

CLIP, Chemical Laboratory Information Profile

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

Sodium Fluoride

NaF

CAS No.: 7681-49-4

Physical Properties

White crystalline solid.
Vapor pressure at 20 °C: negligible
Melting point: 990 °C
Boiling point: 1700 °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:
3	0	2	2	No	No	Acids.*

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

*Reactivity Hazards

Reacts with acids to form hydrogen fluoride, a highly toxic gas.

Cited as known to be or reasonably anticipated to be carcinogenic in NTP-9?	No	Identified as a reproductive toxin in Frazier and Hage, <i>Reproductive Hazards of the Workplace</i> ?	No
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Typical symptoms of acute exposures:

Irritation of the eyes, nausea, abdominal pain, sensation of thirst, sweating.

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

Eyes, skin, respiratory system, central nervous system, skeleton, kidneys.

Storage Requirements

Store with other poisons—but separated from poisonous acids—in a cool, dry, well-ventilated, locked location.

Additional Remarks

Powdered and finely crystalline sodium fluoride is dusty and when disturbed tends to form a suspension of sodium fluoride particles in the breathing air of nearby persons. When used as a pesticide, sodium fluoride is often dyed blue or green. When used as a decay-preventing additive in toothpaste, the concentration of sodium fluoride in the toothpaste is not considered toxic.

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/m³—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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