Potassium Permanganate

J.T. BAKER INC., 222 Red School Lane, Phillipsburg, NJ 08865

SECTION I - PRODUCT IDENTIFICATION

Product Name: Potassium Permanganate
Common Synonyms: Permanganic Acid, Potassium Salt
Chemical Family: Manganese Compounds
Formula: K\text{MnO}_4
Formula Wt.: 158.04
CAS No.: 7722-64-7
NIOSH/RTECS No.: SD6475000
Product Use: Laboratory Reagent
Product Codes: 3232, 3228, 3227

PRECAUTIONARY LABELING

Laboratory Protective Equipment

U.S. Precautionary Labeling

DANGER!
CAUSES IRRITATION. HARMFUL IF SWALLOWED OR INHALED. STRONG OXIDIZER. CONTACT WITH COMBUSTIBLE MATERIALS, FLAMMABLE MATERIALS, OR POWDERED METALS CAN CAUSE FIRE OR EXPLOSION.
Keep from contact with clothing and other combustible materials. Do not store near combustible materials. Avoid contact with eyes, skin, clothing. Keep in tightly closed container. Wash thoroughly after handling. In case of fire, soak with water. In case of spill, sweep up and remove. Flush spill area with water.
Potassium Permanganate

PRECAUTIONARY LABELING (CONTINUED)

International Labeling

Contact with combustible material may cause fire. Harmful if swallowed. Keep out of reach of children.

SAF-T-DATA* Storage Color Code: Yellow (reactive)

SECTION II - COMPONENTS

Component: Potassium Permanganate
CAS No.: 7722-64-7
Weight %: 90-100
OSHA/PEL: 5 mg/m³
ACGIH/TLV: 5 mg/m³

TLV is for Manganese, Dust and compounds, as Mn. PEL (Ceiling) is for Manganese compounds, as Mn.

SECTION III - PHYSICAL DATA

Boiling Point: N/A
Vapor Pressure (mmHg): N/A

Melting Point: 150°C (302°F)
(at 760 mm Hg)
DECOMPOSES
Vapor Density (air=1): 5.40

Specific Gravity: 2.70
(H₂O=1)

Solubility (H₂O): Moderate (1-10%)

% Volatiles by Volume: 0
(21°C)

pH: N/A

Odor Threshold (ppm): N/A

Physical State: Solid

Coefficient Water/Oil Distribution: N/A

Appearance & Odor: Dark purple to bronze crystals. Odorless.

Continued on Page: 3
Potassium Permanganate

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Closed Cup): N/A
Autoignition Temperature: N/A
Flammable Limits: Upper - N/A Lower - N/A

Fire Extinguishing Media
Use water spray.

Special Fire-Fighting Procedures
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers cool.

Unusual Fire & Explosion Hazards
Strong oxidizer. Contact with combustible materials, flammable materials, or powdered metals can cause fire or explosion.

Toxic Gases Produced
none identified

Explosion Data-Sensitivity to Mechanical Impact
None identified.

Explosion Data-Sensitivity to Static Discharge
None identified.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLV/TWA): 5 mg/m³
TLV is for Manganese, Dust and compounds, as Mn.
Short-Term Exposure Limit (STEL): Not Established
Permissible Exposure Limit (PEL): 5 mg/m³
PEL (Ceiling) is for Manganese compounds, as Mn.
Toxicity of components

Continued on Page: 4
P6005 - 04
Effective: 03/09/92

Potassium Permanganate

Effective: 03/09/92

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SECTION V - HEALTH HAZARD DATA (CONTINUED)
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Oral Rat LD₅₀ for Potassium Permanganate 1090 mg/kg
Subcutaneous Mouse LD₅₀ for Potassium Permanganate 500 mg/kg

Carcinogenicity: NTP: No IARC: No Z List: No OSHA Reg: No

Carcinogenicity
None identified.

Reproductive Effects
None identified.

Effects of Overexposure

INHALATION: excessive inhalation is irritating, may cause perforated septum, and manganism

SKIN CONTACT: severe irritation or burns

EYE CONTACT: severe irritation or burns

SKIN ABSORPTION: rapid absorption

INGESTION: nausea, vomiting, gastrointestinal irritation, burns to mouth and throat

CHRONIC EFFECTS: none identified

Target Organs
respiratory system, central nervous system, blood, kidneys

Medical Conditions Generally Aggravated by Exposure
damaged skin

Primary Routes of Entry
ingestion, inhalation

Emergency and First Aid Procedures

INGESTION: CALL A PHYSICIAN. If swallowed, do NOT induce vomiting. If conscious, give large amounts of water. Follow with diluted vinegar, fruit juice or whites of eggs beaten with water.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes.

