



## Product Information

### Oleyl alcohol

Product Number **O 8880**

Storage Temperature -0 °C

#### Product Description

Molecular Formula: C<sub>18</sub>H<sub>36</sub>O

Molecular Weight: 268.5

CAS Number: 143-28-2

Density: 0.850 g/ml (20 °C)<sup>1</sup>

Melting Point: 13-19 °C<sup>1</sup>

Synonyms: (*Z*)-9-octadecen-1-ol,  
*cis*-9-octadecen-1-ol, oolenol<sup>1</sup>

This product is prepared by synthetic reduction of plant-derived oleic acid.

Oleyl alcohol is a long-chain aliphatic alcohol that occurs naturally in fish oils. It is used in such large-scale applications as the softening and lubrication of textile fabrics, and the production of carbon paper, stencil paper, and printing ink. Oleyl alcohol is also utilized as an antifoam agent and cutting lubricant. It also is a precursor for the preparation of its sulfuric ester derivatives, which are used in detergents and wetting agents.<sup>1</sup>

Oleyl alcohol has been incorporated into various formulations for drug delivery.<sup>2,3</sup> Various mixed-lipid surfaces, including oleyl alcohol as one component, have been prepared to investigate the adsorption of porcine pancreatic carboxylester lipase at an argon-buffer interface.<sup>4</sup> A study of the emulsification of oils which contain oleyl alcohol, n-hexadecane, and surfactant by phase behavior and videomicroscopy has been reported.<sup>5</sup>

Oleyl alcohol has been utilized as a solvent for the biodegradation of phenol in a two-phase partitioning bioreactor.<sup>6</sup> The use of oleyl alcohol to enhance the production of 2-phenylethanol from L-phenylalanine by yeast has been described.<sup>7</sup>

#### Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

#### Preparation Instructions

This product is miscible in chloroform (0.1 ml/ml, v/v), yielding a clear, colorless solution. It is also miscible in alcohol and ether.<sup>1</sup>

#### References

1. The Merck Index, 12th ed., Entry# 6968.
2. Lee, P. J., et al., Novel microemulsion enhancer formulation for simultaneous transdermal delivery of hydrophilic and hydrophobic drugs. *Pharm. Res.*, **20(2)**, 264-269 (2003).
3. Sudimack, J. J., et al., A novel pH-sensitive liposome formulation containing oleyl alcohol. *Biochim. Biophys. Acta.*, **1564(1)**, 31-37 (2002).
4. Tsujita, T., et al., Regulation of carboxylester lipase adsorption to surfaces. 2. Physical state specificity. *Biochemistry*. 1987 Dec 15;26(25):8430-8434 (1987).
5. Rang, M. J., and Miller, C. A., Spontaneous Emulsification of Oils Containing Hydrocarbon, Nonionic Surfactant, and Oleyl Alcohol. *J. Colloid Interface Sci.*, **209(1)**, 179-192 (1999).
6. Vrionis, H. A., et al., Expanded application of a two-phase partitioning bioreactor through strain development and new feeding strategies. *Biotechnol. Prog.*, **18(3)**, 458-464 (2002).
7. Etschmann, M. M., et al., Screening of yeasts for the production of the aroma compound 2-phenylethanol in a molasses-based medium. *Biotechnol. Lett.*, **25(7)**, 531-536 (2003).

GCY/RXR 8/03

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