Honeywell

# *Tripotassium hexafluoroaluminate*

## *Product Stewardship Summary* *February 2011*

$K_3AlF_6$

| | |
|---|---|
| Chemical Name: | Tripotassium hexafluoroaluminate |
| Chemical Category (if applicable): | Alkali Metal Halide |
| Synonyms: | Potassium aluminum fluoride; Aluminate(3-), hexafluoro-, tripotassium, (OC-6-11)-; Hexafluoro-,tripotassium,(OC-6-11)-aluminate(3-); Tripotassium,(OC-6-11)-aluminate(3-hexafluoro-; Aluminium potassium fluoride; Trikaliumhexafluoroaluminat; Aluminum tripotassium hexafluoride; and Potassium cryolite; |
| CAS Number: | 13775-52-5 |
| CAS Name: | Aluminate(3-), hexafluoro-, tripotassium, (OC-6-11)- |
| EC (EINECS) Number: | 237-409-0 |
| Document Number: | GPS0042 V1.0 |

- Tripotassium hexafluoroaluminate (potassium cryolite) is primarily used in the production of welding agents, blasting and pyrotechnics, and abrasives.

- Exposure can occur at either a potassium cryolite production facility or at other manufacturing, packaging or storage facilities that handle potassium cryolite. Persons involved in maintenance, sampling and testing activities, or in the loading and unloading of potassium cryolite packages are at risk of exposure, but worker exposure can be controlled with the use of proper general mechanical ventilation and personal protective equipment. Workplace exposure limits for fluoride ion have been established for use in worksite safety programs. When potassium cryolite is a component of consumer products, users should follow manufacturer's use and/or label instructions. Potassium cryolite dusts released to the atmosphere and deposited in soil or surface water in the vicinity of production sites have negligible impact on the environment. Please see the MSDS for additional information.

- Potassium cryolite is a nonflammable solid that is stable under normal conditions. Contact of potassium cryolite with water or extended skin contact under moist conditions can produce hydrofluoric acid (HF), a very dangerous acid.

- Breathing potassium cryolite dust can irritate the nose, throat, and lungs. Ingestion or inhalation of large amounts of potassium cryolite can cause nausea, vomiting, loss of appetite and weakness. Potassium cryolite can cause deposits of fluorides in bones and teeth, a condition called fluorosis, which may result in pain, disability and discoloration or mottling of teeth. Potassium cryolite is not considered a reproductive or developmental toxic substance.

- The cancer risk for potassium cryolite is low.

- Potassium cryolite is slightly soluble in water and therefore will dissociate into its constituent ions in the aquatic environment. Potassium cryolite can be toxic to aquatic organisms, which is essentially due to the fluoride ion. Fluoride tends to accumulate preferentially in the skeletal and dental hard tissues of vertebrates (fish), exoskeletons of invertebrates, and cell walls of plants. No accumulation has been reported for edible tissues.

- For risk management, the World Health Organization (WHO) has recommended a guideline of 1.5 mg/L for fluoride in drinking water.

- Please contact us for more information. Additional information may also be found at the following links:

  ASTDR Toxicology Profile for Fluorides, Hydrogen Fluoride, and Fluorine

  WHO Environmental Health Criteria 227 - Fluorides

  WHO Drinking Water Guideline - Fluoride