

# Material Safety Data Sheet

## Acesulfame Potassium

### Section 1: Chemical Product and Company Identification

**Product Name:** Acesulfame K

**CAS#:** 55589-62-3

**Synonym:** 6-Methyl-1,2,3-oxathiazin-4(3H)-one 2,2-dioxide

potassium salt; Acesulfame K; Sunett; Potassium acesulfame; Sweet One

**Chemical Name:** 1,2,3-Oxathiazin-4(3H)-one, 6-methyl-, 2,2-dioxide, potassium salt

**Chemical Formula:** C<sub>4</sub>H<sub>4</sub>KN<sub>2</sub>O<sub>4</sub>S

**Contact Information:**

### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS # %	by Weight
Acesulfame Potassium	55589-62-3	100

**Toxicological Data on Ingredients:** Acesulfame Potassium: ORAL (LD50): Acute: 7431 mg/kg [Rat].

### Section 3: Hazards Identification

**Potential Acute Health Effects:** Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance may be toxic to kidneys, liver.

Repeated or prolonged exposure to the substance can produce target organs damage.

### Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

**Skin Contact:** Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

**Serious Skin Contact:** Not available.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation:** Not available.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get

medical attention if symptoms appear.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...).  
Some metallic oxides.

**Fire Hazards in Presence of Various Substances:**

Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:**

Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.

**Fire Fighting Media and Instructions:**

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** As with most organic solids, fire is possible at elevated temperatures

**Special Remarks on Explosion Hazards:**

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

## Section 6: Accidental Release Measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:** Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

## Section 7: Handling and Storage

**Precautions:** Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, metals, acids.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

## Section 8: Exposure Controls/Personal Protection

**Engineering Controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be

used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (Crystalline powder.)

**Odor:** Odorless.

**Taste:** Not available.

**Molecular Weight:** 201.24 g/mole

**Color:** White.

**pH (1% soln/water):** 6.5 - 7.5

**Boiling Point:** Not available.

**Melting Point:** Decomposition temperature: 225°C (437°F)

**Critical Temperature:** Not available.

**Specific Gravity:** 1.81 (Water = 1)

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, methanol.

### Solubility:

Easily soluble in cold water, hot water.

Partially soluble in methanol.

Very slightly soluble in acetone.

Solubility in water: 27 g/100 ml @ 20 deg. C.; 15 g/100 ml @ 0 deg. C; 21 g/100 ml @ 10 deg. C; 36 g/100 ml @ 30deg. C.; 46 g/100 ml @ 40 deg. C; 58 g/100 ml @ 50 deg. C; 83 g/100 ml @ 70 deg. C; 130 g/100 ml @ 100 deg. C

Soluble in glacial acetic acid.

Solubility in glacial acetic acid: 13 g/ 100 ml @ 20 deg. C

Very slightly soluble in ethanol

Slightly soluble in glycerol.

Solubility in glycerol (anhydrous): 3 g/ml

Solubility in ethanol(anhydrous): 0.1 g/ml

Solubility in methanol: 1 g/100 ml @20 deg. C

Very soluble in dimethylformamide, dimethylsulfoxide.

Soluble in glycerin-water.

Soluble in ethanol-water.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Excess heat, dust generation, incompatible materials

**Incompatibility with various substances:** Reactive with oxidizing agents, metals, acids.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Incompatible with strong acids, metals like aluminum, iron, zinc, copper, oxidizers like potassium bromate, potassium nitrate.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 7431 mg/kg [Rat].

**Chronic Effects on Humans:** May cause damage to the following organs: kidneys, liver.

**Other Toxic Effects on Humans:** Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects:

Skin: May cause skin irritation.

Eyes: May cause eye irritation.

Inhalation: May cause respiratory tract irritation and mucous membrane irritation.

Ingestion: May cause gastrointestinal effects such as nausea, vomiting, diarrhea, constipation, cramps, loss of appetite. It may affect the blood (slight increase in hemoglobin concentration)

Medical Conditions Aggravated by Exposure: Hemochromatosis, thalassemia, sideroblastic or Sickle Cell anemia.

Chronic Potential Health Effects:

Ingestion: Prolonged or repeated ingestion may affect the liver (liver degeneration) and kidneys (nephropathy), and may cause weight loss. It may also cause cancer (pulmonary tumors) based on some animal studies. No human data was found.

## Section 12: Ecological Information

**Ecotoxicity:** Ecotoxicity in water (LC50): 1800 mg/l 96 hours [Fish (Zebra Fish)].

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

**Waste Disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## Section 14: Transport Information

**DOT Classification:** Not a DOT controlled material (United States).

**Identification:** Not applicable.

**Special Provisions for Transport:** Not applicable.

## Section 15: Other Regulatory Information

**Federal and State Regulations:** No products were found.

**Other Regulations:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS: This product is on the European Inventory of Existing Commercial Chemical substances.

**Other Classifications:**

**WHMIS (Canada):** Not controlled under WHMIS (Canada).

**DSCL (EEC):**

This product is not classified according to the EU regulations.

S24/25- Avoid contact with skin and eyes.

**HMIS (U.S.A.):**      **Health Hazard:** 1      **Fire Hazard:** 1      **Reactivity:** 0

**Personal Protection:** E      **National Fire Protection Association (U.S.A.):**

**Health:** 1      **Flammability:** 1      **Reactivity:** 0      **Specific hazard:**

**Protective Equipment:**

Gloves.    Lab coat.    Dust respirator. Be sure to use an approved/certified respirator or equivalent.

Safety glasses.

## Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

**Created:** June 14, 2007

**Last Updated:** June 14, 2009