

Palamoll® 654

Medium viscosity polymeric plasticizer for PVC that has a good resistance to oils, fats and water. Good compatibility and thermal stability. It has only a slight tendency to migrate into plastics and adhesives.

BASF Registered Name Palamoll® 654

CAS No. 208945-12-4

Average Molecular Weight 5200

Product Specifications

	Value	Test Method
Specific Gravity @ 25°/25 °C	1.069 - 1.089	ASTM D-4052
Viscosity @ 25 °C, cP	2,900 – 3,900	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	1.466 - 1.468	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	-18
Flash point (COC), °C	288
Odor	mild characteristic
Surface Tension, mN/m	36.5
Solution Temperature, °C	156
Plastisol Gelation Temperature, °C	136
Vapor Pressure @ 20 °C, mbar	< 0.1
Solubility in Water @ 25 °C, mg/L	< 0.1
Ignition Temperature, °C	400

Viscosity & Density Data

Temperature (°C)	Dynamic viscosity (cP)	Density (g/cm ³)
-5	42,650	1.103
0	26,700	1.099
5	17,030	1.095
10	10,900	1.091
20	4,910	1.083
40	1,340	1.068
60	496	1.053
80	228	1.039

Description

Palamoll® 654 is a medium 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. It is soluble in organic esters, ketones, ethers, aromatic and chlorinated hydrocarbons.

Applications

Palamoll® 654 has little tendency to migrate into other plastics and adhesives. It is used in hoses, wire and cable jacketing and protective clothing where extraction resistance to oils, mineral spirits, water and aqueous media is important. Palamoll® 654 is used to plasticize FPVC roofing systems where bitumen, water and sunlight resistance properties are necessary. It is used in FPVC films that will be coated with a dispersion adhesive as well as electrical tape, decorative film and decals. Palamoll® 654 should be pre-heated to 80 °C before addition to the dry blend. The mixing cycle should continue until a temperature of 150 °C - 170 °C is reached, depending on the amount of plasticizer. It has a higher molecular weight than monomeric plasticizers and must be processed at a higher fusion temperature.

Safety

Based on toxicity studies, Palamoll® 654 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® 654 can be stored for one year at temperatures below 40°C, if moisture is excluded.

If Palamoll® 654 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® 654 returns to a liquid state and conforms to its product specifications

Packaging

Palamoll® 654 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

While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. Further, you expressly understand and agree that the descriptions, designs, data and information furnished by BASF hereunder are provided gratis and BASF assumes no obligation or liability for the description, designs, data and information given or results obtained, all such being given and accepted at your risk.

© 2022 BASF Corporation