

AWSM Industries, LLC

MATERIAL SAFETY DATA SHEET

Potassium Fluorotitanate

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Potassium Fluorotitanate

OTHER/GENERIC NAMES: Titanium Potassium Fluoride, Potassium Hexafluorotitanate

PRODUCT CODES: ACH-38162

PRODUCT USE: Industrial

DISTRIBUTOR: AWSM Industries, LLC
12 Route 17 North, Suite 309
Paramus, NJ 07652

TELEPHONE: (201) 845-4666
(Monday-Friday, 8:30 AM – 5:00 PM)

CHEMTREC PHONE: 1800-424-9300
(24 Hours/Day, 7 Days/Week)

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME:</u>	<u>CAS NO.</u>	<u>% WT</u>
Potassium Hexafluorotitanate	16919-27-0	> 98

Trace impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDS. These materials may be listed for local "Right-to-Know" compliance and for other reasons.

OSHA Hazard Communication Standard: *This product is considered hazardous under the OSHA Hazard Communication Standard*

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: A colorless, odorless solid that may be harmful if swallowed or inhaled. Causes eye irritation with risk of serious eye damage. May cause allergic skin reaction. Contact with acids liberates toxic hydrogen fluoride gas.

POTENTIAL HEALTH HAZARDS

EYES: Causes irritation. Exposure may cause serious damage to eyes.

SKIN: May cause irritation. May cause allergic skin reaction.

INGESTION: May be harmful if swallowed.

INHALATION: Dust may be harmful if inhaled. May cause respiratory tract irritation.

DELAYED EFFECTS: Chronic exposure may cause fluorosis resulting in bone changes including thickening of the pelvis, vertebrae and long bones; calcification of ligaments, tendons and muscle attachments to the bones and affecting teeth.

Ingredients found on one of the three OSHA designated carcinogen lists are listed below.

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
No ingredients listed in this section			

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SECTION 4: FIRST AID MEASURES

SKIN: Remove contaminated clothing. Flush affected area with large amounts of water for at least 15 minutes. Use soap if available. Get medical attention.

EYES: Immediately flush eyes with large quantities of water for at least 15 minutes. Get immediate medical attention.

INHALATION: Remove to fresh air. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen provided a qualified operator is available. Get medical attention.

INGESTION: If person is conscious, rinse mouth with water. Do not induce vomiting unless directed to do so by a physician. Give water or milk to dilute stomach contents. Get immediate medical attention.

ADVICE TO PHYSICIAN: No specific advice. Treat according to symptoms present.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	Not applicable
FLASH POINT METHOD:	Not applicable
AUTOIGNITION TEMPERATURE:	Not applicable
UPPER FLAME LIMIT (volume % in air)	Not applicable
LOWER FLAME LIMIT (volume % in air)	Not applicable
FLAME PROPAGATION RATE (solids)	Not applicable
OSHA FLAMMABILITY CLASS:	Not flammable

EXTINGUISHING MEDIA:

Water spray, foam, carbon dioxide, or dry chemical.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Emits toxic fumes under fire conditions. Liberates hydrogen fluoride in contact with strong acids.

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Use self-contained breathing apparatus and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (Always wear recommended personal protective equipment.)

Provide ventilation to spill area. Collect and place in an approved, labeled waste container. Avoid raising dust. Do not allow to enter into sewers or waterways.

Spills and releases may have to be reported to Federal and/or local authorities. See section 15 regarding reporting requirements.

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SECTION 7: HANDLING AND STORAGE

NORMAL HANDLING: (Always wear recommended personal protective equipment.)

Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Do not inhale dust. Wash hands before breaks and after work.

STORAGE RECOMMENDATIONS:

Store in a cool, dry, well ventilated area. Keep containers upright and tightly closed. Protect containers from physical damage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Ensure adequate mechanical ventilation. Use local ventilation at product handling and transfer points.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION: Wear rubber gloves and clothing suitable to prevent skin contact.

EYE PROTECTION: Safety glasses, goggles, or a full face shield

RESPIRATORY PROTECTION Not required for properly ventilated areas. If there is potential for inhalation of dust, use an appropriate NIOSH approved respirator. The respirator must be selected based on contamination levels and use conditions found in the workplace, must not exceed the working limits of the respirator and be approved by the National Institute for Occupational Safety and Health (NIOSH) and used in accordance with Occupational Safety and Health Administration (OSHA) 29 CFR 1910.134.

ADDITIONAL RECOMMENDATIONS Provide safety showers and eyewash station in close proximity to working area.

