
Technical Information

Lugalvan[®] DC

Wax emulsion for the production of transparent anti-corrosion coatings

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® = Registered trademark of BASF in many countries.

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We create chemistry

Chemical nature Aqueous emulsion of an ethylene copolymer

PRD-No.* 30042710

* BASF's commercial product numbers.

Appearance Lugalvan® DC is a aqueous, highly opaque emulsion.

Handling and Storage

Handling

- The viscosity of Lugalvan® DC may increase slightly during storage. During prolonged storage a crust may form due to water evaporation, in this case it is recommended to filter the product before use.
- Keep the container tightly closed and do not store below 15 deg C for long periods of time.
- Please refer to the latest Safety Data Sheet for detailed information on product safety.

Shelf life Lugalvan® DC has a shelf life of at least 1,5 years, provided it is stored properly in originally sealed drums.

Properties

Some physical properties are listed in the table below. These are typical values only and not all of them are monitored on a regular basis. They are correct at the time of publication and do not necessarily form part of the product specification. A detailed product specification is available on request.

Lugalvan® DC	Unit	Value
Physical form		emulsion
Concentration (ISO 1269 160°C, 2g, 1mg/50s)	%	20 – 22
Viscosity (DIN EN ISO 2431, ISO 2431, no. 4, 23 °C)	s	25 – 170
Density (DIN 51757, 25 °C, ASTM D 1298)	g/cm ³	0.98 – 1.0
pH value (DIN ISO 976, ISO 976, 25 °C)		8.5 – 9.5

Disposal By lowering the pH value to a mildly acidic range, Lugalvan® DC can be precipitated and then separated from waste water by means of filtration.

Application

Lugalvan® DC is available as an aqueous, emulsifier-free polymer emulsion. It can be mixed with water in any ratio, provided that the pH value does not fall below 8.5.

Lugalvan® DC can be applied by dipping, rolling, spinning or spraying. The layer thickness of the polymer film can be adjusted via the viscosity. The viscosity depends mainly on the solids content of the bath, but also on the bath temperature, the pH value or subsequently added additives.

Usually, transparent films of approx. 1 – 10 µm layer thickness are applied (Higher layer thicknesses can be obtained by multiple dipping with intermediate drying). Monitoring of the solid's concentration is recommended in open-stirred baths to achieve constant layer thicknesses.

Drying

Non-tacky parts can be reached within one minute at 80 °C in a hot air oven (depending on size, geometry and layer thickness).

For improved corrosion protection, a longer residence time, e.g. 10 minutes at 80 °C is recommended. Drying at room temperature is also possible, but then the drying time should be at least 24 hours.

Film

Lugalvan® DC forms a well-adherent, corrosion-protecting transparent film on metal surfaces.

It improves the appearance of the sealed products. Substrates can be galvanized steel (passivated or non-passivated) and ungalvanized steel, nickel, aluminum and non-ferrous metals. Use on other metals is possible in principle and must be examined on a case-by-case basis. Lugalvan® DC improves the corrosion protection of metal surfaces considerably, depending on the thickness of the layer.

Furthermore, the paint adhesion is greatly improved compared to the pure metal surface or the passivated surface.

When using Lugalvan® DC on copper or copper containing alloys it may require the addition of benzotriazole (or similar anti-tarnish additives) to reduce the corrosion or discoloration effect (especially for drying above 90°C).

Safety and Labeling

Please refer to the safety data sheet for information on classification & labeling, safe use, handling and transport.

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