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ACRACOAT AL ANTI-OXIDATION Technical Data Sheet

General Information:

The current market for aluminum anti-oxidation primers is held by solvent-borne coatings, typically at low solids contents (approx. 25%), and these do not meet the strict VOC (Volatile Organic Content) guidelines arising throughout North America. These perform the task reasonably, but require that the base metal be de-rusted and pre-cleaned to a large extent, and subsequent painting with a quality topcoat is necessary to maintain the anti-oxidation abilities.

Acracoat AL is an aqueous primer which we feel meets both ecological concerns and provides high resistance to long-term oxidation resistance, and will prevent oxidization of Aluminum.

A fault of aqueous coatings of the past is the need for coalescent to provide the necessary film hardness and abrasion resistance. The use of co-solvent adds a large VOC component to the paint decreasing some of the benefits of using aqueous paints in preference to solvent-borne coatings. Our primer has no co-solvent or plasticizer and can offer a zero VOC anti-oxidation primer.

Possibly the most important feature of these metal primers is that they do not contain any heavy metals. This offers a tremendous ecological benefit when these paints replace the more common solvent-borne often containing zinc chromates or other toxic metal-based additives.

Benefits

- 100% aqueous, meets zero VOC criteria (EPA method 24, ASTM D-2359)
- Air dries rapidly, in minutes, similar to solvent systems
- Can be brush, roller, dip or spray applied, after appropriate viscosity adjustment
- Can be applied to previously oxidized surfaces
- Provides proven, long-term bond to Aluminum, i.e. outstanding adhesion
- Odorless
- Can be top coated with aqueous or solvent-borne paints, or self-top-coated
- Primer has good outdoor weather-ability without top coating
- Primer has excellent , and early water and chemical resistance
- Environmentally friendly and non-flammable
- Rapid resistance to severe scuffing and abrasion
- Protection is not based upon heavy metals
- Since it is pigment-free, settling or separation in dip tanks is negligible
 - *Though the method of application, condition of substrate and coverage rate will influence performance, it is noted that Acracoat applied in two coats exhibit excellent corrosion resistance, according to DIN50021, as follows, representing 240 hours of salt-fog exposure, without top-coating.*
- No spread at the cut-line
- No oxidation spots below the paint
- No blisters on the surface.

ALUMINUM ANTI OXIDATION ACRACOAT AL

Properties

The physical properties of Acracoat Anti-Oxidation primer are as follows:

Chemistry.....	proprietary acrylic waterborne
Solids.....	>40%
Color.....	Clear
Odor.....	Negligible, can be used indoors
Volatiles.....	None - only water
Cure time.....	<1 hour
Topcoat.....	typically after 3 hours
Elongation %.....	1396 (ASTM D-412)
Abrasion resistance.....	Very high
Water resistance.....	Very high and rapid attainment
Application.....	Brush, roller, spray, or dip with appropriate viscosity adjustment
Restrictions.....	Not restricted by WHMIS or TDG, not a hazard, no RTK or SARA restrictions
VOC.....	Zero according to EPA method 24, and ASTM D-2359
Coverage (theoretical).....	770 square feet per US gallon @ 1 mil coat weight

This primer may be top-coated immediately or even self-top-coated. It has an outstanding weather-ability. The only caution is that it should not be applied to metals that have a fresh coating of oil or mold release, as is common practice from some steel manufacturing plants. In these cases the metal should be pre-cleaned to remove the deposits or left outdoors to weather away these deposits before priming. In our testing the anti-oxidation properties were still attained when applied over oily surfaces but this is to be avoided wherever possible.



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MSDS SHEET

TRADE NAME: ACRACOAT AL

CHEMISTRY: MODIFIED STYRENE / ACRYLIC LATEX

FORMULA: ACRACOAT

USE: METAL PROTECTION FINISHES TO CONTROL OXIDATION

PHYSICAL DATA

APPEARANCE: WHITE EMULSION

ODOR: SLIGHT

MELTING POINT: N/A

BOILING POINT: 100 DEG C.

