

**SYDNEY**

25 – 27 Green St  
East Botany, NSW 2019  
Ph: +61 2 9666 3788  
Fax: +61 2 9666 4805

**MELBOURNE**

29 Trade Place  
Vermont, VIC 3133  
Ph: 03 9872 4033  
Fax: 03 9872 4099

**BRISBANE**

Unit 6/5 Deakin Street  
Brendale, QLD 4500  
Ph: 07 3205 8510  
Fax: 07 3205 9616

**SINGAPORE**

H.K. Moey  
9 Elias Terrace  
Singapore 519772  
Ph: +65 6582 8103  
Fax: +65 6584 8100  
Mobile: +65 9751 0026



**TECHNICAL DATA**  
**MESAMOLL OIL**

POLYMER ADDITIVES

**DESCRIPTION**

Mesamoll® Oil is a general purpose plasticizer with good gelling behaviour and saponification resistance. It is suitable for use with many types of polymers including PVC and polyurethanes.

<b>Chemical composition</b>	Alkylsulphonic phenyl ester (ASE)
<b>CAS Reg. No.</b>	91082-17-6 (ASE)
<b>Physical form</b>	Slightly yellowish, clear liquid
<b>Health and safety information</b>	Relevant safety data and references as well as possibly necessary warning labels are to be found in the safety data sheet no. 033204/
<b>Indication according to GefStoffV</b>	Mesamoll Oil is not subject to labelling according to the German Regulations on the Transport of Dangerous Goods, the German Regulation on Dangerous Substances (GefStoffV) or corresponding EU directives.

**PRODUCT SPECIFICATION**

Property	Nominal Value	Unit	Test Method
<b>Refractive index <math>n_D</math> 20</b>	1.499 ± 0.003		DIN 53 491
<b>Acid value</b>	0.1 max.	mg KOH/g	DIN 53 402
<b>Hazen colour value</b>	400 max.		ISO 6271
<b>Density at 20°C</b>	1.055 ± 0.015	g/cm <sup>3</sup>	DIN 51 757
<b>Viscosity at 20°C</b>	115 ± 15	mPa s	DIN 53 015
<b>Water content</b>	0.05 max.	%	DIN 51 777
<b>Saponification number</b>	Only partial saponification possible	mg KOH/g	DIN 53 401
<b>Pour point</b>	Approx. -32	°C	ISO 3016
<b>Flash point (open cup)</b>	Approx. 225	°C	ISO 2592
<b>Dissolution temperature</b>	Approx. 116	°C	DIN 53 408 (method based on)

**STORAGE**

Mesamoll Oil is sensitive to moisture and must therefore always be kept in its tightly sealed original container in a dry place. If stored properly, the product keeps for 2 years.

During storage, Mesamoll Oil should not come into contact with iron for prolonged periods since this may cause discoloration.

This information is of general nature and is supplied without recommendation of guarantee. It does not make claim to be free from patent infringement. Properties shown are typical and do not imply specification tolerances. Era Polymers cannot accept liability for loss or damage through use. Whilst these technical details are based on expert knowledge, practical experience and laboratory testing, successful application depends upon the nature and conditions in which the products are supplied. Users must, by comprehensive testing, evaluate this product in their own application.



**SYDNEY**

25 – 27 Green St  
East Botany, NSW 2019  
Ph: +61 2 9666 3788  
Fax: +61 2 9666 4805

**MELBOURNE**

29 Trade Place  
Vermont, VIC 3133  
Ph: 03 9872 4033  
Fax: 03 9872 4099

**BRISBANE**

Unit 6/5 Deakin Street  
Brendale, QLD 4500  
Ph: 07 3205 8510  
Fax: 07 3205 9616

**SINGAPORE**

H.K. Moey  
9 Elias Terrace  
Singapore 519772  
Ph: +65 6582 8103  
Fax: +65 6584 8100  
Mobile: +65 9751 0026

The materials recommended for transport and storage containers are: aluminum; stainless steel (V4A or V2A); iron containers with an oil-resistant coating such as DD Coating (Desmodur, Desmophen); tanks in uncoated polyester or, preferably, with an impervious DD coating.

To ensure that Mesamoll Oil can be easily pumped from outdoor tanks even at low temperatures, tanks should be well insulated and/or the plasticizer heated slightly if necessary. Warm water has proved to be a suitable heating medium, whereas heating with steam should be strictly avoided. Heating coils should be made of aluminium or, if necessary, of stainless steel (V4A).

**SOLUBILITY**

Soluble in all common solvents but insoluble in water.

