



TIBCHEMICALS

PROTEGOL® EP - Flowcoat 08

Solvent-based, two-component epoxy coating,
friction-reduction for gas pipelines

Description

PROTEGOL® EP FLOWCOAT 08 is a solvent based two-component epoxy coating, which fulfils the following requirements:

- “Technical Specification for Internal Coating materials for Steel Line Pipe and Fittings” according to TRANSCO CM2, Edition march 2003,
- “Recommended Practice for Internal Coating of Line Pipe for Non-Corrosive Gas Transmission Service” according to API recommended Practice 5L2 Fourth Edition, July 2002, reaffirmed, May 2015
- “Steel tubes and fittings for on and offshore pipelines – Internal coating for the reduction of friction for conveyance of non corrosive gas” according to DIN EN 10301: 2004,
- “Paints and Varnishes – Friction reduction coatings for the interior of on- and offshore steel pipelines for non-corrosive gases” according to ISO 15741: 2001.
- Qualification for Gaz de France by GRTgaz FTR 282, August 2010

Uses

Interior coating of on and offshore steel pipelines for non-corrosive gases to reduce friction.

Benefits

- Excellent corrosion protection
- Smooth coating surface
- High mechanical and abrasion resistance
- Good chemical resistance

Product Data

The following data have been determined at + 20 °C (under lab conditions) unless otherwise stated:

Type Two-component material

Base Hardener Solids	Epoxy resin Polyaminoamide 74 ± 2 % per weight 59 ± 2 % per volume
Ash content	35 % - 40% ** per weight (at 580°C)
Gloss	Measured at approx. 60 ° angle (values accepted within a range of 30-45 GU)
Viscosity at 25°C (by RheoStress 6000 System) Comp. A Comp. B	Liquid (approx. 400-800 mPas) Liquid (approx.1000-1500 mPas)
Hardness at 23°C (DIN 53 153/ API RP 5L2)	>94 Buchholz
Wet density mixture A+B	1,3 g/cm ³ ±0,1 by calculation
Dry density mixture A+B	1.77 g/cm ³ ±0,05 by calculation
Mixing ratio comp. A : B	100 : 15 parts by weight 100 : 23 parts by volume *
Application method	Airless-spraying, small areas with brush or roller
Minimum thickness	50 µm
Recommended coating Thickness (DFT)	Approx. 50 µm to 100 µm (above the peaks of the substrate)
Application temperature	Substrate > 10 °C Comp. A 20 °C - 40° C Comp. B 20 °C - 40° C
Humidity	Max. 80 %
Equipment	High-efficient airless pump
Spray tip nozzle orifice	0.013” to 0.015”
Nozzle pressure	Min. 180 bar
Pot life - at 23°C - at 30°C	Approx. 6 hours Approx. 3 hours Stir the mixture every hour to avoid settlement or separation.
Tack-free at 23°C	After approx. 4 hours

Date of issue 07/2018

TIB Chemicals AG | Muelheimer Strasse 16 -22 | 68219 Mannheim | P. O. Box 81 02 20 | 68202 Mannheim | Germany
Phone +49 621 8901-812 | Fax +49 621 8901-902 | info.protegol@tib-chemicals.com | www.tib-chemicals.com

This information is given to the best of our knowledge but without obligation. We are not liable for any wrong advice or any advice we may have failed to give. This data sheet becomes invalid as soon as a new edition has been published. Please contact us for latest.





TIBCHEMICALS

PROTEGOL® EP - Flowcoat 08

Solvent-based, two-component epoxy coating,
friction-reduction for gas pipelines

Fully cured	
- at 23°C	After 14 days
- at 60°C	After 2 hour
Time before outdoor exposure after curing at:	
- 23°C	2 days
- 60°C	1 hour
Temperature limits without simultaneous mechanical stress	Dry 100°C Short time 250°C
Cleaning	Solvent G

* Volumetric mixing ratio obtained at normal pressure and room temperature (23° C) and calculated over density.

