

# PITT-CHAR® XP

## DESCRIPTION

Solvent-free, thick-film intumescent epoxy coating, for hydrocarbon pool and jet fires

## PRINCIPAL CHARACTERISTICS

- Highly durable intumescent coating for protection of steel against hydrocarbon and jet fires; typical applications include: Offshore – structural steel members, bulkheads and decks; Onshore – pipework, storage tanks and vessels
- Unique flexibility offers enhanced performance on vibrating structures and in conditions of explosion overpressure
- Suitable for use in cryogenic conditions
- Good resistance to splash and spillage of chemicals
- Excellent abrasion resistance
- Suitable for corrosivity categories up to C5-I and C5-M
- Meets the requirements for Norsok M501 rev 5 accelerated aging tests
- Approved by ABS, BV, DNV, LR, UL and GASAFE

## COLOR AND GLOSS LEVEL

- Gray
- Matt

## BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.06 kg/l (66.2 lb/ft <sup>3</sup> )
Volume solids	100%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 0.0 g/kg max. 0.0 g/l (approx. 0.0 lb/US gal)
Recommended dry film thickness	1000 - 7000 µm (40.0 - 280.0 mils) per coat
Theoretical spreading rate	1.06 kg/m <sup>2</sup> for 1000 µm (0.22 lb/ft <sup>2</sup> for 40.0 mils)
Dry to touch	10 hours
Overcoating Interval	Minimum: 4 hours Maximum: 1 month
Shelf life	Base: at least 24 months when stored cool and dry Hardener: at least 24 months when stored cool and dry

### Notes:

- The applied density is dependent upon many variables such as temperature, test method and application method
- The required dry film thickness must be in accordance with the approval certification
- See ADDITIONAL DATA – Curing time
- See ADDITIONAL DATA – Spreading rate and film thickness

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## RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Approved primer must be sound, dry and free from any contamination
- Where mesh reinforcement of PITT-CHAR® XP is necessary, this should be carried out in accordance with the PITT-CHAR® XP APPLICATION GUIDELINES

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### Substrate temperature and application conditions

- Ambient temperature below 10°C (50°F) is acceptable; however curing to hardness takes longer, and it will cease curing below 5°C (41°F)
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
- Relative humidity during application and curing should not exceed 85%

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## INSTRUCTIONS FOR USE

### Mixing ratio

- By volume: base to hardener 2.33 : 1
- By weight: base to hardener 3.05 : 1

Note: For details see PITT-CHAR XP Application Guidelines

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### Pot life

45 minutes at 25°C (77°F)

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### Airless spray

#### **Recommended thinner**

THINNER 60-30

#### **Volume of thinner**

5 - 7%, but the quantity shall never exceed 10%

#### **Nozzle angle**

40° for large flat surfaces

#### **Nozzle orifice**

Approx. 0.69 – 0.89 mm (0.027 – 0.035 in)

#### **Nozzle pressure**

35.0 MPa (approx. 350 bar; 5077 p.s.i.)

#### Notes:

- The addition of thinner will affect sag resistance and overcoating intervals
- Material (mixed) temperature needs to be between 23°C (73°F) and 35°C (95°F)
- The maximum length of the hoses should not exceed 30 m (98.4 ft)
- Use of spray equipment with a ratio of 74:1 is recommended

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## Airless spray: Plural component

### **Recommended thinner**

No thinner should be added

### **Nozzle angle**

40° for large flat surfaces

### **Nozzle orifice**

Approx. 0.84 – 1.09 mm (0.033 – 0.043 in)

### **Nozzle pressure**

24.0 - 31.0 MPa (approx. 240 - 310 bar; 3481 - 4496 p.s.i.)

### Notes:

- Nozzle angle 40° (for large flat surfaces)
- Twin feed spray equipment utilizing a minimum 10 inch king air motor is recommended
- Base and hardener need to be pre-heated to a minimum of 55 - 60°C (131 - 140°F) while circulating through the unit
- Suitable insulated and/or heated hoses should be used

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## Trowel

### **Recommended thinner**

THINNER 60-30

### **Volume of thinner**

0 - 2%

Note: Recommended for small areas and touch-up only

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## Cleaning solvent

THINNER 90-53

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## ADDITIONAL DATA

Curing time for solvent-free application				
Substrate temperature	Dry to walk on	Time to outdoor exposure	Dry to handle	Full cure
5°C (41°F)	30 hours	70 hours	3.5 days	1.5 months
10°C (50°F)	26 hours	45 hours	52 hours	1 month
20°C (68°F)	18 hours	18 hours	18 hours	15 days
30°C (86°F)	10 hours	7 hours	10 hours	10 days
40°C (104°F)	4 hours	5 hours	7 hours	7 days

**Notes:**

- Curing times may vary depending on substrate, ambient and material temperature
- Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)

## SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 1430, 1431 and relevant Material Safety Data Sheets
- Although this is a solvent-free paint, care should be taken to avoid inhalation of spray mist, as well as contact between the wet paint and exposed skin or eyes

## REFERENCES

• CONVERSION TABLES	INFORMATION SHEET	1410
• EXPLANATION TO PRODUCT DATA SHEETS	INFORMATION SHEET	1411
• SAFETY INDICATIONS	INFORMATION SHEET	1430
• SAFETY IN CONFINED SPACES AND HEALTH SAFETY, EXPLOSION HAZARD – TOXIC HAZARD	INFORMATION SHEET	1431
• CLEANING OF STEEL AND REMOVAL OF RUST	INFORMATION SHEET	1490
• SPECIFICATION FOR MINERAL ABRASIVES	INFORMATION SHEET	1491
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

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