Honeywell

PRODUCT STEWARDSHIP SUMMARY

Fluorosulfonic Acid

FHO_3S

Chemical Name:	Fluorosulfonic acid
Synonyms:	Fluorosulphuric acid; Fluosulfonic acid
CAS Number:	7789-21-1
CAS Name:	Fluorosulphuric acid
EC (EINECS) Number:	232-149-4
Revision Date:	February 2019

- Fluorosulfonic acid is used in various chemical and manufacturing applications. It is utilized as a fluorinating agent, a catalyst in alkylation, in polymerization and condensation reactions and in hydrofluorination of olefins. This chemical is also utilized in the production of substituted pyridine and petroleum products.

- Exposure to fluorosulfonic acid can occur in laboratories and industrial/ manufacturing facilities where the chemical solution is handled. Workers risk exposure primarily through inhalation and contact with the skin and eyes. Good manufacturing and industrial hygiene practices should be followed to prevent or reduce contact. See the Safety Data Sheet (SDS) for additional information.

- Fluorosulfonic acid is a colorless to light yellow fuming liquid with an irritating odor. The substance reacts violently with water to form toxic mists of hydrogen fluoride and sulfuric acid. It is corrosive to metals. Contact with metals can result in the liberation of hydrogen gas that is flammable. It is stable under normal conditions, but fluorosulfonic acid must be kept away from atmospheric moisture, water and heat/overheating. Other incompatible materials include strong oxidizing agents, alkalis, amines, and hydrated salts. Contact with carbonates, sulfides and cyanides can result in the release of toxic gases.

- Fluorosulfonic acid is toxic especially with inhalation and can irritate the respiratory tract and cause acute symptoms of toxicity. The health effects

are associated with hydrogen fluoride and free fluoride ions. Exposure to large areas of skin, ingestion and significant inhalation exposure can cause severe systemic effects including hypocalcemia, hypomagnesemia and hyperkalemia resulting in electrolyte imbalance and cardiac arrhythmias. Severe injury can result from eye and skin contact with fluorosulfonic acid solutions resulting in skin burns and serious, potentially irreversible eye damage.

- Fluorosulfonic acid is not known to be genotoxic.
- The product is not known to cause reproductive or developmental harm.
- Fluorosulfonic acid is not considered a known or anticipated carcinogen by OSHA, NTP or IARC. This product contains small amounts of sulfuric acid and sulfur trioxide that are both considered carcinogenic.
- This product is considered to be harmful to aquatic organisms based on products with similar composition.
- Please **contact us** for more information. Additional information may also be found at the following links:

  TOXNET- Fluosulfonic acid

  European Chemicals Agency (ECHA): Brief profile- Fluorosulphuric acid

This product stewardship summary is intended to give general information about the chemical or categories of chemicals addressed. It is not intended to provide an in-depth discussion of all health and safety information. Additional information on the chemical is available through the applicable Material Safety Data Sheet which should be consulted before use of the chemical. The product stewardship summary does not supplant or replace required regulatory and/or legal communication documents. Statements concerning use of our products are made without warranty that any such use is free of patent infringement and are not recommendations to infringe any patent.

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