

## CLIP, Chemical Laboratory Information Profile

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

## Acetic Anhydride



CAS No.: 108-24-7

Synonyms: Acetic acid anhydride, Acetic oxide, Acetyl oxide, Ethanoic anhydride

## Physical Properties

Colorless liquid with a pungent odor.  
Vapor pressure at 20 °C: 4 Torr  
Melting point: -73 °C  
Boiling point: 140 °C

## Exposure Limits

OSHA PEL: 5 ppm  
ACGIH TLV: 5 ppm

## Hazardous Characteristics

Overall toxicity	Flammability	Destructive to skin/eye	Absorbed through skin	Sensitizer?	Self-reactive?	Incompatible with:
3	2	3	0	No	No	Water, alcohols, oxidizing agents*

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

## \*Reaction with:

water, alcohols, oxidizing agents can be violent and is exacerbated in the presence of acid or higher temperatures; even mild oxidizers, e.g. boric acid, can cause an eruption. 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:

Sore throat, coughing, labored breathing if inhaled. Inflammation, burns if on skin; dermatitis if contact is prolonged. Tearing, redness, pain, blurred vision if in eyes. Sore throat, abdominal pain, vomiting, diarrhea if swallowed.

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

Eyes, skin, respiratory system.

## Storage Requirements

Store separately in a cool, dry, well-ventilated and locked location that is *not* protected by a water sprinkling system outlet.

## Additional Remarks

Forms explosive air-vapor mixtures above 48 °C. Often, the symptoms of lung edema do not appear until a few hours after exposure to the vapor.

## 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](http://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<sup>3</sup>—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.

Prepared by: Jay A. Young

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