



ADVANCED POLYMER SURFACE ENGINEERING TECHNOLOGY

## Unique Polymer Systems – Two Component Solvent Based Epoxy Coating

**UPS GP** is a high performance anti-corrosive coating, designed for use as a long term protection system of new and existing steel structures where surface preparation is restricted.

**UPS GP** is based on a complex blend of epoxy resins and a specially formulated polyamine curing system reinforced with a unique combination of anti-corrosive pigments and rust penetrants to produce a system which provides the optimum adhesion, weather and corrosion resistance in virtually any environment.

**UPS GP** is easy to apply by brush, roller or spray and has excellent adhesion to blast cleaned or manually prepared surfaces with good compatibility with existing coatings which cannot be removed.

**Before proceeding, please read the following information carefully to ensure that the correct application procedure is fully understood.**

### SURFACE PREPARATION

All loose rust, millscale and loosely adherent coatings must be removed. Surfaces that can be abrasive blast cleaned should be prepared to a minimum standard Sa2 (BS 7079 or equivalent).

Where blast cleaning is not possible, then the following methods of surface preparation should be used: high pressure water jetting mechanical wire brushing, needle gun, mechanical grinders etc.

In coastal environments and on badly pitted steel work, high pressure water blasting is the preferred method of preparation in order to ensure complete removal of salts and corrosion products from pitted areas.

When mechanical cleaning and wire brushing are used, special attention must be paid to pitted areas to remove all adherent rust and corrosion products and expose a sound substrate.

All oil and grease must be removed by the use of **UPS Universal Cleaner** prior to carrying out surface preparation.

### MIXING

**UPS GP** is a two component material which must be mixed together prior to use.

The base and activator components should be thoroughly stirred to incorporate any slight separation, while stirring the activator unit, the contents of the base unit should be added. Continue stirring until a homogeneous mix is obtained.

The mixed material must be used within 1½ hours of mixing at 20degC (68 F).

### APPLICATION

Do not apply when temperatures are below 7deg C or when the relative humidity exceeds 90% or the surface temperature is less than 3 degC above the dew point.

**UPS GP** can be applied by brush, roller or spray. When application is carried out by brush, two coats may be required to achieve the correct film build.

When airless spray application is used, a tip size of 15-18 thou is recommended with a tip pressure of approximately 2,500 psi.

Only sufficient material should be mixed that can be applied within the usable life of the product.

All equipment should be cleaned **IMMEDIATELY** after use with **UPS Universal Cleaner**.

### Theoretical Coverage Rate

7 m<sup>2</sup>/litre at 125 microns dft (75 ft<sup>2</sup>/litre at 5 mils dft)

### Recommended Film Thickness

Wet 140 microns (5.5 mils)

Dry 125 microns (5 mils)

Detailed working recommendations are available from the Technical Centre on request.

# TECHNICAL DATASHEET UPS GP

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### PHYSICAL CONSTANTS

#### Mixing Ratio

1 part base to 1 part activator by volume.

#### Appearance

Base Thixotropic Metallic Liquid  
Activator Thixotropic Light Brown Liquid

#### Drying & Cure Times at 20°C (68°F)

Usable Life 1½ hours  
Touch Dry 6 hours  
Minimum Overcoating 16 hours  
Maximum Overcoating 24 hours  
Full Cure 7 days

**Volume Solids** 90%

**V.O.C.** 78 gms/litre

**Shelf Life** Use within 2 years of purchase. Store in original sealed containers at temperatures between 5°C (40°F) and 30°C (86°F).

**Food Contact** Meets FDA requirements CFR 21.175.300 for food contact.

### PHYSICAL PROPERTIES

**Direct Pull Adhesion** 63 kg/cm steel (900 psi)  
ASTM D4541

**Humidity Resistance** Unaffected 5,000 hours  
BS3900 Part F2 exposure

**Salt Fog Resistance** Excellent, unaffected after  
ASTM B117 10,000 hours' exposure

**Impact Resistance** Direct, Pass 0.2" (5 mm)  
BS3900 Part E3 Reverse Pass 0.2" (5 mm)

**Tensile Shear Adhesion** 175 kg/cm (2500 psi)  
ASTM D1002

### HEALTH AND SAFETY

As long as normal good practice is observed **UPS GP** can be safely used.

Vapour masks should be worn for spray application.

A fully detailed **Material Safety Data Sheet** is either included with the material or is available on request.

### PACKAGING

Supplied in 5 and 20 litre units.

The information provided in this Product Data Sheet is intended as a general guide only and should not be used for specification purposes. The information is given in good faith but we assume no responsibility for the use made of the product or this information because this is outside the control of the company. Users should determine the suitability of the product for their own particular purposes by their own tests.

### FOR FURTHER INFORMATION PLEASE CONTACT



UniquePolymerSystems.com

*The Engineer's Choice*

*... for Solutions*

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