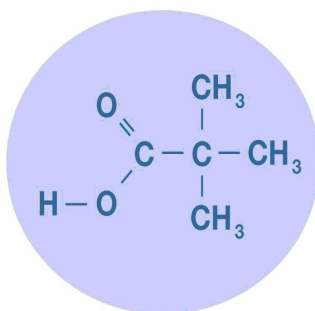


Technical Data Sheet

Versatic™ Acid 5

Description

Versatic™ Acid 5 is the smallest possible tertiary carboxylic acid. Other chemical names are pivalic acid, 2,2- (or alpha,alpha-) di-methylpropionic acid, tri-methylacetic acid and neo-pentanoic acid. Its structure is represented as:



Versatic Acid 5 is a white colourless solid at ambient temperatures, liquid at 40°C, and having a pungent odour.

Applications

Versatic Acid 5 is a key intermediate in the manufacture of a variety of products, which typically show excellent hydrolytic stability and resistance to various chemical agents. This is due to the branched Versatic structure combined with the tertiary nature of its alpha-carbon atom. This is especially demonstrated in comparison with its linear and secondary equivalents.

Versatic Acid 5 is used mainly in the form of its chloride, pivaloyl chloride, produced by reaction with e.g. phosgene, PCl₅ or thionylchloride. Pivaloyl chloride is used as intermediate in the production of several peroxy-esters for polymer production, as intermediate for agrochemicals and for the production of semi-synthetic penicillin, e.g. amoxicillin.

Sales Specifications

Property	Value	Unit	Test Method
Appearance 20°C	White crystalline solid		LPM5037
Appearance 40°C	Clear liquid		LPM5037
Color	50 max	Pt-Co	ASTMD1209
Purity	99.0 min	% m/m	LPM5108
Water	0.1 max	% m/m	ASTME203

Typical Properties

Versatic Acid 5
<https://www.hexion.com/en-US/product/versatic-acid>

Generated: February 29, 2020
 Issue Date: 1/1/2015 5:00:00 AM
 Revision:

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Property	Value	Unit	Test Method
Acid value	544	mg KOH/g	ASTMD1980
Boiling Point at 760 mm Hg	163.5	°C	ASTMD1078
Density at 40°C	0.91 - 0.92	kg/L	ASTMD1298
Flash Point (PMC)	64	°C	ASTMD93
Miscibility With Water	Slightly		
Odour	Pungent		
Pour Point	33.5	°C	ASTMD97
Refractive Index	1.388	n _D ²⁰	ASTMD1218
Solubility in Water at 20°C	2.5	% m/v	
Vapor Pressure at 37.8°C	0.317	kPa	ASTMD323
Vapor Pressure at 70°C	1.86	kPa	ASTMD323

Test Methods

ASTM Standards are published by the American Society for Testing and Materials, 100 Barr Harbor Drive, west Conshohocken, PA 19428-2959, USA or can be found under www.astm.org.

General information about LPM methods can be obtained upon request from Hexion Europe B.V.

Handling Precautions

For more detailed information on all aspects relating to Health, Safety and Handling, reference should be made to the Safety Data Sheet of Versatic Acid 5, which is available from your local Hexion representative or distributor. The precautions advised therein should be strictly observed.

Transportation and Storage

Information on transport, storage, suitable materials for tank construction, etc, is available from Hexion, via local representative or distributor.

Versatic Acid 5 should preferably be stored between 45-64 °C (minimum storage temperature 5°C at which material will be solid) in conditions such that moisture is excluded, in the original containers kept tightly closed. Under these conditions the shelf life should be three years starting from the manufactured date.

Contact Information

For contact information about this product, go to www.hexion.com and visit Versatic Derivatives product pages. Here you will have the option to choose your region to find a representative in your area.