DECOMPOSITION TEMP: N/A

SPECIFIC GRAVITY: 1.01

VISCOSITY: 30-100 cps.

WATER SOLUBILITY: DISPERSES BUT IS NOT WATER SOLUBLE

SOLIDS PERCENTAGE: ~42%

PH: 9.5

INGREDIENTS	WEIGHT %	CAS #	LIMITS	TOXICITY
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HAZARDOUS INGREDIENTS

THIS IS NOT A CONTROLLED PRODUCT UNDER WHMIS (HPA BILL C-70)

THIS IS NOT A TRANSPORT REGULATED PRODUCT (TDG)

THIS PRODUCT IS ZERO VOC (ASTM D-2359, AND EPA METHOD 24)

THIS HAS NO REPORTABLE CONTENT BY SARA III

THIS HAS NO RIGHT-TO-KNOW CONTENT

THIS PRODUCT IS NON-FLAMMABLE AND CONTAINS NO SOLVENTS

FIRE AND EXPLOSION HAZARDS

FLASH POINT: NOT FLAMMABLE, AQUEOUS SYSTEM WITHOUT A FLASH POINT

METHOD: TCC

AUTO IGNITION TEMP: N/A

EXTINGUISHING MEDIA: WATER

FIRE FIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS SUGGESTED

UNUSUAL HAZARDS: NONE

HAZARDOUS DECOMPOSITION PRODUCTS: N/D

HEALTH DATA

ROUTE OF ENTRY: INGESTION OR SKIN

EFFECT OF ACUTE EXPOSURE: NO IRRITATION OF SKIN

EFFECT OF CHRONIC EXPOSURE: NONE KNOWN

SKIN IRRITATION: NON IRRITANT

EYE IRRITATION: MILD IRRITANT

CARCINOGENICITY: NONE KNOWN, OR EXPECTED

OTHER HEALTH DATA: NO MUTAGENICITY, TERATOGENICITY, and REPRODUCTIVE TOXICITY KNOWN

ROTECTION INFORMATION

VENTILATION: NOT REQUIRED, BUT SUGGESTED FOR INDOOR USE

RESPIRATORY PROTECTION: RECOMMENDED IF MISTS ARE GENERATED

GLOVES: SUGGESTED

GOGGLES: SUGGESTED

OTHER MEASURES: NONE

FIRST AID MEASURES

EYES: FLUSH WITH WATER FOR 15 MIN.

SKIN: SOAP AND WATER

INGESTION: DILUTE WITH FLUIDS

INHALATION: CAUSES NO EFFECT



REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: NONE

INCOMPATIBILITY: STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCT: CARBON MONOXIDE, CARBON DIOXIDE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

OXIDIZER PROPERTIES: NOT AN OXIDIZER

SPILL AND DISPOSAL PROCEDURES

SPILLS & LEAKS: ADD AN ABSORBENT

WASTE DISPOSAL: CAN BE LAND FILLED

STORAGE AND HANDLING

PROCEDURES: STORE IN COOL VENTILATED AREA

ECOLOGICAL DATA

BIODEGRADABILITY: NOT KNOWN

AQUATIC TOXICITY: NOT AVAILABLE, AVOID CONTAMINATION OF WATER

HAZARDOUS CLASSIFICATIONS

WHMIS CLASS: NOT CONTROLLED

TRANSPORTATION CLASS: NONE LISTED U.N. # NONE

SPECIAL LABELING: NONE

LISTED DSL: YES

LISTED CEPA: YES

LISTED TSCA: YES

LISTED TDG: NOT REGULATED FOR TRANSPORTATION

HMIS CLASSIFICATION: HEALTH: 1 FIRE: 0 REACTIVITY: 0 OTHER: 0

PREPARATION INFORMATION

REVISION DATE: January 01, 2013

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