

# HEGGEL Pox 401

Epoxy Blast Primer

**Description:**

**HEGGEL Pox 401** is a 2-component epoxy temporary protective primer.

**Application:**

- Temporary protective for steel surfaces prepared by abrasive blast cleaning.
- Suitable for use in conjunction with cathodically protected steel.
- Suitable for welding and fabrication and for overcoating with most paints in common use except high content metallic zinc products (see note on fabrication overleaf).
- As a sealer for aluminium and zinc metal spray.
- As a primer for use over stainless steel and non-ferrous metallic substrates.

**Application methods:**

- Airless Spray
- Conventional Spray
- Roller
- Brush (for small areas and touch up only)
- Recommended Cleanser/Thinner: HEGGEL thinner 401

**Layer thickness:**

Dry film thickness: 25 microns  
 Wet film thickness: 86 microns  
 Theoretical coverage: 11.6 m<sup>2</sup>/ltr\*

\* This figure makes no allowance for surface profile, uneven application, overspray or losses in containers and equipment. Film thickness will vary depending on actual use and specification.

**Technical data:**

Flash Point	Base: 9°C
	Additive: 12°C
Volume Solids %	29 ± 1% (ASTM-D2697-86)
Mixing Ratio	4 parts base to 1 part additive by volume
Colour Availability	Limited Range
Pot Life	10 hrs @ 15°C    8 hrs @ 23°C    4 hrs @ 35°C
VOC	594 gms/litre determined practically in accordance with UK Regulations PG/23
	621 gms/litre calculated from formulation to satisfy EC Solvent Emissions Directive
	518 gms/kilo content by weight from formulation, to satisfy EC Solvent Emissions Directive

**Details for application:**

Practical Application Rates-Microns Per Coat				
	Airless spray	Conventional Spray	Roller	Brush
Dry	25	25	25	20
Wet	86	86	86	69

Average Drying Time			
	At 15°C	At 23°C	At 35°
To touch	10 minutes	5 minutes	3 minutes
To recoat	4 hours	3 hours	2 hours
To handle	30 minutes	20 minutes	15 minutes

These figures are given as a guide only. Factors such as air movement and humidity must also be considered.

**Recommended Topcoats:**

Indefinitely overcoatable with epoxy systems provided the surfaces to be coated have been suitably cleaned. Where a high degree of gloss and colour retention is required, consult HEGGEL to recommend a suitable topcoat.

**Packaging:**

A two component material supplied in separate containers to be mixed prior to use.

Pack Size: 20 litre and 5 litre units.

Weight: 1.20 kg/litre (may vary with shade).

**Shelf Life:**

12 months from date of manufacture or 'Use By' date where specified.

## 1. Surface Preparation

### FERROUS SURFACES

For optimum performance blast clean to Sa2½ BS EN ISO 8501-1 (2007). Average surface profile in the range 30-50 microns.

### Non FERROUS SURFACES

For optimum adhesion all surfaces should be flash blasted using non-metallic abrasive and coated with **HEGGEL Pox 401** within 4 hours of blasting. Under conditions of high humidity a shorter period will be necessary.

### ALL SURFACE

Ensure surfaces to be coated are clean, dry and free from all surface contamination.

## 2. Application Conditions and Overcoating

Epoxy paints should preferably be applied at temperatures in excess of 10°C. In conditions of high relative humidity, i.e. 80-85% good ventilation conditions are essential. Substrate temperature shall be at least 3°C above the dew point and always above 0°C.

At application temperatures below 10°C, drying and curing times will be significantly extended, and spraying characteristics may be impaired. Application at ambient air temperatures below 5°C is not recommended.

In order to achieve optimum water and chemical resistance, temperature needs to be maintained above 10°C during curing.

If it is desired to overcoat outside the times stated on the data sheet, please seek advice of HEGGEL.

## 3. Application Equipment

### Airless spray

Nozzle size: 0.38 mm (15 thou)

Fan Angle: 80°

Operating Pressure: 155 kg/cm<sup>2</sup> (2200 psi)

The airless spray details given above are intended as a guide only.

Details such as fluid hose length and diameter, paint temperature and job shape and size all have an effect on the spray tip and operating pressure chosen. However, the operating pressure should be the lowest possible consistent with satisfactory atomisation. As conditions will vary from job to job, it is the applicators' responsibility to ensure that the equipment in use has been set up to give the best results. If in doubt HEGGEL should be consulted.

### Conventional Spray

Nozzle Size: 1.27 mm (50 thou)

Atomising Pressure: 3.5 kg/cm<sup>2</sup> (50 psi)

Fluid Pressure: 1.0 kg/cm<sup>2</sup> (15 psi)

The details of atomising pressure, fluid pressure and nozzle size are given as a guide. It may be found that slight variations of pressure will provide optimum atomisation in some circumstances according to the set up in use. Atomising air pressure depends on the air cap in use and the fluid pressure depends on the length of line and direction of feed i.e. horizontal or vertical.

### Brush

The material is suitable for brush application to small areas and for touch up purposes.

### Roller

The material is suitable for roller application.

### Preparation and Build Up:

**HEGGEL Pox 401** is not intended to replace a coat of primer in the main paint specification, it is designed to provide temporary protection, until the specified paint scheme can be applied. However in practice the use of **HEGGEL Pox 401** does make a substantial contribution to the performance of the complete paint specification in terms of ultimate durability and resistance to corrosion.

The applied dry film thickness of prefabrication primers is normally below 30 microns. At this level of dry film

thickness, factors such as blast profile, unevenness of application and severity of exposure conditions may significantly affect the performance.

## 4. Additional Notes:

Drying times, curing times and pot life should be considered as a guide only.

The curing reaction of epoxies commences immediately the two components are mixed, and since the reaction is dependent on temperature, the curing time and pot life will be approximately halved by a 10°C increase in temperature and doubled by a 10°C decrease in temperature.

**Fabrication:** While **HEGGEL Pox 401** is classed and approved as a welding primer, under certain types of welding operations e.g. high speed twin-fillet welding, fabricators are advised to satisfy themselves that the product is suitable for their particular welding process.

**Epoxy Coatings - Tropical Use:** Epoxy paints at the time of mixing should not exceed a temperature of 35°C. Use of these products outside of the pot life may result in inferior adhesion properties even if the materials appear fit for application.

Thinning the mixed product will not alleviate this problem.

It is not advisable to apply epoxy coatings when the air and substrate temperatures exceed 45°C. These conditions can introduce paint film formation defects, such as dry spray, bubbling and pinholing etc.

Numerical values quoted for physical data may vary slightly from batch to batch.

## 5. Health and Safety:

Consult Product Health and Safety Data Sheet for information on safe storage, handling and application of this product.

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All information contained herein is based on the current state of our knowledge and practical experience at the time of release. Therefore, please make sure that this is the actual edition of the Technical Data Sheet. All data are only intended as a guideline for informational purposes and do not constitute a legally-binding warranty of the suitability for a certain purpose of use, due to its dependence on site conditions and possible processing, use and applications. All information contained in this technical datasheet is subject to change without notice.

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