

TYPE

Air-drying and stoving epoxy resin ester

FORM OF DELIVERY (f.o.d.)

60 % in xylene (60X)

SPECIAL PROPERTIES AND USE

Superior adhesion, hardness and flexibility.
High pigment loading, radiant gloss.
Excellent resistance to temperature, water and alkali.

Anticorrosive paint systems and primers.
Zinc dust paints.

RESIN COMPOSITION

(approx.)

42 % DCO fatty acid (as triglycerides)

DILUTABILITY

white spirit	⊙	butyl acetate	●
special white spirit 100/140	⊙	methyl isobutyl ketone	●
turpentine oil	●	methoxypropyl acetate	●
xylene	●	methoxypropanol	●
Shellsol AB	●	ethanol	⊙
acetone	●	butanol	●

● = unlimited dilutability
 ○ = substantial dilutability

⊙ = limited dilutability
 ○ = very limited or no dilutability

PRODUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219

dynamic viscosity [mPa.s] 3000 - 4500
 (25 1/s; 23 °C)

Iodine Colour Number DIN 6162

iodine colour number <= 8
 50 % xylene

Acid Value DIN EN ISO 2114

acid value [mg KOH/g] <= 3
 (non volatile matter)

Non-Volatile Matter DIN 55671

non-volatile matter [%] 58 - 62
 (120 °C; 5 min)

Not continually determined:

Non-Volatile Matter DIN EN ISO 3251

non-volatile matter [%] 58 - 62
 (1 h; 125 °C; 1 g)

Density (Liquids) DIN EN ISO 2811-2

density [g/cm³] 0,97
 approx.
 (20 °C)

Flash Point DIN EN ISO 1523

flash point [°C] 25
 approx.

COMPATIBILITY

% Duroxyn EF 900	90	75	50	25	10
% other binder	10	25	50	75	90

Amino resins

Cymel MI-97-IX Resin	●	●	○	○	○
Cymel 370 Resin	●	●	●	●	●

Phenolic resins

Phenodur PR 882	●	●	●	●	●
Phenodur PR 515	●	●	○	○	○

Other binders

nitrocellulose 24 E	○	○	○	○	○
CAB-551-0.2	○	○	○	○	○

● = definite compatibility

○ = very limited or no compatibility

SUGGESTED USES

Duroxyn EF 900 can be used as sole binder for air-drying and stoving paints or in conjunction with amine resins, for stoving primers and finishes.

Air-drying paints

Paints on Duroxyn EF 900 are tackfree within short time and have good through drying in normal film thickness. The films show good flexibility combined with excellent hardness and excellent adhesion, also to non-ferrous metals. Further advantages are resistance to water and diluted alkali.

Duroxyn EF 900 is therefore excellently suited for paints, resistant to tropical climate, interior paints, zinc dust paints, and primer-surfacers.

Stoving paints

Duroxyn EF 900 can be used in the formulation of high quality stoving paints, either alone or in conjunction with low levels of amino resins, preferably melamine resins. The films afford top performance in terms of flexibility, hardness, impact resistance, adhesion to steel and non-ferrous metals, radiant brilliance high build and resistance to water and alkali. Such paints give primers and finishes which are resistant to tropical climate, or primers and fillers for e.g. the vehicle industry, with resistance to water and corrosion. The excellent adhesion and mechanical properties afford impact resistant enamels, e.g. primers-surfacers.

PROCESSING

Duroxyn EF 900 has a very good pigment wetting capacity and is compatible with normal pigments, including reactive pigments. 0.03 - 0.05 % cobalt (metal on solid resin) is a suitable drier, while lead or zirconium siccatives can be coemployed. Antiskinning agents like Additol XL 297 and drying regulators like Additol XL 109 are recommended.

The total film thickness, particularly of several coats should not exceed 30 µm, since through drying is retarded in such cases. Traces of moisture in pigments or solvents may cause defects in gloss and levelling. Levelling aids are high boiling aromatic hydrocarbons, esters or glycol ethers. The paints are applied by spraying or brushing. Stoving paints are formulated in conjunction with Cymel MI-97-IX Resin, with a stoving schedule of 30 min 140 - 160 °C. Up to this temperature, discolouration will not occur. Duroxyn EF 900 has very limited compatibility with binding media other than amino resins.

STORAGE

At temperatures up to 25 °C storage stability packed in original containers amounts to at least 730 days.

DISTINGUISHING FEATURES

Duroxyn EF 900 gives high build paints owing to the low viscosity. Build is better than of Duroxyn EF 935, drying is slower and yellowing of stoving systems is higher. The mechanical properties of Duroxyn EF 900 are slightly superior to Duroxyn EF 935.

Producer:

CAB-551-0.2 (Eastman)