Laroflex® MP products

Chlorinated binders that are resistant to hydrolysis and are intended for the production of paints that dry by physical means on iron and steel, nonferrous metals, mineral substrates, and plastics. Also suitable for printing inks and road marking paints.
Laroflex MP products

Nature
Copolymers of vinyl chloride and vinyl isobutyl ether.

Properties

Physical form
Fine, white powder.

Product specification
Viscosity at 23 °C of 20% solution in toluene (ISO 3219, DIN 53214)
Rate of shear D = 250 s⁻¹; 100 s⁻¹ for Laroflex MP 60

<table>
<thead>
<tr>
<th>Laroflex MP</th>
<th>mPa·s</th>
<th>20 – 26</th>
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</thead>
<tbody>
<tr>
<td>Laroflex MP 35</td>
<td>mPa·s</td>
<td>30 – 40</td>
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<tr>
<td>Laroflex MP 45</td>
<td>mPa·s</td>
<td>40 – 50</td>
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<tr>
<td>Laroflex MP 60</td>
<td>mPa·s</td>
<td>≥ 50</td>
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</tbody>
</table>

Other properties
K-value, Fikentscher (ISO 174, DIN 53726) ca. 35
Density at 20 °C (ISO 2811, DIN 53217) g/cm³ ca. 1.24
Vicat softening temperature °C 48 – 58
(ISO 306; Method A/50)
Chlorine mass fraction % ca. 44

Although they have roughly the same K-value, the four Laroflex MP products differ from one another in their viscosity and in the flow characteristics of their solutions.

Solubility
The Laroflex MP products are soluble in aromatic and chlorinated hydrocarbons*, esters, ketones, glycol ether acetates, and some glycol ethers. Aliphatic hydrocarbons and alcohols are diluents and not true solvents for Laroflex MP.

* Only Laroflex MP 25 and Laroflex MP 35 in 1,1,1-trichloroethane

Compatibility
The Laroflex MP products are compatible or partly compatible with vinyl chloride copolymers, polyacrylates, unsaturated polyester resins, maleic resins, cyclohexanone resins, aldehyde resins, coumarone resins, hydrocarbon resins, urea resins, alkyd resins modified by oils and fatty acids, natural resins, drying oils, plasticizers, tars, and bitumen.

Applications
Laroflex MP products are binders in paints for steel structures, shipbuilding and underwater applications, mechanical and automotive engineering, transportation, and the protection of buildings. They are also used in the printing inks industry.

Instructions on formulating Laroflex MP coatings are given in the Technical Information Bulletin, “General instructions on the formulation and application of Laroflex MP coatings”.

Manufacturers must perform their own careful trials in the development of products from Laroflex MP, because experiments on our part cannot embrace the great variety of factors that may exert an influence during production and processing, e.g. the mutual compatibility of the component of a formulation, the behaviour during storage, etc.

Safety

General
The normal precautions relating to handling chemicals and local regulations on industrial hygiene must be observed. The place of work must be well ventilated, skin care measures should be adopted, and safety goggles should be worn.

Safety Data Sheet
Safety Data Sheets with information on all relevant questions have been compiled for the Laroflex MP products.
### Airborne concentration

The Laroflex MP products contain technically unavoidable traces of vinyl chloride. When they are being processed, measures must be adopted to ensure adherence to the limits and other information on vinyl chloride given in the current German MAK list or the current TLV list published by the American Conference of Governmental Industrial Hygienists.

### Industrial hygiene

According to the experience that we have gained over many years and other information at our disposal, the Laroflex MP products do not exert any harmful effect on health, provided that they used for the purpose for which they are intended and the principles of sound manufacturing practice are adhered to.

### Labelling

According to the information at our disposal, Laroflex MP products are not hazardous industrial products in the sense of the German Health and Safety Regulations* or the EEC Guideline on Classification and Labelling.

The Laroflex MP products do not contain any hazardous components in levels that the processor must take into consideration in labelling.

### Food legislation

The composition of the Laroflex MP products conforms to the German recommendation on costings for food containers and packaging**. If the normal precautions relating to sound industrial practice are observed, the coatings obtained satisfy the provisions of the relevant German ordinance on vinyl chloride in food contact applications***.

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## Storage

If they are protected from heat and moisture, the Laroflex MP products can be stored indefinitely.

## Note

The information submitted in this publication is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

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* Anhang I Nr. 1.1 of the Gefahrstoffverordnung

** Empfehlung XL “Lacke und Anstrichstoffe für Lebensmittelbehälter und -verpackungen” (109. Mitteilung Bundesgesundheitsblatt 18, 26 [1975])

*** Bedarfsgegenständeverordnung vom 10. 4. 92 (BGBl I. S 866)