CLIP, Chemical Laboratory Information Profile

"Only when you know the hazards, can you take the necessary precautionary measures."

Oleic Acid $C_8H_{17}CH{=}CH(CH_2)_7COOH$ CAS No.: 112-80-1

Synonyms: (*Z*)-9-Octadecenoic acid, *cis*-9-Octadecenoic acid, Red oil

Physical Properties

An oily, colorless to brown liquid.

Vapor pressure at 175 °C:	1 Torr
Melting point:	13 °C
Boiling point:	360 °C

Exposure Limits

OSHA PEL:	NE
ACGIH TLV:	NE

Hazardous Characteristics

Overall toxicity	Flammability	Destructive to skin/eye	Absorbed through skin	Sensitizer?	Self-reactive?	Incompatible with:
0	1	0	0	No	No	Strong oxidizing agents.*

0: None (or very low); 1: Slight; 2: Moderate; 3: High; 4: Severe.

***Reactivity Hazards**

The reaction of oleic acid with strong oxidizing agents is exothermic and can be violent. Its reaction with finely divided metals (e.g., aluminum flakes) and with other reducing agents can be violent if the oleic acid has become peroxidized. See Bretherick's *Handbook of Reactive Chemical Hazards* for details and for other incompatibilities.

Cited as known to be or reasonably anticipated to be carcinogenic in NTP-9?	No	Identified as a reproductive toxin in Frazier and Hage, *Reproductive Hazards of the Workplace*?	No

Typical symptoms of acute exposures:

None expected as a consequence of typical laboratory use and handling.

Principal target organ(s) or system(s):

Eyes, skin, respiratory system.

Storage Requirements

With other chemicals in a cool, dry, well-ventilated general storage location. There is some evidence that oleic acid may be subject to peroxide formation when it is stored for long periods and its container has been imperfectly sealed. Accordingly, oleic acid should either be used up within one year after receipt or properly disposed of at that time.

Additional Remarks

Do not confuse oleic acid, also known as "Red Oil", with the quite different and moderately toxic, "Turkey Red Oil". Oleic acid is a component of many edible foods. However, ingestion of large amounts of oleic acid would produce unpleasant gastrointestinal disorders.

Notes

ReadMe

This Chemical Laboratory Information Profile is ***not*** a Material Safety Data Sheet. It is a brief summary for teachers and their students that describes some of the hazards of this chemical as it is typically used in laboratories. On the basis of your knowledge of these hazards and before using or handling this chemical, *you need to select the precautions and first-aid procedures to be followed.* For that information as well as for other useful information, refer to Material Safety Data Sheets, container labels, and references in the scientific literature that pertain to this chemical.

Reproductive Toxins

Some substances that in fact are reproductive toxins are not yet recognized as such. For the best readily available and up-to-date information, refer to "DART/ETIC". See the TOXNET home page at *www.sis.nlm.nih.gov* and click on "Toxicology search". *Note that some of the data in DART/ETIC have not been peer-reviewed.* See also Linda M. Frazier and Marvin L. Hage, *Reproductive Hazards of the Workplace*; Wiley, 1998; and T. H. Shepard, *Catalog of Teratogenic Agents*, 9th ed.; Johns Hopkins University Press, 1998.

Abbreviations

ACGIH TLV—American Conference of Governmental Industrial Hygienists–Threshold Limit Value. C—Ceiling. CAS—Chemical Abstracts Service. mg/m^3—milligrams per cubic meter. NA—Not applicable. NE—Not established. NI—No information. NTP-9—National Toxicology Program, Ninth Annual Report on Carcinogens. OSHA PEL—Occupational Safety and Health Administration–Permissible Exposure Limit. ppm—parts per million. STEL/C—Short-term exposure limit and ceiling.

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