

# PIPESTOP<sup>®</sup> 100 WB

Two component water based epoxy paint for gas pipelines

## NATURE AND USE

Pipestop 100 WB is a water based Epoxy-Polyamide product for internal coating of pipelines carrying gas. The technology of this innovating product meets the current specifications request to reduce V.O.C. emission during spray application, combining excellent applicability and performing protection from corrosion with good chemical resistance.

The cured film improves pigging operations, hydrostatic tests on the pipe and allows considerable increase of the gas flow in service, avoiding the contamination of the carried product by mill scales or scales deriving from chemical-physical degradation of the steel substrate. It offers considerable long term advantages and savings in the pumping costs of the product, prolonged protection against internal corrosion of the pipe.

Thanks to its relatively low thickness and to the high performances offered, Pipestop 100 WB coating is very recommended for this type of application.

**Product Qualified SNAM according to specification GASD C 9.11.01**  
**The product fully cured complies with EN 10301 – ISO 15741**

## TECHNICAL DATA



<b>Specific Gravity A+B</b>	Kg/l	1,35 ± 0,1 @ +20°C
<b>Solids by Weight:</b>	%	60 ± 2 % A+B
<b>Solids by Volume:</b>	%	47 ± 2 % A+B
<b>Mixing Ratio by Weight:</b>		100 parts of Base / 12.5 parts of Hardener
<b>Mixing Ratio by Volume:</b>		6 parts of Base / 1 part of Hardener
<b>**Pot life @ +20°C:</b>		4 ± 0,5 hours
<b>Exercise Temperature range:</b>		-20°C / +110°C
<b>Colour:</b>		Oxide Red

## SUBSTRATE PREPARATION

Surfaces should be abrasive blasted at least to Swedish Standard of SA 2 ½ according to ISO 8501-1 with a medium roughness profile of about 40 - 50 µm Rz DIN (Cut off 2.5)\*\*\*

## PRODUCT PREPARATION

Mix the two components separately. Add component B to component A and stir until the complete homogenization is reached. Await 10 – 15 minutes before starting the application. The indicated suggested time may increase or decrease according to the equipment used for the application\*\*\*.

\*\*\* Please take care of following notes enclosed.

\*\* The "POT LIFE" time of two components products (time within which it is possible to apply the paint mix of Base and Hardener), is exponentially dropped by the increase of product temperature.

Note: The use of a mix of paint (Base + Hardener) over the POT LIFE time is irreparably compromising all the properties of the coating film.\*\*

## APPLICATION DETAILS

**Application method:** Standard Airless Spray with compression ratio 45:1 minimum (nozzle pressure about 160 atm.)  
nozzle Ø 13-23 Thou with different fan width depending on the diameter of pipes to coat.

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The content of the present technical data sheet is the most complete currently available, based on practical experience and given in good faith. Should any change be necessary, the present data sheet will be updated without prior notice. The applying conditions of use differ according to environmental conditions and subjective application factors outside the control of the Company. The user shall determine the suitability of the product for the intended use under his own risk and responsibility. No warranty is impressed or implied. The Company refuses all liability not directly related with defects of the product or consequent to deviations from written instructions.



**INDUSTRIE BRUNO STOPPANI R.P.S. S.r.l.**

**Sede Operativa:** Via Industriale 90-119 25020 Capriano del Colle (Bs) – Italy - Phone +39 030 9745116 – Fax +39 030 9745383

