

SpectrULite[®] organics | TECHNICAL INFORMATION

88 SERIES WATERBORNE ORGANIC COATINGS: TWO - PACK SYSTEM 1.0 PRODUCT CHARACTERISTICS

1.1 GENERAL PROPERTIES

TWO-Pack, high reactive coating with excellent glass adhesion and outstanding scuff resistance, recommended for clear, frosts, whites and colored transparent coatings

Solids	35% Approx – polyester base
V.O.C.	LOW - Max 10% by weight
Flash point	> 60°C, 140°F
Density	1.06 g/ cm ³ +/- 0.03
Scuff Resistance	Outstanding in high speed decoration and filling lines
Recommended colors	Clear, frosts, whites and colored transparents

1.2 RECOMMENDED APPLICATION PARAMETERS

Application Methods	Hand held or automatic spray gun, electrostatic disc or aerobell spray equipment. Very good flow properties, especially well suited to electrostatic disc application
Application Conditions	Glass Temperature: 20 - 30°C (68 - 86°F) Air Temperature: 20 - 30°C (68 - 86°F) Relative Humidity: 60-80%
Application Viscosity	27-33 seconds #4 Afnor @ 24°C, 75°F
Applied Film Thickness	20 to 30 microns average Wet film thickness
Filtering	Filtering before use is recommended: Frost: 25 - 50 microns filter Clear/colors : 10 – 25 microns filter
Atomization Pressure	30-60 psi (2– 4 bar) depending on application
Spray Gun Nozzle Size	Hand held gun : 0.5 – 1.5 mm diameter. Automatic machine : 0.5 – 1.0 mm diameter
Thinning	TWO - pack system. Thinning with distilled or de-ionised water is necessary to prepare the product for application, according to individual requirements.
Cleaning	Immediately after use, wash the spray equipment with de-ionised or distilled water. The wet coating can be cleaned up with water or a wet towel. Dried coatings must be cleaned with acetone or MEK. Paint thinners, mineral spirits or turpentine is not recommended.

1.3 CURING/DRYING OF PRODUCT

Curing Method	Convection oven or lehr.
Curing Parameters	Flash dry: 2-3 minutes at room temperature up to 80°C Fast Curing: 10 mins. at 180°C (356°F) glass temperature

1.4 GENERAL PERFORMANCE CHARACTERISTICS*

Pencil Hardness	>4H
MEK/Acetone Double Rubs	>50
24 Hours soak in Water/Ethanol/G1 liquid	Pass

***Note:** Performance characteristics based on testing conducted in Ferro development laboratories. Data is given for general comparison only; it is not a guarantee of performance in a particular application. It is always recommended that the customer evaluate the coating for suitability in the intended application. We strongly recommend that all safety precautions be followed as per the relevant Ferro MSDS.

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2.0 PRODUCT PREPARATION

The 88 Series water-borne organic coatings are supplied as a TWO-Pack system to maximize glass adhesion. Ensure that the product has been well mixed prior to use. Some settling may occur during prolonged storage. Product temperature should be equivalent to your room temperature prior to measuring viscosity or application of the material. The viscosity has to be adjusted to meet individual requirements by adding deionized water.

Add 3 parts of Adhesion Promoter 85-6010 to 100 parts of SpecTruLite 88 series under agitation. Wait at least 30 minutes before using the mixture. The Pot Life of the mixture is maximum 8 hours.

Filtering before use with a 10 - 25 micron filter is recommended; for Frosts, the filtering recommendation is to use a 25 – 50 micron filter.

Thinning is necessary in order to prepare the material for spray application. Distilled or de-ionized water is recommended for thinning. Do not use tap water; salts present in tap water may cause lumps or gelling to occur or may cause water sensitivity of the cured film. Water should be added slowly while the coating is under agitation. Coating should be mixed gently to assure uniformity. Do not mix under high-speed agitation, as this may whip or entrap air into the coating and affect spray performance.

3.0 SUBSTRATE PREPARATION

Cleanliness of the substrate is extremely important. Dirt, dust, fingerprints, wax, lubricants or oils on the glass or in the workplace environment can cause surface defects or performance problems. Cold end coatings based on polyethylenes, soaps, oleic acid are known to cause wetting problems or adhesion issues and should be removed.

4.0 CURING PARAMETERS

For complete curing and best performance, the 88 Series coating and the substrate should reach a temperature of about 180°C (356°F). In forced air ovens and lehrs a recommended starting point cure cycle is 10 minutes at 180°C (356°F). The actual time necessary to cure the coating is dependent on the heat transfer rate of the oven or lehr and the size, shape, and thickness of the ware. Infrared ovens can allow faster cross-linking cycles of the coating, and hence shorter cycle times. Blistering can occur if the wet film is heated too quickly. A flash dry of 2 - 3 minutes at room temperature up to 80° C is recommended to avoid any blistering.

The final appearance of the coating will be achieved upon curing. Other firing cycles are possible according to the required chemical-mechanical properties. Any firing cycle chosen should be checked on the specific installation under normal production conditions. Cured film can be tested by rubbing with a rag soaked in a strong solvent (MEK or acetone) – if under-cured, the solvent will remove the film.

5.0 STORAGE RECOMMENDATIONS

This product contains water and freezing can occur at temperatures below 0°C (32°F). Product must be stored in cool and dry conditions. The storage temperatures should not be below 10°C (50°F) and not exceed 35°C (95°F). Settling may occur if stored for long periods of time. Before use, products must be stirred thoroughly. Partly used containers must be tightly sealed after use. Product should always be filtered as it is transferred into spray equipment. If stored as recommended, a shelf life of six months after the production date is guaranteed.

6.0 QUALITY ASSURANCE

In accordance with the quality management system of Ferro Glass Systems, certified to DIN EN ISO 9001, SpecTruLite 88 Series organic coatings have to pass stringent quality control after production. Each production lot is carefully checked and compared to our production standard.

Only those batches that meet Ferro standards are released for sale.

IMPORTANT INFORMATION

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