CLIP, Chemical Laboratory Information Profile

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

Acetone $(CH_3)_2CO$ CAS No.: 67-64-1

Synonyms: Dimethyl ketone, 2-Propanone, Ketone propane

Physical Properties

Colorless, flammable liquid with a distinctive odor

Vapor pressure at 20 °C:	179 Torr
Melting point:	–95 °C
Boiling Point:	56 °C
Flash point:	–19 °C

Exposure Limits

OSHA PEL:	1000 ppm
ACGIH TLV:	500 ppm
ACGIH STEL/C:	750 ppm

Hazardous Characteristics

Overall toxicity	Flammability	Destructive to skin/eye	Absorbed through skin	Sensitizer?	Self-reactive?	Incompatible with:
1	3	1	1	No	No	Oxidizing agents, chloroform (in basic environment), many plastics*

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

***Reaction with:**

oxidizing agents can be violent and exothermic, particularly with strong oxidizing agents; chloroform and other haloforms with an activated hydrogen is, in the presence of base, spontaneous, exothermic, and violent; compressed air can be spontaneous and exothermic. 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:

Irritation of the eyes and skin, nose, throat. Dizziness, nausea, headache.

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

Eyes, skin, respiratory system, central nervous system.

Storage Requirements

With other flammables in a cool, dry, well-ventilated location, away from ignition sources and separated from oxidizing agents.

Additional Remarks

Vapors are heavier than air and can travel long distances; they are explosive when mixed with air. The liquid develops a static charge when poured or pumped. The charge can be large enough to generate a spark sufficient to ignite the ever-present vapors, causing an explosion and/or fire. Exposure to ethyl alcohol enhances the toxic effects of exposure to acetone.

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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