EXPOSURE GUIDELINES:

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
Fluorides as F	2.5 mg/m ³ (TWA)	2.5 mg/m ³ TWA	-----

¹= Limit established by AWSM Industries.
²= Workplace Environmental Exposure Level (AIHA).
³= Biological Exposure Index (ACGIH).

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

None

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless solid.
PHYSICAL STATE: Solid.
MOLECULAR WEIGHT: 240.07
CHEMICAL FORMULA: $K_2Ti_6F_{14}$
ODOR: Odorless
SPECIFIC GRAVITY (H₂O = 1): 1100-1200 kg/m³ (bulk density)
SOLUBILITY IN WATER (weight %): 12.7 g/l @ 68°F (20°C)
pH: 4-5 (saturated solution)
BOILING POINT: Not applicable
MELTING POINT: 1436 °F (780 °C)
VAPOR PRESSURE: Not applicable.
VAPOR DENSITY (air= 1.0): Not applicable.
EVAPORATION RATE: Not applicable **COMPARED TO:** Not Applicable
% VOLATILES: Not applicable.
FLASH POINT: Not applicable.
(Flash point method and additional flammability data are found in Section 5.)

SECTION 10: STABILITY AND REACTIVITY

NORMALLY STABLE/(CONDITIONS TO AVOID):

Stable under normal conditions.

INCOMPATIBILITIES:

Contact with strong acids liberates hydrogen fluoride.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition may generate oxides of potassium, titanium and hydrogen fluoride.

HAZARDOUS POLYMERIZATION:

Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:

Oral (rat) LD₅₀ – 169 mg/kg.
Rabbit skin: Irritant.
Rabbit eye: Irritant. Risk of serious eye damage.

DELAYED (SUBCHRONIC AND CHRONIC EFFECTS)

Chronic exposure may cause fluorosis resulting in bone changes including thickening of the pelvis, vertebrae and long bones; calcification of ligaments, tendons and muscle attachments to the bones and affecting teeth.

OTHER DATA:

Skin sensitizer- Guinea pig.
Ames test negative.

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SECTION 12: ECOLOGICAL INFORMATION

Aquatic Toxicity:
Rainbow Trout LC₅₀: 64 mg/l- 10 days.
Bacteria Toxicity:
Eco: 180 mg/l – 24 hrs.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? Not listed.

If yes, the RCRA ID number is: Not applicable.

OTHER DISPOSAL CONSIDERATIONS: Dispose of in accordance with Local, State and Federal regulations.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

SECTION 14: TRANSPORT INFORMATION

US DOT HAZARD CLASS: 6.1 PG III
US DOT ID NUMBER: UN3288
PROPER SHIPPING NAME: TOXIC SOLID, INORGANIC, N.O.S. (Potassium Fluorotitanate)

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

SECTION 15: REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: Material is on the TSCA Inventory

OTHER TSCA ISSUES: None

SARA TITLE III/ CERCLA

"Reportable/ Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

INGREDIENT NAME

SARA/CERCLA RQ (LB)

SARA EHS TPQ(LB)

No ingredients listed in this section.

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center (800) 424-8802 and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: Immediate Delayed.

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SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

INGREDIENT NAME**COMMENT**

No ingredients listed in this section.

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME**WEIGHT%****COMMENT**

No ingredients listed in this section.

ADDITIONAL REGULATORY INFORMATION:

None listed.

WHMIS CLASSIFICATION (CANADA):

Not determined.

FOREIGN INVENTORY STATUS:

Potassium Hexafluorotitanate is on the following inventories.

EINECS inventory. EINECS No. 2409699

Canadian DSL.

Australian.

Korean.

Japanese (ENCS).

Philippine (PICCS).

SECTION 16: OTHER INFORMATION

CURRENT ISSUE DATE: JUNE 17, 2005

PREVIOUS ISSUE DATE: JANUARY 1, 2005

CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:

Changes made to sections 1, 4, 8, 14, 15, and 16.

OTHER INFORMATION:

All information, statements, data, advice and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as "information") are believed to be accurate and reliable. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness or a particular purpose or any other matter, including, including, without limitation, that the practice of application of any such information is free of patent infringement or other intellectual property misappropriation. AWSM Industries, LLC is not engaged in the business of providing technical, operational, engineering or safety information for a fee, and therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. AWSM Industries, LLC shall not be responsible or liable for the use, application or implementation of the information, provided herein, and all such information is to be used at the risk, and in the sole judgment and discretion, of such persons, their employees, advisors, and agents.

Date Created	Created By	Replaces	Area	Product/ Process	Special
10/07/05	JD	01/01/05	MSDS	Fluorotitanate	JL