**sales@industri brunostoppa nipa nts.com - www.industri brunostoppa nipa nts.com**

Company with quality management system UNI EN ISO 9001:2015 certified

	Dual Feed Hot Airless Spray for two components (bi-mixer) with compression ratio 45:1 minimum Conventional Spray Brush
<b>Thinning:</b>	The product is supplied ready for use Should thinning in particular environmental conditions be required, only demineralised water can be added, up to a maximum of 3 – 5 %
<b>Cleaning:</b>	Cleaner for Pipestop 100 W.B.
<b>Defects repairing:</b>	Should a defect in the film appear, roughen the affected area. Clean and repair the same by application by brush or spray until the suitable thickness is reached***.
<b>Hardening at +25°C:</b>	Touch dry 2-3 hours Through dry 18-24 hours Fully cured 7-10 days @ +25°C (Bucholz Hardness ≥94)
<b>Overcoating at +20°C:</b>	Recoat interval Min. 4-6 hours / Max. 24 hours
<b>Industrial application:</b>	Do not perform forced drying in oven on the coating just applied to avoid possible damages to the coating film. If necessary, only after flash off period of at least 24 hours at ambient temperatures, it is possible to perform forced warm air curing at +40°C/+60°C
<b>External exposure:</b>	(in dry and ventilated ambient, R.H. ≤ 85%), of the coated item at different temperatures, after: <ul style="list-style-type: none"><li>• 3-4 hours @ +10/+15°C</li><li>• 2-3 hours @ +21/+25°C</li><li>• 1-2 hours @ +30/+35°C</li></ul>
<b>Test/Glass Specimen hardening:</b>	Forced drying of test specimen and glass panels, differently than provided by EN 10301 Specification, for this product the drying system shall be :  Rt for 1 night 1 hour ≈ 50° C 1 hour ≈ 75° C
<b>Application temperature:</b>	Min. +8°C / Max. +40°C
<b>Suggested product temperature:</b>	+20 / +30°C
<b>Temperature of the substrate:</b>	from +5 to +40°C; always at least +3/5°C above dew point
<b>Relative humidity:</b>	% ≤ 85 %
<b>Suggested thickness:</b>	70-80 µm dry (DFT) 150 – 170 µm wet (WFT) Min. 60 – Max. 120 µm. dry (DFT) Min. 127 – Max. 250 µm wet (WFT<9
<b>Theoretical spreading rate:</b>	sqm/l 6,5 at the suggested thickness

More info by writing to [sales@industri brunostoppa nipa nts.com](mailto:sales@industri brunostoppa nipa nts.com) or by calling +39 030 9745116

**HANDLING**  
**STORAGE AND**  
**SAFETY**  
**PRECAUTIONS**

**Warning:** All handling and/or use activities of the material and its components must strictly refer to the given indications in the Safety Data Sheet (Base and Hardener). The following advices are stated by common sense and in good faith, they are uncompleted and do not substitute the content of each specific safety data sheet of the product.

**Handling:** The material must be used only by professional and qualified applicators suitably trained. All the operations involving the use of the product, must be carried on in compliance with all the relevant National Health, Safety & Environmental standards and regulations.

**Precautions:** When the product is used in enclosed areas (rooms, containers, vessels, etc.) it is imperative to use adequate means providing the necessary air circulation, to be granted during the whole application and coating polymerization time, also to avoid conditions open to potential explosion danger.

All electrical installations must always be grounded. Where explosion hazards exist, the workmen should be required to use only non-ferrous tools and wear conductive non-sparking shoes and clothing. Explosion and flame-proof equipment too are required.

**Storage and transport:** Keep far from flames, sparks or heat sources. Do not leave exposed under direct solar action. Store under shelter in original unopened packaging, in cool, dry and ventilated areas, at temperatures between +5°C and +35°C.

**Shelf life:** **Base** 12 months in the suggested storage conditions (original unopened packaging)  
**Hardener** 12 months in the suggested storage conditions (original unopened packaging)

N.B.: **Product for professional use only**  
**and exclusively for the uses not regulated under CE Directive 2004/42/CE.**

**Refer to Material Safety Data Sheet**



**Access catalogues, data sheets and company presentations**

### RECOMANDATIONS FOR THE PREPARATION AND THE APPLICATION OF THE COATING PIPESTOP 100 WB

- Before and during the use of the product, carefully read and follow accurately the indications given in the Material Technical Data Sheet.

Important note : the material is a fast drying coating.

The forced drying in oven of the coating just applied, will damage the coating film.

Consequently this procedure is not suggested.

It is possible to perform the forced curing (oven temperature +40°C/+60°C) only after flash off period of at least 24 hours at temperature between +8°C and +40°C in ventilated area.

- **Working place**

All operations must be performed in the full respect of the law concerning the safety of workers, paying all the due attention also to the indications supplied in the Material Safety Data Sheet of the product used

Please remember that the use of materials to be applied by “nebulization” must be performed only in duly ventilated ambient properly equipped.

- **Cleaning of the Spray equipment**

The equipment, duly cleaned with Thinner for epoxy products after last previous use of epoxy solvent based coatings must be emptied.

Use some ethyl alcohol 99% indicatively (like for industrial use type) . Pump in ethyl alcohol and pump it down to fill and to empty a first time the spraying line.

Fill again a second time the same spraying line still using ethyl alcohol and keeping the spraying pump on recycle during 5 minutes.

Pump down the equipment to empty it and then charge it with a mixture of demineralised water with ethyl alcohol at 50% by volume and proceed with the washing of the line pumping down to empty the line at the end of the operation.

Finally charge the equipment with demineralised water only, filling and pumping down the equipment consecutively twice.

