

CHARTEK® 4

FIREPROOFING

Asset protection in the
harshest environments



KEY BENEFITS

- Protects steelwork in hydrocarbon fires
- Jet fire tested
- Resistant to explosion
- Certified by Underwriter's Laboratories, Lloyd's Registry of Shipping and Det Norske Veritas
- Ideal for high-risk situations e.g. offshore platforms, chemical processing plants and LPG storage tanks
- High impact strength
- Excellent physical properties - hard, durable and flexible
- Requires virtually no maintenance even in the harshest climatic conditions



Chartek® 4 epoxy intumescent fireproofing is a scientifically formulated mix of thermally reactive chemicals in a tough epoxy resin matrix. In a fire, these chemicals undergo a complex series of transformations that result in the coating expanding and absorbing heat to form a low density, carbonaceous char. This is intumescence.

Chartek® 4's protective char acts as an insulating blanket, a thermal barrier to soundly protect structures from a hydrocarbon fire's violent heat and destructive nature.

In test after test, Chartek® 4 has demonstrated its ability to endure not only pool fires, jet fires and hose streams, but also to resist explosion and impact.



MECHANICAL AND PHYSICAL PROPERTIES

When designing a fireproofing composition, care must be taken to balance the physical properties such that the resultant product is not too brittle, but at the same time not too flexible.

Chartek® 4 has been designed to take the flexing associated with lifting and movement of fireproofed steel - it is many times more flexible than steel - yet is rigid enough not to exhibit undesirable creep characteristics when, for example, heavy loads are placed on a Chartek® 4 coated surface.



Property	Value	Property	Value
Density kg/l (lb/gal)	1.12 (69.9)	Hardness, shore D	>75
Tensile strength MPa (psi)	18.00 (2650)	Thermal conductivity W/m°C (Btu-in/hr ft² °F)	0.236 @ 19°C (1.64 @ 66°F)
Compressive strength (psi)	37.90 (5500)	Thermal expansion -46 to 66°C cm/cm °C (-50 to 150 °F in/in °F)	27.30 (9.1)
Flexural strength MPa (psi)	28.30 (4100)	Specific heat J/g°C (Btu/lb°F)	1.42 @ 20°C (0.34 @ 68°F)
Lap shear strength MPa (psi)	11.70 (1690)		

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