CHAR 22

Solvent-borne intumescent coating for fire protection of steel structures.

CHAR 22 is a solventborne high performance intumescent coating providing a very effective fire barrier thanks to high active solids content, tough and durable char with excellent stickability.
Fast development of a stable, low heat transfer char provides effective and long term protection to flammable and non-flammable substrates.

CHAR 22 is used for fire protection of steel structures and in other application fields. In structural resistance-to-fire applications it provides protection against fire for up to 2 hours.

CHAR 22 solvenborne formulation present advantages for application in difficult environmental conditions with low temperature and high humidity and can withstand the early rain.

Intumescence means "swelling while charring". Special chemicals in the coating react in excess of 200°C generating a low-density expanded char up to 100 times thicker than the original dry film. This char provides a very effective barrier to heat transfer protecting the substrate.

Structural resistance to fire plays a key role in fire safety. In commercial and industrial facilities, hotels, airports, supermarkets, schools, hospitals, cinemas, theatres, multistorey parkings, any large building, the use of intumescent coatings extends the resistance of structures in the event of fire preserving lives and property, allowing people evacuation and the safe operation of the fire brigade.

CHAR 22

DENSITY: 1.35 ± 0,05 kg/dm³ at 20°C

SOLIDS CONTENT:
80% ±5%w/w - 73% ±5%v/v

COLOUR: white

STANDARD PACKING: 25kg steel ADR drums

SHELF LIFE: 12 months
in original packing and proper environment

SPREADING RATE: 0,55 ± 0,05mm
dry film thickness with 1kg/m² wet (theoretical)

APPLICATION: Normally by airless spray.
Small surfaces or retouching by roller or brush

WET THICKNESS PER COAT:
Airless spray: max 1000 µm (750 µm DFT)
Brush or roller: max 500 µm (300µm DFT)

THINNING: Not recommended
If necessary with synthetic thinner max 5%

DRYING TIME *
4 hours - touch / 24 hours - complete

MIN APPLICATION TEMPERATURE +0°C

MAX APPLICATION TEMPERATURE +40°C

(*) *@ +20°C and 60% RH. Drying time depends on DFT, temperature, relative humidity.*

TEST, ASSESSMENT AND CLASSIFICATION REPORTS INCLUDE:	
PR-01-02-093	PAVUS
ZP-03-02.003	PAVUS
PR-05-1.02.083	PAVUS
PK-2-16-05-002-A0	PAVUS
PV-05-02.002	PAVUS
PR-05-1.02.083	PAVUS
PK-2-16-10-04-A0	PAVUS
PV-10-2-2004	PAVUS
100583	GTC
14-8846-1683	APPLUS
14-8846-1743 M1	APPLUS
14-8846-1318 M1	APPLUS
216/C5a/2015/0049	PAVUS

USE AND APPLICATION

Proper substrate preparation is requested depending on conditions including cleaning, degreasing and removal of loose particles. Steel surfaces are normally sandblasted SA 2 1/2 then a proper anticorrosive primer is applied.

Spray application is performed in at least two coats, crossing wet on wet, with airless systems. A typical application of 1,5 mm dry = 2,7 kg/m² wet is made in two coats of about 1 mm wet thickness. Suitable equipment is an airless spray piston pump with minimum compression rate = 40:1, minimum pressure 150 bar (e.g. GRACO MARK V or WAGNER ProSpray PS34), Reverse-A-Clean self-cleaning tips, nozzle diameter 45-50 mils = approx. 1 mm, flexible feeding pipe 3/8"of maximum length 30m.
Average volumetric flow rate in common airless spray applications ranges from 3 to 6 l/min.
Gun, line and feed filters should be removed.

Application can also be done by brush or roller with long single strokes, not overworking.
Application by brush/roller requires more coats than airless spray.
Proper environmental condition must be kept during application and drying.

RECOMMENDED PRIMERS AND TOPCOATS

Eposol Primer 100: 2K epoxy for steel, stainless steel, aluminium and non-ferrous metals.
Primer 036: fast drying modified phenolic alkyd primer for steel and zinc coated steel.
Other commercially available primers have been tested and proved compatible.
In general CHAR 22 is compatible with alkyd and epoxy primers.
Please consult our technical service.

Topcoating can be useful in any environment to improve aesthetic and reduce dirt pick-up. Intumescent coatings are not suitable for use in the presence of condensing moisture or rain, therefore in moist environments and when exposed outdoors a topcoat is necessary and it must have proper characteristics of water barrier.

Interior environments according to **ETAG 018** classes Z1 and Z2 do not generally require any topcoat.

Semi-exposed environments according to **ETAG 018** class Y require our **IRISOL** acrylic solventborne topcoat.

Outdoor fully exposed environments according to **ETAG 018** class X or C3 corrosion class according to **ISO 12944** require our **PURETHAN** solventborne 2K polyurethane topcoat and its application must be particularly accurate.

CERTIFICATIONS AND APPROVALS

CHAR 22 comes with European certification and numerous type approvals in Europe and other countries.
For the fire protection of steel structures, assessment and classification reports are available according to **ENV 13381-4** and **EN 13501-2**.
Other special application reports are also available.