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School Materials Safety Manual:

No. 263 Potassium Bromide Issued 5/91

♦ SECTION 1 INTRODUCTION

Material Potassium Bromide, ca 100%

Chemical Formula KBr

CAS Number 7758-02-3

Synonyms bromide salt of potassium, potassium monobromide

DOT Classification Not listed as a Hazardous Material for Transportation (49 CFR 172.101)

EPA Classification Not listed as a RCRA Hazardous Waste (40 CFR 261.33), a CERCLA Hazardous Substance (40 CFR 302.4), a SARA Extremely Hazardous Substance (40 CFR 355), or a SARA Toxic Chemical (40 CFR 372.65)

OSHA Classification Not listed as an Air Contaminant (29 CFR 1910.1000, Subpart Z)

NFPA Hazard Rating Not found

Genium Hazard Rating

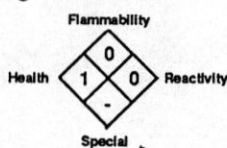
4 = Extreme

3 = High

2 = Moderate

1 = Slight

0 = Minimum



Description Colorless crystals or white granules/powder; odorless. Potassium bromide is crystallized out of mixed and heated solutions of iron bromide and potassium carbonate.

Overview Used in special soaps; in spectroscopy; in infrared transmission; in manufacturing photographic papers and plates; in engraving operations; and as a lab reagent. Potassium bromide is most likely found in the school environment as a lab reagent. Use potassium bromide with care. Staff members who use it must be aware of its potential hazards and the safety measures required to handle it. Large doses can cause central nervous system (CNS) depression and prolonged inhalation can lead to skin eruptions. Use in small quantities.

Manufacturer Always request an up-to-date MSDS from your chemical supplier. That sheet should include the substance's manufacturer and emergency phone numbers. This *Manual's* Resources/Manufacturers Index lists some larger manufacturers and available emergency phone numbers.

♦ SECTION 2 USE AND STORAGE DATA

Preliminary Planning Considerations *Plan and provide for safe disposal of all school-generated chemical waste.* Check applicable regulations prior to use. Provide adequate ventilation or restrict use to fume hood. Contact lens use in the laboratory is controversial. In some cases, soft lenses can actually protect eyes from chemicals. In other cases, chemical entrapment is a possible hazard. Particles adhering to contact lens surfaces can cause corneal damage. For safety, always wear safety glasses or goggles. Employees and students should know the location of eyewash and shower facilities near where chemicals are used. Be sure eyewash stations and safety showers are in good working order.

Usage Precautions and Procedure Before using, read this material's container label and follow all precautions. Do not smoke in usage or storage areas. Practice good housekeeping to avoid unintentionally mixing incompatibles. Do not allow chemical residue or dust buildup in lab or work areas. Avoid vapor inhalation and prolonged skin contact. Wear impervious gloves to work with this substance. Keep this material away from notebooks, textbooks, and personal belongings to avoid transporting chemical residues from the lab/work area. After working with chemical materials, and before eating, drinking, or smoking, always wash hands and face. Accidental ingestion of potassium bromide can be toxic. Remove and launder contaminated clothing before reusing.

Additional Data Potassium bromide is stable at room temperature under normal handling and storage conditions. It does not polymerize. Its incompatibilities include bromine trifluoride. In general, potassium bromide is a stable, inert material that should not react hazardously with common chemicals.

Preferred Storage Location and Methods Storage areas should be cool and well ventilated, and the containers tightly closed and out of direct sunlight. To separate incompatible chemicals, store by chemical family, not by alphabetical name. Protect all chemical containers from physical damage. Prohibit smoking in chemical storage areas. Purchase amounts equal to only a year's needs, if at all.

♦ SECTION 3 SPILL/DISPOSAL PROCEDURES

If Spilled Ventilate spill area. Clean up spilled material promptly and thoroughly. Cleanup personnel should protect against skin or eye contact and inhalation. For dry spills, carefully collect and scoop the spilled dry material into secure disposal or reclamation containers. Avoid creating airborne dust conditions. Sweep, vacuum (with an appropriate filter), or wet mop to minimize dust dispersion.

Disposal of Small Quantities *Handle emptied containers carefully since residues may remain.* Always check regulations before disposal. Investigate recycling, reclamation, or destruction to a less hazardous material rather than disposal of untreated waste to a landfill. If this method is not practical, feasible, or in accord with existing regulations, contact your supplier or a licensed disposal contractor for specific treatment/disposal procedures.

Disposal of Larger Amounts Contact your supplier or a licensed disposal company.

Follow all applicable local, state, and Federal regulations for all waste disposal.

♦ SECTION 4 HEALTH HAZARDS

Ingestion of large doses of potassium bromide can depress the central nervous system. Prolonged intake can result in mental deterioration and acneform skin eruptions.

1990-91 ACGIH TLV None established

1990 NIOSH REL None established

1990 OSHA PEL None established

1985-6 Toxicity Data Rat, cytogenic analysis, Ascites tumor:
200 mg/kg

Carcinogenicity Not listed by the NTP, IARC, or OSHA

Acute Effects Exposure to potassium bromide may cause skin and eye irritation.

Chronic Effects Prolonged, continued, chronic exposure to potassium bromide may cause skin rashes/irritation (acneform eruptions).

♦ SECTION 5 FIRST AID PROCEDURES

Eye Contact Promptly flush eyes with plenty of running water for at least 15 min, including under the eyelids. Get prompt medical attention.

Skin Contact After flushing with large amounts of water, wash exposed areas with soap and water.

Inhalation Remove victim from exposure to fresh air and support breathing as necessary.

Ingestion Unlikely. However, if this exposure should occur, get *prompt* medical attention. Never give anything by mouth to an unconscious or convulsing person. Give the conscious person 2 to 3 glasses of water to drink to dilute the material. *Do not induce vomiting.*

Get proper in-school, paramedic, or community medical attention and support.

♦ SECTION 6 FIRE PROCEDURES AND DATA

Fire Hazards Potassium bromide is a stable, inert, simple inorganic salt that does not burn. No unusual fire hazards or explosions are reported. Since fire may produce toxic fumes, a self-contained breathing apparatus (SCBA) is recommended.

Flash Point and Method None reported

Autoignition Temperature None reported

Flammability Limits in Air (vol. %) None reported

Hazardous Decomposition Products Thermal oxidative decomposition of potassium bromide can produce toxic fumes of potassium and/or bromine at elevated temperatures.

Extinguishing Media Use water fog, carbon dioxide, dry chemical, alcohol-type foam, or other media appropriate to surrounding fire conditions.

♦ SECTION 7 PHYSICAL DATA

Melting Point (at 1 atm) 1346 °F (730 °C)

Solubility in Water (at 25 °C) Complete

pH of Aqueous Solution 7 (neutral: neither acidic nor basic)

Molecular Weight 119

Specific Gravity (H₂O = 1) 2.75

References 1, 6, 84-94, 116, 117, 120, 122, 124, 126, 127, 132, 526; Genium's *Material Safety Data Sheets Collection*, No. 247 (11/88)

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