

Mesamoll[®] Plasticizers

Description

Phthalate-free general purpose plasticizer with a good gelling behaviour and an exceptional saponification resistance. It is compatible with many types of polymers including PVC, polyurethanes, and rubber.

Chemical Composition

Alkylsulphonic acid ester with phenol (ASE)

CAS Registry Number

91082-17-6 (ASE)

Appearance

Slightly yellowish, clear liquid

Solubility

The solubility in cold water is low

Typical Properties*

Property	Nominal Value	Unit
Density	approx. 1.055	g/cm ³
Refraction index 20 °C	approx. 1.50	#
Viscosity 20 °C	approx. 125	mPa·s
Color number	max. 350	Hazen
Water content	max. 0.05	%
Saponification number	partial saponification	mg KOH/g
Pour point	-32	°C
Dissolution temperature based on DIN 53 408	120	°C

*The analytical data are guide values.



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Application

General properties

Mesamoll® is characterised by

1. A good compatibility with a large number of polymers.
2. An excellent gelling capacity with a large number of polymers including PVC, resulting in lower processing temperatures and shorter processing times.
3. A good resistance to weathering.
4. A high saponification resistance due to its chemical structure. This is especially beneficial for articles which come into contact with water and alkalis.
5. Favourable dielectric properties for high frequency welding, leading to short cycle times.

Applications

Mesamoll® is used as a plasticiser for a wide range of articles based on polyvinyl chloride (PVC), polyurethane (PUR), and rubber (NBR, NR, SBR, SBR/BR, IIR, CR). It allows the production of AgBB conform articles. Typical applications are:

1. PUR-based sealing and adhesive systems (1-component and 2- component systems) mouldable, easy-to-process sealants for filling or covering joints in structures and parts of buildings.
2. Cleaning: Rinsing and service fluids for polyurethane foaming machinery.
3. Rotational Moulding: Vinyl articles made by rotational casting.
4. Dip Moulding: PVC one way gloves and other articles which are produced by dip moulding.
5. Calendering: Films for different applications such as automotive industry, for tunnel linings and other construction applications, for electrical insulation and adhesive tapes. Because of its good saponification resistance, Mesamoll® can be used in the production of swimming pool covers, shower curtains.
6. Extrusion: Profiles for the automotive industry, jointing strip, tubing, weathering and alkali-resistant structural profiles, blown film.
7. Injection Moulding: Work boots, technical articles.
8. Coatings (including spreading): Coatings for air-supported structures and tents, occupational and protective clothing, rain-wear, bath mats, expanded film, floorcoverings, wall paper, imitation leather.

Packaging

Road tankers, 1000 kg PE-containers, 240 kg metal drums.

Storage conditions

Mesamoll® should be kept in its tightly sealed original container in a dry place. If stored properly, the product is stable for 2 years.

During storage, Mesamoll® should not come into contact with iron for prolonged periods since this may cause discoloration of the plasticizer, especially at temperatures above 40 °C. The materials recommended for transport and storage containers are: aluminium, stainless steel (1.4541 resp. 1.4571), iron containers with an oil-resistant



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coating such as DD coating, tanks in uncoated polyester or, preferably, with an impervious DD coating. As sealants materials should be used which are resistant to Mesamoll® as Teflon® (DuPont Polytetrafluoroethylene) or Centellen® (Synthetic fibre based, Fa. Hecker Werke GmbH & Co KG). To ensure that MESAMOLL® can be easily pumped from outdoor tanks even at low temperatures, tanks should be well insulated and/or the plasticiser heated slightly if necessary. Warm water has proved to be a suitable heating medium. Heating coils should be made of aluminium or, if necessary, of stainless steel 1.4571.

Handling

A receiving inspection is recommended. The product should be stored in its tightly sealed original container in a cool, dry place. Once opened, containers should be resealed tightly after removal of product. Consult material safety data sheet (MSDS) for additional handling information on Mesamoll®.

® = registered trade mark

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