

# PPG PITT-CHAR® XP modular construction

The ultimate flexible intumescent coating for protection against hydrocarbon hazards

We supply products that ensure your coated structures remain undamaged during transportation, erection, commissioning and operations.



# The only patented flexible epoxy intumescent on the market



The unreliable, fluctuating price of oil has made modular, off-site fabrication increasingly popular in oil and gas plant construction projects.

Working this way is generally more cost effective for operators, but it is not without its challenges. Prefabricated steel sections are at risk of being damaged when they are transported from their point of manufacture to final assembly on-site, which can be thousands of miles apart.

Any damage to the intumescent coating can impact its ability to perform effectively and save lives when the structure is in service. As it is the job of the intumescent coating to buy time, specifying the right solution can literally mean the difference between life and death for people working in these environments.

Specially formulated for the oil and gas industries, PPG PITT-CHAR XP is the only patented flexible epoxy intumescent on the market and is widely trusted for modular construction projects.

The unique flexibility of PPG PITT-CHAR XP eliminates the cracking issues that are often encountered when transporting steel sections coated with traditional, rigid epoxy systems.

This flexibility also reduces impact and abrasion damage during construction, minimizing subsequent remedial repairs and, once in service, any subsequent repair work due to mechanical damage and other defects.



## The single-product solution for fire and cryogenic spill protection

- Saves lives and protects assets
- Unique flexibility
- Enhanced crack resistance during construction and in service
- Superior low-temperature adhesion
- Mechanically tough – reduces damage and repair
- Increases fabrication speed and efficiency
- Helps improve application quality
- More cost-effective through service life
- Extensively tested and approved by customers and third party institutes

PPG PITT-CHAR XP is a single coating solution that provides protection in extreme conditions against a hydrocarbon hazards such as explosions, impacts, fires and cryogenic spills.

When exposed to fire, the coating expands to form an insulating char that prevents steel from heating up rapidly. This delays the loss of load-bearing capacity and integrity, buying crucial time for personnel to escape.

In addition to its unrivaled fire protection, the unique flexibility of PPG PITT-CHAR XP provides enhanced resistance to cracking on flexing and vibrating structures, and exhibits excellent performance particularly under cryogenic and explosion overpressure conditions.



# Unique flexibility – extensive track record



Originally introduced in 1983, PPG PITT-CHAR XP has more real-time history than any other epoxy intumescent coating available today with hundreds of projects successfully completed around the world.

PPG PITT-CHAR XP often exceeds global standards as it provides protection during a 4-bar over pressure explosion test when the standard requires only 1 bar.

This means that, under explosion conditions, this extremely robust product will protect the steel, even when there is significant steel deflection. Rigid epoxy systems on the other hand are prone to crack, which exposes steel substrates to the effects of any subsequent fire.



## Longer life = lower costs

With PPG PITT-CHAR XP, operators are also able to reduce the long-term costs of inspection and maintenance.

As an extremely robust coating with a long service life, it is able to withstand weathering and ageing with little or no maintenance required. This offers an extended inspection window and eliminates the need for constant patching.

PPG PITT-CHAR XP also future-proofs oil and gas facilities against further hazards such as jet fire and explosion, which are not currently mandated in API guidelines but are identified by the Chemical Safety Board (CSB) reference as real threats, and therefore anticipates changes to in industry standards and legislation.

The coating is tested and approved for industrial environments by some of the world's leading laboratories.

# Increase efficiency, save time, protect assets



## Benefits for modular construction

The use of PPG PITT-CHAR XP intumescent coating increases fabrication speed and efficiency, resulting in faster turnaround of structural steel and enabling tight production schedules to be met. It is compatible for use over a wide range of steel substrates, including carbon steel and galvanized steel.

As a single-product system with one mixing ratio, PPG PITT-CHAR XP is less complicated to apply than two-product epoxy systems. This ease of use also ensures that over-coating and curing times are significantly reduced. Eliminating the need to adjust and clean application equipment saves applicators even more time.

Smaller block-outs are also more achievable than when using cementitious solutions.



### Flexible PFP captures savings in block-out applications.

Steel was fireproofed before erection, resulting in two types of cost savings:  
1. Reduction in scaffolding cost (no scaffolding required to apply fireproofing).  
2. Savings in craft productivity (scaffolding not interfering with multi craft and discipline work).



Both flexible and tough, PPG PITT-CHAR XP resists cracking and damage during slinging and handling, so that the fireproof coating remains in good condition when steel is transported and erected on site.

The hardwearing flexibility of PPG PITT-CHAR XP also helps to minimize possible damage caused by other trades such as pipe fitters and insulators working in the area.

The product delivers excellent resistance to corrosion in varying climatic, heat and humidity conditions, and so is able to protect assets anywhere in the world.

## Global engineering support

Our engineers are experts in intumescent fire protection and are up to date with all relevant industry standards and fire ratings. They also have the engineering capability to support you in the early stages of development, guiding you through the specification process and providing ongoing support right through to project completion and beyond.

## Trusted worldwide

PPG PITT-CHAR XP has comprehensive approval certifications from recognized authorities, including ABS (American Bureau of Shipping), BV (Bureau Veritas), DNV (Det Norske Veritas), Lloyd's Register, UL (Underwriters Laboratories), GASAFE and many others.



Visit [ppgpmc.com](http://ppgpmc.com) or contact:

Asia Pacific ☎ +86-21-6025-2688 ✉ [ppgpmc.ap@ppg.com](mailto:ppgpmc.ap@ppg.com)

Europe, Middle East and Africa ☎ +32-3-3606-311 ✉ [customers@ppg.com](mailto:customers@ppg.com)

Latin America ☎ +57-1-8764242 ext. 201 ✉ [ppgpmcandean-ca@ppg.com](mailto:ppgpmcandean-ca@ppg.com)

North America (US & Canada) ☎ +1-888-9PPGPMC ✉ [PMCMarketing@ppg.com](mailto:PMCMarketing@ppg.com)



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