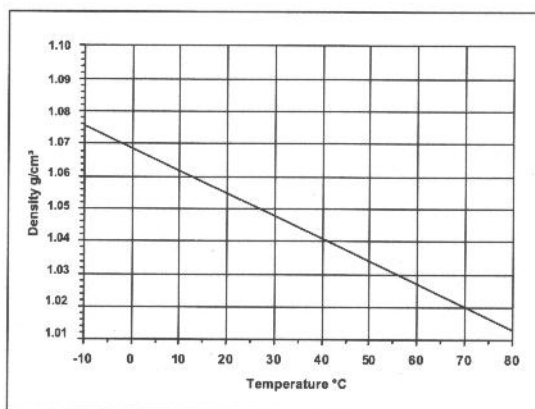
**PACKAGING**

Road tankers  
1000 kg PE-containers  
220 kg metal drums

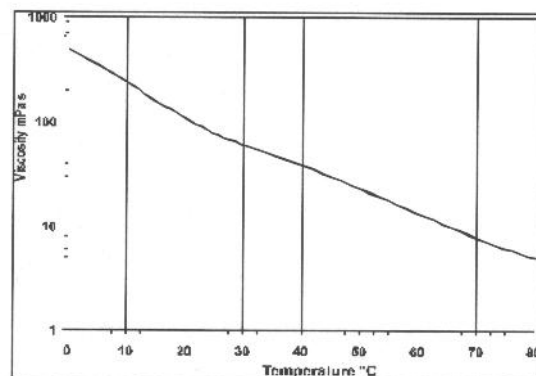
**These raw material are typical properties and, unless specifically indicated otherwise, are not to be considered as delivery specification.**

**INSTRUCTION AND RECCOMENDATIONS FOR USE**

The density, viscosity and vapour pressure are important variables determining storage, the design of the storage tanks and the dimensions of pipelines and delivery pumps etc. The graphs in Figures 1 to 3 show the values for these properties in the case of Mesamoll Oil.



**Fig. 1:** Density of Mesamoll Oil as a function of temperature (DIN 51 757)



**Fig. 2:** Viscosity of Mesamoll Oil as a function of temperature (DIN 53 015)

This information is of general nature and is supplied without recommendation of guarantee. It does not make claim to be free from patent infringement. Properties shown are typical and do not imply specification tolerances. Era Polymers cannot accept liability for loss or damage through use. Whilst these technical details are based on expert knowledge, practical experience and laboratory testing, successful application depends upon the nature and conditions in which the products are supplied. Users must, by comprehensive testing, evaluate this product in their own application.

**SYDNEY**

25 – 27 Green St  
East Botany, NSW 2019  
Ph: +61 2 9666 3788  
Fax: +61 2 9666 4805

**MELBOURNE**

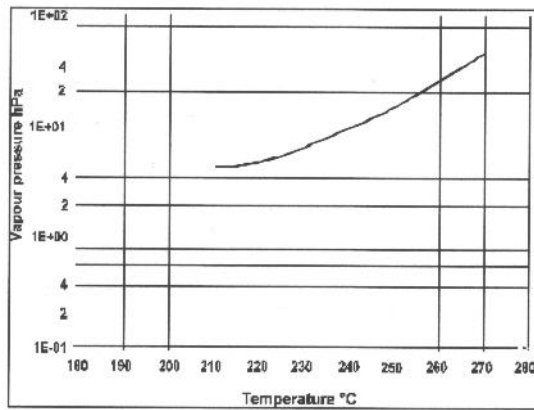
29 Trade Place  
Vermont, VIC 3133  
Ph: 03 9872 4033  
Fax: 03 9872 4099

**BRISBANE**

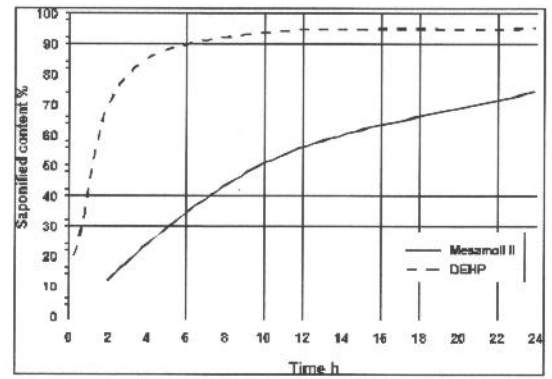
Unit 6/5 Deakin Street  
Brendale, QLD 4500  
Ph: 07 3205 8510  
Fax: 07 3205 9616

