

DESCRIPTION

Sun/Steel Enamels are fast drying, water-reducible finishes for general industrial use on steel either as a single topcoat over properly primed surfaces or as a DTM finish when used with two coats. The first coat must have an overnight dry.

ADVANTAGES

- VOC 2.53 lb/gal (304 g/l) Coating:
- VOC 1.0 lb/gal (120 g/l) Material
- Fast air drying
- Excellent corrosion resistance
- Good early moisture resistance
- Excellent adhesion to untreated clean metal, both cold and hot rolled steel
- Reduces with water – means considerable cost savings in solvents
- Free of lead and chromate hazards
- No flash point – reduces fire hazards – lower insurance rates
- Application by various spray methods
- Lower odor improves working conditions
- Water can be used for cleanup of spray guns and other equipment

SURFACE PREPARATION

Substrate should be free of grease, oil, dirt, fingerprints, drawing compounds, any contamination, and surface passivation treatments to ensure optimum adhesion and coating performance properties.

New Galvanized Steel: Use recommended pre treatment

Aged Galvanized Steel: Remove oxidation by cleaning.

Steel or Iron: Remove rust, mill scale, and oxidation products.

For best results, treat the surfaces with a proprietary surface chemical treatment of zinc or iron phosphate to improve corrosion protection.

Testing: Due to the wide variety of substrates, surface preparation methods, application methods, and environments, the customer should test the complete system for adhesion and compatibility prior to full scale application.

Product Limitations:

- Package stability is 12 months. Indoor storage at 50-90°F is recommended.
- Higher relative humidity will increase dry time.
- Do not spray at air temperatures below 50°F.
- Liquid water reducible coatings may cause corrosion/rusting in the presence of steel. Tanks, containers, piping, and application equipment should be lined, stainless steel or plastic.
- Heavier film thickness will give slower dry time and higher gloss. Follow recommended film thickness for optimum performance.

APPLICATION

APPLICATION TEMPERATURE:

Substrate temperature between 55 to 100 deg F

Product temperature between 75 to 90 deg F

Reduce with hot water in the winter, cold water in the summer.

Do not over reduce as sagging will occur.

APPLICATION EQUIPMENT

Water-reducible enamels must be applied at higher viscosities than solvent-based enamels. They apply and atomize easier at higher viscosities. Do not over reduce.

Conventional Spray:

Reducer: Water or IPA

Reduction: As needed, material thinned to 20-25 seconds Zahn #3.

Note: Use oil & water extractor in air line per manufactures instructions. Drain daily or more often as needed especially in area or period of high humidity.

Airless Spray:

Reducer: Water or IPA

Reduction: As needed, up to 10%

Pressure: 1800-2300 psi

Tip: .011" - .017"

Air Assisted Airless:

Air pressure: 15-30 psi

Fluid Pressure: 600-900 psi

Cap/Tip: .011" - .013"

Reducer: Water or IPA

Reduction: As needed

Electrostatic Spray:

See salesman, system's are now in testing

HVLP: (Mach I)

Air Pressure: 70-90 psi

Fluid Pressure: 3-10 psi

Fluid nozzle: #94 (.055")

Reducer: Water or IPA

Reduction: As needed, up to 5%

Dip:

Reducer: Water

Reduction: As needed, up to 15%. A 3:1 blend of water and butyl Cellosolve, is necessary for tank maintenance. Monitor and adjust tanks for viscosity, pH (8.5-8.9), and stability.

Excessive agitation or turbulence on part immersion or withdrawal may cause foaming.

CLEAN-UP

Use water when wet. If no longer water soluble, then clean with Lacquer Thinner. Follow manufacturer's safety recommendations when using any solvent

CHARACTERISTICS

GLOSS: ASTM D523 on a 60° meter - Very High Gloss 90+

COLOR: Hi-Hide White, Black, CAT Yellow, Safety Red, Safety Yellow, Forest Green., Silver Aluminum, and unlimited Custom matched colors using new ZERO VOC Colorants.

SOLIDS BY WEIGHT: 36 ± 2% (may vary by color)

SOLIDS BY VOLUME: 25 ± 2% (may vary by color)

VISCOSITY

As packaged: 78-84 Krebs Units

RECOMMENDED FILM THICKNESS

Mils wet: 3.0 – 3.9

Applications, greater than 6 mils, paint will run

Mils dry: 1.0 – 1.3

RECOMMENDED SPREADING RATE: (no application loss)

@ 1 mil dft: 496 sq ft/gal

DRYING SCHEDULE: 1.0 mils dft, 77°F, 50% RH:

To touch: 30-45 minutes

To handle: 60-90 minutes

Tack free: 45-60 minutes

To recoat: 30-60 minutes

To pack: overnight

Force Dry: 15-30 minutes at 150-180°F

NOTE: Good air movement and humidity control are necessary for proper drying of water reducible coatings. Coating millage and substrate temperature effect the above drying schedule. Please contact your salesman if you are unsure how environmental conditions may affect your results.

FLASH POINT: > 212°F (Seta Flash)

pH: 8.5 – 8.9

PACKAGE LIFE: 1 year, unopened

PERFORMANCE TESTS

Salt Spray Test

ASTM B117: 400 hours

Freeze/Thaw Cycles

ASTM D2243: 20 cycles

VOC

COATING VOC: 2.53 #/gal or 304 g/l

This is an “artificial” VOC computation that the EPA and AQMD use to regulate paints and coatings that contain either water or exempt solvents. The *COATING VOC* is sometimes called the *Regulatory VOC*, and this is the VOC that air quality districts use to determine whether or not the paint is in compliance with the limits set by a rule.

MATERIAL VOC: 1.0 #/gal or 120 g/l

This is the *actual or real amount of VOC that a gallon of paint contains*. Always use the MATERIAL VOC to calculate actual VOC emissions.

STORAGE

WINTER:

PROTECT FROM FREEZING:

Store product inside a building, preferably with heat to maintain a climate of no less than 50°F. If stored outside, protect with blanket material and store under canopy if possible.

SUMMER:

PROTECT FROM EXTREME HEAT:

Store inside a building or under canopy to prevent direct sunlight exposure. Extreme heat will destabilize the product by affecting to pH and resins.

Flammability

This product is exempt under section 1501.2 of the 2009 International Fire Code.

Chapter 15 regulates spray finishing with any material defined as a flammable or combustible liquid by requiring that the spraying operation be confined to either a spray booth or an approved spray room. This section clarifies for the code user that liquids that do not have a fire point and a water-miscible liquids with a flash point over 95°F (35°C) having an aggregate water and inert solid content by weight of at least 80 percent are not regulated by Chapter 15.

CAUTIONS

Do not apply product to exposed steel if threat of rain is imminent.

Thoroughly review product label for safety and cautions prior to using this product. A Material Safety Data Sheet is available from your local Sunburst Coatings Distributor. Please direct any questions or comments to your local Sunburst Coatings Distributor.

Note: The information, rating, and opinions stated here pertain to the material currently offered and represent the results of tests believed to be reliable.

As of Date: 4/1/2024