Petrochemicals
Plasticizers

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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
Refractive Index $^{\eta}D20$	1.463

Viscosity & Density Data

Temperature (°C)	Dynamic viscosity (cP)	Density (g/cm³)
-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

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