

## COATING RESINS

### TECHNICAL DATA

### CRAYVALLAC SLX

#### SALES SPECIFICATION

Particle size distribution:  
(Malvern Mastersizer S laser particle size  
analyser) (CR005)

DV.1 min.	1.8 µm
DV.9 max.	15.0 µm

#### OTHER PROPERTIES

Density at 25°C (77°F), g/cm <sup>3</sup> (CR006)	0.99
Bulk density, g/cm <sup>3</sup> (CR016)	0.40 - 0.60
Appearance	Off white powder
Capillary Melting Point (CR003)	121-135°C (257-275°F)

#### PRODUCT INFORMATION

**CRAYVALLAC SLX** is a high performance micronised amide wax rheology modifier designed for the low temperature manufacture of moisture curing methoxysilane based sealants. The performance benefits of this product are:

- 100% Active
- Efficient activation at 60-90°C (140 - 194°F)
- Reduced production cycle times
- Imparts shear thinning rheology
- Very good extrusion properties
- Excellent sag and slump resistance
- Minimal effect on modulus
- Excellent storage stability

**CRAYVALLAC SLX** is also suitable for the low temperature manufacture of moisture curing methoxysilane based adhesives.

#### RECOMMENDED AMOUNTS

For one component moisture curing methoxysilane based sealants, excellent slump and sag control will generally be obtained when **CRAYVALLAC SLX** is used at a level of 1 - 5% by mass on total formulation.

#### INCORPORATION METHOD AND PROCESSING INSTRUCTIONS

**CRAYVALLAC SLX** is specially designed for the low temperature manufacture of one-component methoxysilane sealants where processing temperatures typically lie within the range 60 - 90°C (140 - 194°F).

With moisture curing methoxysilane based sealants, **CRAYVALLAC SLX** is generally added along with the initial charge of methoxysilane polymer and plasticiser to a vacuum dispersion vessel either with or without heating capability.

This is then followed by the pigments and extenders. Efficient activation of **CRAYVALLAC SLX** is achieved during the vacuum dispersion stage by allowing the batch temperature to rise to 60 - 90°C (140 -194° F). This condition of dispersion would typically be maintained for approximately 30 minutes at 80°C (176°F), or until the required level of dispersion obtained and a suitably low moisture content has been achieved (typically <800 ppm.). Following this, the batch temperature is lowered sufficiently to allow for the safe addition of such additives as moisture scavengers, adhesion promoters and reaction catalysts.

The activation process constitutes the conversion of the **CRAYVALLAC SLX** particles to an interacting network of crystalline fibres. It is this network that gives rise to the shear thinning rheology. This shear thinning characteristic provides for a low viscosity at the shear rates associated with application by extrusion, and a very high viscosity under the low shear rates experienced after application. The net result is ease of application followed by excellent sag and slump resistance. Activation at too low a temperature, or for too short a time, will result in the formation of an inefficient interacting network and consequently poor sag and slump resistance.

The successful manufacture of methoxysilane based sealants is very dependent on the careful control of moisture levels throughout manufacture and storage. For this reason it is normal practice to pre-dry all pigments and extenders prior to dispersion with the methoxysilane polymer. Alternatively, special grades of low moisture content ingredients may be used.

The use of vacuum processing is essentially there to prevent the take up of moisture during processing. Due to the lower processing temperature used, the vacuum processing is not particularly efficient at removing unwanted water residues introduced with the raw materials. Therefore a greater emphasis must be put on the pre-drying of pigments and extenders, or the purchase of special grades of low moisture content raw materials.

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With moisture cured methoxysilane based sealants, we strongly recommend that all additives be quickly dispersed and not allowed to remain in direct contact with the resin component. Prolonged contact may sometimes result in the formation of an insoluble fine skin which later appears as small particles in the final sealant.

Due to the multitude of formulations, processing methods and application conditions used in the field, we strongly recommend that all products containing **CRAYVALLAC SLX** be tested thoroughly to ensure their suitability for their intended end use. We do not recommend the use of **CRAYVALLAC SLX** in paint type applications.

#### **PRECAUTION FOR STORAGE**

**CRAYVALLAC SLX** should be stored in the original containers in a dry place at temperatures between 5°C (41°F) and 30°C (86°F). Avoid exposure to direct sunlight or frost. Under these conditions the product may be stored for up to 4 years from production date.

#### **PRECAUTIONS FOR USE**

Please refer to the corresponding Safety Data Sheet.