



Chem~Bar™ 900

Aluminium Finish and Metal Spray Sealer

Data Sheet

FEATURES

Chem~Bar 900™ Aluminium is a specialised variant of the well-proven Altex Chem~Bar 900™ technology providing a clean bright aluminium finish with application characteristics that may be optimised for sealing thermal metal spray.

Chem~Bar 900™ Aluminium:

- Developed from proven technology
- Quality aluminium finish
- Designed for use as a sealer over:-
 - Zinc Metal Spray
 - Zinc / Aluminium 95/5 Metal Spray
 - Aluminium Metal Spray
- Improves the appearance of metal spray
- Increases the performance life of metal-spray
- Long term self re-coatability with minimal surface preparation

Limitation:

The alignment of aluminium flakes in aluminium-filled finishes is very dependent on application conditions and techniques. Care must be taken to keep conditions as constant as possible to reduce variations in final appearance. It is also advisable to work from a single batch of material since variations can occur from batch to batch. For more information consult Altex Technical Services.

RECOMMENDED USES

Chem~Bar 900™ Aluminium is a single package high performance aluminium filled vinyl-acrylic finish suitable for use as a general-purpose aluminium finish and for sealing thermal metal spray.

Chem~Bar 900™ Aluminium may be used in all atmospheric exposures where traditional aluminium finishes may be employed; including:

- Pulp and Paper Industry
- Chemical Process Industry
- Sewage and Waste Water Plants
- Water Tank & Silo Exteriors
- Refineries
- Fertiliser Plants
- Marine Installations
- Bridges
- Power Projects
- Containers
- Shipping

Not recommended for immersion, or contact with solvents or fats, or for exposure in strongly acidic or alkaline environments.

SPECIFICATION DATA

Coating Type:	Vinyl-acrylic
Colour:	Aluminium
Packaging:	10 litre pails
Mix Ratio:	N/A – Single pack
Gloss:	High metallic sheen
Flash Point:	27°C
Thinner:	Altex Thinner #10
<u>For GP Finishing</u>	Add 0 – 15% by volume
<u>Metal-Spray Sealing</u>	Add 25 -30% by volume
Pot Life:	N/A – Single pack
Induction Time:	N/A – Single pack
Application:	Spray
Dry Times (40 µm DFT / 50% R.H. / 25°C):	
Touch Dry	1.5 hours
Recoat	Overnight
Hard Dry	4 hours
Storage:	Store under cool, dry conditions

Density:	1.05 kg per litre
VOC:	565g// litre
Temperature Resistance:	70°C - dry
Volume Solids:	35%
Theoretical Coverage Rate:	8.8 square metres per litre at 40 microns dry
Recommended Film Thickness Per Coat Calculated for Un-Thinned Material:	
<u>As General Purpose Finish</u>	114 microns wet to obtain 40 microns dry
<u>As Metal-Spray Sealer</u> (above Metal-Spray surface**)	67 microns wet to obtain 20 microns dry
**To calculate consumption / spreading rate when sealing metal-spray add 15 microns DFT equivalent per 100 microns of metal spray substrate; for example:-	
Metal-spray substrate is 150 microns average; therefore required DFT equivalent to achieve 20 microns <u>over</u> the metal spray = 20 + (1.5 x 15) = 44.5 microns DFT equivalent consumption	

SURFACE PREPARATION

All surfaces must be sound and free of oil, grease, dirt, form release agents, curing compounds, loose and flaking paint, moisture and other foreign substances.

Over Primed Substrates:

Chem~Bar 900™ Aluminium is self-priming as a 2 or more-coat system or may be applied to surfaces primed with a compatible primer. Compatible primers include Chem~Bar™ 3500 Primer, Multi~Bond Primer, High Build Rust Barrier, Zinkex 100, Carbozinc® 859 EZ2, and Carboguard® 504.

Over Thermal Metal-Spray

Chem~Bar 900™ Aluminium should be applied to clean freshly applied metal-spray. To achieve full penetration of the metal-spray pores it is important to thin this material; see for further details see Directions for Use below.

DIRECTIONS FOR USE

Mixing:

Use mechanical agitation for proper mixing to ensure homogeneous condition. Stir until thoroughly mixed.

Thinning:

For application as a general purpose finish coating, thin Chem~Bar 900™ Aluminium as required; generally in the range of 0 – 15% addition of Altex Thinner #10.

For sealing metal-spray it is essential to thin Chem~Bar™ 900 Aluminium to maximize penetration into the porous substrate. The recommended rate of thinning is 25 – 30% v/v Altex Thinner #10.

Clean-up:

Use Altex Thinner #10

Application:

The preferred method of application Chem~Bar 900™ Aluminium is spray. Small areas may be brushed, however care must be taken to ensure that the correct film thickness is obtained.

Suggested spray equipment is:

Conventional Air Spray

1.0mm to 1.6mm Fluid tip with appropriate air cap.

(Note: Other equipment equivalent to the above may be used.)

As Metal-Spray Sealer (above Metal-Spray surface**)

A 20 microns dry film is normally required over the sealed metal-spray.

The required wet film thickness should be calculated allowing for added thinner. Therefore if thinned +25% the required WFT over the metal spray is calculated as follows:-

Theoretical WFT plus 25% = $(67 \times 1.25) = 83.75$ microns.

How to calculate extra material consumption for filling metal-spray pores:

Correctly applied metal-spray typically has voids amounting to 12-16% within the metal film; to properly seal these voids extra paint material will be required. Taking an average 15% void content material consumption can be calculated as follows:-

**To calculate consumption / spreading rate when sealing metal-spray add 15 microns DFT equivalent per 100 microns of metal spray substrate; for example:-

Metal-spray substrate is 150 microns average; therefore required *DFT equivalent* to achieve 20 microns over the metal spray and fill the metal-spray pores = $20 + (1.5 \times 15) = 44.5$ microns DFT equivalent material consumption.

Therefore base theoretical calculations for paint usage on a required DFT of 44.5 microns.

PRECAUTIONS

For industrial use only: Read and follow all the caution statements on this Product Data Sheet, the product label and the Material Safety Data Sheet (MSDS) for health and safety information prior to use.

Chem~Bar 900™ Aluminium is flammable. Keep away from heat, sparks and open flame. Use with adequate ventilation. May cause eye and skin irritation. Do not breathe vapour or spray. Wear suitable protective clothing such as gloves and eye and face protection.

WWW.ALTEXCOATINGS.COM

Head Office New Zealand
Altex Coatings Ltd
91-111 Oropi Road
Greerton, Tauranga 3112
Ph : +64 7 541 1221
Fax : +64 7 541 1310

Head Office Australia
Resene Paints (Aust) Ltd
Industrial & Marine Division
7 Production Avenue, Molendinar
Queensland 4214
Ph : +61 7 5512 600
Fax : +61 7 5512 697

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