

Palamoll® 652

Low viscosity polymeric plasticizer that is compatible with PVC. Resistant to oils, fats, aliphatic hydrocarbons and bitumen. It has only a slight tendency to migrate into plastics. It is well suited for the manufacture of plastisols.

BASF Registered Name Palamoll® 652

CAS No. 208945-13-5

Average Molecular Weight 3300

Product Specifications

| | Value | Test Method |
|---|---------------|-------------|
| Specific Gravity @ 25°/25 °C | 1.044 - 1.064 | ASTM D-4052 |
| Viscosity @ 25 °C, cP | 1,100 - 1,600 | ASTM D-445 |
| Acid Number, mg KOH/g (maximum) | 1.5 | ASTM D-1045 |
| Water, by weight (% maximum) | 0.1 | ASTM E-203 |
| Color, Pt-Co Units (APHA, maximum) | 150 | ASTM D-5386 |
| Refractive Index n ²⁵ _D | 1.460 - 1.465 | ASTM D-1045 |
| Suspended Matter | COLSFFM* | visual |

*Clear Oily Liquid Substantially Free of Foreign Material

Typical Physical Properties

The following data were measured in the BASF Corp. laboratory. They do not represent any legally binding guarantee of properties for our sales product.

| | Value |
|------------------------------------|---------------------|
| Pour point, °C | -25 |
| Flash point (COC), °C | 252 |
| Odor | mild characteristic |
| Surface Tension, mN/m | 35.0 |
| Solution Temperature, °C | 152 |
| Plastisol Gelation Temperature, °C | 134 |
| Vapor Pressure @ 20 °C, mbar | < 0.1 |
| Solubility in Water @ 25 °C, mg/L | > 0.1 |
| Ignition Temperature, °C | 410 |

Viscosity & Density Data

| Temperature (°C) | Dynamic viscosity (cP) | Density (g/cm ³) |
|------------------|------------------------|------------------------------|
| -10 | 43,000 | 1.081 |
| -5 | 21,200 | 1.076 |
| 0 | 12,000 | 1.073 |
| 5 | 7,190 | 1.069 |
| 10 | 4,480 | 1.065 |
| 20 | 1,940 | 1.057 |
| 40 | 510 | 1.041 |
| 60 | 186 | 1.027 |
| 80 | 86 | 1.013 |

Description

Palamoll® 652 is a low viscosity polymeric plasticizer that is compatible with PVC. It is based on adipic acid and polyhydric alcohols. It is resistant to oils, fats, aliphatic hydrocarbons and bitumen. Because of its low viscosity and ease of processing Palamoll® 652 is used in plastisol formulations. Monomeric plasticizers can be mixed with Palamoll® 652 to further reduce the viscosity and improve the processing, however, this will adversely affect the extraction and migration performance of the plasticized PVC.

Applications

Products that need greater resistance to extraction by oils, fats and aliphatic hydrocarbons than monomeric plasticizers should use Palamoll® 652. Palamoll® 652 has a higher molecular weight than monomeric plasticizers and must be processed at a higher fusion temperature. Palamoll® 652 should be pre-heated to 80°C before being added in the mixing cycle.

Safety

Based on toxicity studies, Palamoll® 652 has a low order of toxicity and does not require special handling. Handle in accordance with good industrial hygiene and safety practices. Avoid eye contact by wearing personal protective equipment. If eye contact occurs, wash with flowing water and contact physician.

Avoid repeated or prolonged skin contact. Avoid breathing vapors by providing adequate ventilation.

Always refer to the Safety Data Sheet (SDS) for detailed information on safety.

Storage and Handling

Palamoll® 652 can be stored for one year at temperatures below 40°C, if moisture is excluded.

If Palamoll® 652 is stored below 20 °C or for a long time at room temperature, it can become wax-like, cloudy and even solidify. This does not affect the properties of the ester. Upon reheating to 30 °C, Palamoll® 652 returns to a liquid state and conforms to its product specifications.

Packaging

Palamoll® 652 is available in bulk tank trucks or drums.

Contact Information**Marketing**

BASF Corporation
11750 Katy Freeway, Suite 120
Houston, TX 77079, USA

Tel: +1 800-533-8961
Fax: +1 713-759-3036
E-mail: plasticizers@basf.com

Technical Support

BASF Corporation
4403 La Porte Highway 225
Pasadena, TX, 77501, USA

Tel: +1 281-884-4432
Fax: +1 281-884-4302

Visit us online at

<http://www.plasticizers.basf.com>

Note

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