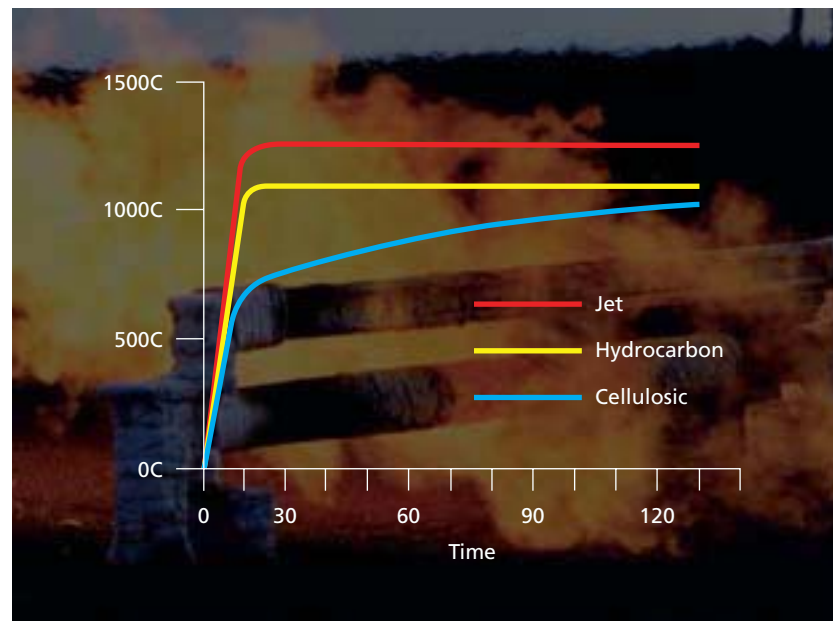


Offshore including:

- Offshore platforms
- Drilling rigs
- FPSO's



Comparison of Fire Test Curves



The Sigma FireBarr range for Hydrocarbon Fires

Sigma FireBarr 2000

- Solvent free epoxy intumescent coating

Protection of steel from hydrocarbon pool and jet fires

Sigma FireBarr 2000 Mesh

- Special developed scrim cloth

Quick drying intumescent coating for in-shop application

Sigma FireBarr 2000 TB

- Solvent free epoxy insulation coating

Insulation from high and low temperature with and without Sigma FireBarr 2000



Passive fire protection



Approved Product



Resistant to sea / coastal atmospheres



Resistant to water immersion



Resistant to industrial polluted areas



Resistant to chemical splash & spillage

Worldwide Support Services

Sigma Coatings field technical support staff are among the most highly skilled and trained in the coatings business. With in-depth knowledge of the working realities facing the industries we supply, our technical experts offer an unsurpassed perspective on the coatings options that can help your industry to function optimally, maximising technical performance and minimising expensive down time.

Complementary documentation

Sigma FireBarr 2000
Product data sheet 7721

Sigma FireBarr 2000 TB
Product data sheet 7722



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