

PowderCoat ...for Aluminum Embed Angle

In an effort to help “*clean up the environment*” and for a better protective coating, Ohio Gratings has discontinued the use of wet paints including bituminous for its coating of aluminum embed angle and currently offer gray polyester powder coat as our standard color. Other colors are available upon request.

As far back as 1965 the aluminum industry has recommended protecting aluminum that is embedded in concrete with an asphalt-base coating, bituminous paint or other inert or insulating coating. Early studies showed that under certain conditions corrosion of aluminum developed where there was reinforcing steel and a calcium chloride mix in the concrete which then caused a reaction to the embedded aluminum conduit.

Early coatings of coal tar epoxy and bituminous paint have been used successfully in preventing corrosion prior to embedding aluminum conduit, angle or other aluminum product into concrete during the construction phase.

However, in recent years these finishes have come under scrutiny due to the hazardous nature of the material for both health and environmental issues. Skin contact and inhalation

of fumes top the list of health concerns while discarding unused portions of these coatings and discarding solvents used for clean up are cause for concern on the environmental side.



As we consider the environment more and more, projects by both the private and public sectors are requiring a percentage of the overall project to use “green products” during construction. This has also included the various finishes which are required in every phase of the construction process.

Many improvements have been made with powder coating being one of the more impressive. Powder coating is considered “green” and can be recycled as it is applied in a confined space and requires no messy clean up. It is also applied much more consistently since it is sprayed on and not brushed on as is the case with wet paint applications.



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Coating Comparisons

	PowderCoat	Bituminous Paint	Coal Tar Epoxy
Moisture Resistance	Excellent	Good*	Good*
Chemical / Solvent Resistance	Excellent	Good*	Good*
Corrosion Protection	Excellent	Good*	Good*
U.V. Resistance	Excellent	N/A	Poor
Insulation Barrier	Excellent	Good*	Good*
Mil Thickness	5+	Varies	Varies
Environmentally Friendly	Yes	No	No
Hazardous Vapors	No	Yes	Yes
High Temp. Conductivity	Yes	Yes	Yes
Curing Time	.5 hrs.	12+ hrs.	12+ hrs.
Flexibility	Yes	Yes	Yes
Colors Available	Any	Black	Black
Permanent Finish	Yes	No	Yes
Application Method	Sprayed	Brushed	Brushed

*If materials are properly cleaned and blasted, protection levels increase for bituminous and coal tar epoxies.

PowderCoat - Benefits & Features

✓ **High Impact Resistance** - Reduces chipping or scratching offering longer life than paint.

✓ **Uniform Finish** - Eliminates sags and runs in mil thicknesses to manufacturer's spec.

✓ **Color / Texture Variety** - Metallic finishes, flat to gloss coatings, custom or standard colors in smooth, wrinkled, matte or rough textures.

✓ **Longlasting Durability** - Resistant to:

- Heat
- Fading
- UV Sunlight
- Corrosion
- Impact
- Abrasion
- Scratching
- Peeling

✓ **Environmentally Friendly** - E.P.A. approved, pollution free, uses NO solvents and creates NO toxic waste.

✓ **Bending Flexibility**



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