The spraying equipment is now ready to use epoxy water based coating.

- **Cleaning of the substrate before coating application**

The steel , before coating application shall be preliminarily cleaned, made free from any contaminants and accurately degreased from any residual of oils, fats, etc. which could cause cissings on the coating film known as “Eye holes”

Successively the substrate must be blasted with specific abrasive (selected and clean) down to minimum grade Sa 2,5 according to ISO 8501/1 and at the end of the roughening operation the surface roughness shall be of 40-50 µm RZ DIN.

Then proceed with full dust collection by dry air (minimum cleanness degree class 2-3 according to ISO 8502-3), followed by the coating application of PIPESTOP 100 WB within the time limit as shown in the following table (the limits have been calculated in relation with the Relative Humidity of the ambient where the operation is performed)

Relative Humidity (R.H.)	Maximum elapsed time
80% ≤ R.H. ≤ 85%	2 hours
70% ≤ R.H. ≤ 80%	3 hours
R.H. ≤ 70%	4 hours

### • Coating Application

Each component, before its use, shall be separately conditioned at the temperature of +20°C / +25°C. Before starting any use of the material in the container it is necessary to verify that each component is homogeneous and kept under light stirring.

**The suggested temperature** for the use of the coating mix is of + 25°C / +30°C

Mix the two component in the right exact mixing ratio (as stated in the MTDS of the product), for at least 5/10 minutes under light stirring (mechanical or manual) avoiding to incorporate too much air in the mix. Let the mix charge to rest for further 5/15 minutes.

Now the pot life time start to run.

The product can be thinned with Demineralised water up to a maximum of 3-5%

### Thinning procedure

Add the component B (Hardener) to the component A (Base) previously and separately homogenized and then mix them accurately respecting the right mixing ratio indicated in the MTDS (5/10 minutes under Light stirring - mechanical or manual - avoiding to incorporate too much air in the mix).

Only at this point, the demineralised water can be added in the stated percentage continuing to stir the mix to reach the complete whole homogenisation.

The final mix got must rest for 5/15 minutes

Start the recycle of the product in the equipment

Adjust all the parameters available to get the required thickness

**Nozzle**, nozzle pressure, Air pressure, indicatively as shown in the product MTDS, subject to field set up.

**Note:** Not all the parameters are indicated as usually adjusted during the coating operations keeping under consideration all variable factors such as, considering the internal coating of pipelines, pipe dimensions, rotating speed, axial speed, thickness of the coating, etc.

During the application work, keep the coating under light movement and check from time to time the pot life is not exceeded

### IMPORTANT

Any time the work is stopped for any reason and at least every shift change, it is necessary to clean suitably the container of the coating mix and the nozzles involved with a proper cleaner (Cleaner Pipestop 100 WB). This operation is MANDATORY

Keep under control the walls of the mix container to avoid the presence of film thicknesses whose drying could cause the formation of coating coagulations (curdles) and foul the new batch of coating.

### REPAIRS

The accepted defects according to the purchaser specifications must be repaired.

The protection of the uncoated areas of the substrate and the repairs of the substrate parts involved by the specimen laid, can be performed after only 3, 4 hours of flash period (+20°C – ventilated ambient), as the coating is sufficiently dried but still adhesive to receive the subsequent coat of paint. In this case a good interlocking action (integration) between the two coats is reached.

This operation can easily be performed using a medium size brush.

#### Procedure

Apply a first coat to well penetrate the pores of the roughness, making pressure on the pores of the substrate to help the product to enter.

Immediately after apply a second coat to level the thickness of the proper coating in the nearby of the repair (this last operation, alternatively to the brush application, can be performed by spray with mixed air cup where the coating in the cup has been previously diluted with water up to a maximum of 5-10%. To become familiar with this operation we suggest to simulate a repair before the work.

The same procedure can be used for small defects repairs if resulting at the visual control during first coating operations which can be done on the just applied product, respecting the over-coating interval indicated in the MTDS and above.

The surface to be repaired must be kept fully dry until proceeding with the repair applications.

The repairs subsequent to destructive tests or to areas with presence of porosity, to be performed on the fully cured film and exceeding the over-coating interval time, must respect the following steps :

- Roughening of the involved area by mechanical abrasive job (sanding/grinding).
- Accurately remove all dust
- Apply first coat of product as previously described, than complete the job with a second coat to reach the required thickness of the film

All the repaired areas, after curing, must be re-inspected by holiday detector (Pinholes free) and elcometer (Dry Film Thickness), to verify the absence of any discontinuity in the coating film.

Should You need further information, please contact our Technical Department.