**SINGAPORE**

H.K. Moey  
9 Elias Terrace  
Singapore 519772  
Ph: +65 6582 8103  
Fax: +65 6584 8100  
Mobile: +65 9751 0026



**Fig. 3:** Vapour pressure of Mesamoll Oil in line with: OECD, Paris, 1981, Test Guideline 104, Decision of the Council C (81) 30 Final



**Fig. 4:** Saponification rate at Mesamoll Oil compared

## GENERAL PROPERTIES

Mesamoll Oil is characterized by

- Outstanding gelling capacity with a large number of polymers including PVC and polyurethanes, enabling the reduction of processing temperatures and processing times.
- High saponification resistance, especially compared to DEHP (see Fig. 4), due to Mesamoll's chemical structure; this is especially beneficial for articles which come into contact with water and alkalis.
- Good compatibility with a large number of polymers such as polyurethane (PU), polyvinyl chloride (PVC), natural rubber (NR), styrene-butadiene rubber (SBR), blends of styrene-butadiene rubber and butadiene rubber (SBR/BR), isobutylene-isoprene rubber (IIR), acrylonitrile-butadiene rubber (NBR) and chloroprene rubber (CR)
- Outstanding resistance to weathering and light
- Good dielectric properties which give plasticized PVC outstanding weldability at high frequencies leading to shorter cycle times than with other plasticizers.

Mesamoll Oil meets a large number of European food contact regulations.

## APPLICATIONS

Mesamoll Oil is used as a plasticizer for a wide range of articles based on polyurethane (PU), polyvinyl chloride (PVC), natural rubber (NR), styrene-butadiene rubber (SBR), blends of styrene-butadiene rubber and butadiene rubber (SBR/BR), isobutylene-isoprene rubber (IIR), acrylonitrile-butadiene rubber (NBR) and chloroprene rubber (CR).

Typical fields of application are:

- Polyurethane-based sealing and adhesive systems (One-component and Two-component systems) Mouldable, easy-to-process sealants for filling or covering joints in structures and parts of buildings.

- Cleaning

### Rinsing and service fluids for polyurethane foaming machinery

This information is of general nature and is supplied without recommendation or guarantee. It does not make claim to be free from patent infringement. Properties shown are typical and do not imply specification tolerances. Era Polymers cannot accept liability for loss or damage through use. Whilst these technical details are based on expert knowledge, practical experience and laboratory testing, successful application depends upon the nature and conditions in which the products are supplied. Users must, by comprehensive testing, evaluate this product in their own application.

# Era Polymers Pty. Ltd.

A.B.N. 14 003 055 936

erapol@erapol.com.au  
www.erapol.com.au

## SYDNEY

25 – 27 Green St  
East Botany, NSW 2019  
Ph: +61 2 9666 3788  
Fax: +61 2 9666 4805

## MELBOURNE

29 Trade Place  
Vermont, VIC 3133  
Ph: 03 9872 4033  
Fax: 03 9872 4099

## BRISBANE

Unit 6/5 Deakin Street  
Brendale, QLD 4500  
Ph: 07 3205 8510  
Fax: 07 3205 9616

## SINGAPORE

H.K. Moey  
9 Elias Terrace  
Singapore 519772  
Ph: +65 6582 8103  
Fax: +65 6584 8100  
Mobile: +65 9751 0026

- **Calendering**  
Film for the automotive industry, film for tunnel linings and other construction applications, swimming pool covers, shower curtains, office film, welding film, film for electrical insulation, adhesive tape.
- **Rotational Mouldings**  
Toys (active figures, dolls and playing balls) out of vinyl
- **Dip Moulding**  
PVC one way gloves and other articles which are produced by dip moulding
- **Extrusion**  
Profiles for the automotive industry, jointing strip, tubing, weathering and alkali-resistant structural profiles, blown film.
- **Injection Moulding**  
Work boots, technical articles
- **Coatings (including spreading)**  
Coatings for air-supported structures and tents, occupational and protective clothing, rain-wear, bath mats, expanded film.
- **Foodstuffs**  
Articles for food contact applications including film, conveyor belts for food, tubing for the drinks industry and milking machines, toys.



This information is of general nature and is supplied without recommendation of guarantee. It does not make claim to be free from patent infringement. Properties shown are typical and do not imply specification tolerances. Era Polymers cannot accept liability for loss or damage through use. Whilst these technical details are based on expert knowledge, practical experience and laboratory testing, successful application depends upon the nature and conditions in which the products are supplied. Users must, by comprehensive testing, evaluate this product in their own application.

Version: 2

Date of Issue: 30/5/2005

Page 4 of 4  
MESAMOLL OIL