* *Ash content is specified by the coating manufacturer

Colours

Comp. A	Red
Comp. B	Clear
Comp. A + B	Red

Packaging

- Comp. A and comp. B: each 200 kg in 200 litre non-returnable drums
- Comp. A in 25 kg hobbocks, comp. B in 3.75 kg tins

Storage

24 months shelf life stored at a cool and dry place, in tightly closed original containers.

Storage and Transport Data

PROTEGOL® Flowcoat 08

	Flash point	VbF	GGVS / ADR
Comp. A	> 21 °C	-	
Comp. B	> 21 °C	-	

Application

Substrate

The steel surfaces to be coated must be dry, clean and free from dust, have a good key and be free from all matter acting as release agents (e.g. oil, grease, old paint). In order to obtain the necessary conditions, suitable substrate preparation methods such as blasting must be used.

Steel surfaces must be abrasive blast clean to near white (degree of cleanliness according to DIN EN ISO 12944-4 at least Sa 2½). The coating must be applied immediately after blast cleaning.

The constructional design of steel and iron shall comply with DIN 28051 and DIN 28053 or with VDI guideline 2532. The surface profile shall range between 25 µm and 40 µm or refer to customer specification. The blasting material shall be angled shot.

Coating

Ensure that the temperature of the substrate is min. +10°C and at least 3°C above the dew point in order to avoid condensation. The dew point can be determined with a suitable dew point mirror.

Thoroughly mix the component A with a slow-speed mechanical stirrer (e.g. drill fitted with a stirring paddle running at about 400 rpm). Take care not to stir in any air. Component B shall be added to component A while stirring. Then put the whole content into another new and clean container. Strip any adhering residues with a spatula and add to the new container while still stirring until the material has been mixed homogeneously.

PROTEGOL® EP-FLOWCOAT 08 is applied using airless spray equipment.

If necessary, the viscosity can be reduced through diluting with max, 5% of Solvent G or by using of a heater after the dosage pump.

Relative humidity during application and curing process must be < 80 %.

Date of issue 07/2018





TIBCHEMICALS

PROTEGOL® EP - Flowcoat 08

Solvent-based, two-component epoxy coating,
friction-reduction for gas pipelines

Both components should be stored at room temperature which will make application easier at lower temperatures, whereas at high summer temperatures the drums shall be stored in a cool place. By no means expose them to direct sunlight.

Maintenance of tools

Application equipment must be cleaned immediately after use with Solvent G.

Health and Safety

It must be ensured by suitable measures such as continuous ventilation, mechanical extraction or respiratory protection that vapours and mist possibly produced during the spraying process are not inhaled. We therefore recommend wearing filter or fresh air masks.

When using PROTEGOL® EP FLOWCOAT 08 all safety precautions applicable to handling epoxy resins and their hardeners must be observed.

They are listed in the „Merkblatt für die Verarbeitung von Polyester- und Epoxidharzen“(Application advice for polyester and epoxy resins) published by the German liability insurance association of the chemical industry and are available on request.

Notes on dangers and safety advice on the containers must strictly be observed!

Contact with the unprotected skin should be avoided. Any material accidentally splashed onto the skin should immediately be removed using warm, soapy water or preferably warm, non-alkaline detergent. Afterwards wash again thoroughly with soap and water. It is recommended to protect the skin with a silicone-free barrier cream before starting work.

Any further information can be taken from the material safety data sheets.

Date of issue 07/2018

TIB Chemicals AG | Muelheimer Strasse 16 -22 | 68219 Mannheim | P. O. Box 81 02 20 | 68202 Mannheim | Germany
Phone +49 621 8901-812 | Fax +49 621 8901-902 | info.protegol@tib-chemicals.com | www.tib-chemicals.com

*This information is given to the best of our knowledge but without obligation. We are not liable for any wrong advice or any advice we may have failed to give.
This data sheet becomes invalid as soon as a new edition has been published. Please contact us for latest.*