EYE CONTACT: In case of eye contact, immediately flush with plenty of water for at least 15 minutes.

SARA/TITLE III HAZARD CATEGORIES and LISTS

Acute: Yes Chronic: Yes Flammability: Yes Pressure: No Reactivity: No

Extremely Hazardous Substance: No CERCLA Hazardous Substance: Yes Contains Potassium Permanganate (RQ = 100 LBS)

SARA 313 Toxic Chemicals: No TSCA Inventory: Yes

SECTION VI - REACTIVITY DATA

Stability: Stable Hazardous Polymerization: Will not occur

Conditions to Avoid: heat

Incompatibles: organic materials, combustible materials, strong reducing agents, strong acids, peroxides, alcohols, chemically active metals

Decomposition Products: none identified

SECTION VII - SPILL & DISPOSAL PROCEDURES

Steps to be Taken in the Event of a Spill or Discharge
Wear self-contained breathing apparatus and full protective clothing. Keep combustibles (wood, paper, oil, etc.) away from spilled material. With clean shovel, carefully place material into clean, dry container and cover; remove from area. Flush spill area with water.

Disposal Procedure
Dispose in accordance with all applicable federal, state, and local environmental regulations.
P6005 -04

Potassium Permanganate

Effective: 03/09/92

Issued: 07/10/93

SECTION VII - SPILL & DISPOSAL PROCEDURES (CONTINUED)

EPA Hazardous Waste Number: D001 (Ignitable Waste)

SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

Ventilation: Use general or local exhaust ventilation to meet TLV requirements.

Respiratory Protection: None required where adequate ventilation conditions exist. If airborne concentration exceeds TLV, a dust/mist respirator is recommended. If concentration exceeds capacity of respirator, a self-contained breathing apparatus is advised.

Eye/Skin Protection: Safety goggles, uniform, butyl rubber gloves are recommended.

SECTION IX - STORAGE AND HANDLING PRECAUTIONS

SANF-DATA* Storage Color Code: Yellow (reactive)

Storage Requirements
Keep container tightly closed. Store separately and away from flammable and combustible materials.

SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

Domestic (D.O.T.)

Proper Shipping Name: Potassium permanganate
Hazard Class: Oxidizer
UN/NA: UN1490 Reportable Quantity: 100 LBS.
Labels: OXIDIZER, CORROSIVE
Regulatory References: 49CFR 172.101; 173.154; 173.194
SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION (CONTINUED)

International (I.M.O.)

Proper Shipping Name: Potassium permanganate
Hazard Class: 5.1
UN: UN1490
Marine Pollutants: No
Labels: OXIDIZING AGENT, CORROSIVE
Regulatory References: 49 CFR 172.12(b); IMDG Code

I.M.O. Page: 5067
Packaging Group: II

AIR (I.C.A.O.)

Proper Shipping Name: Potassium permanganate
Hazard Class: 5.1
UN: UN1490
Labels: OXIDIZING AGENT, CORROSIVE
Regulatory References: 49 CFR 172.101; ICAO== We believe the transportation
data and references contained herein to be factual and
the opinion of qualified experts. The data is meant as
a guide to the overall classification of the product
and is not package size specific, nor should it be
taken as a warranty or representation for which the
company assumes legal responsibility.== The
information is offered solely for your consideration,
investigation, and verification. Any use of the
information must be determined by the user to be in
accordance with applicable Federal, State, and Local
laws and regulations. See shipper requirements 49 CFR
172.3 and employee training 49 CFR 173.1.

U.S. Customs Harmonization Number: 284160000006

N/A = Not Applicable or Not Available
N/E = Not Established

The information in this Material Safety Data Sheet meets the
requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and
regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the
Canadian WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. This document
is intended only as a guide to the appropriate precautionary handling of
the material by a person trained in, or supervised by a person trained
in, chemical handling. The user is responsible for determining the
precautions and dangers of this chemical for his or her particular
application. Depending on usage, protective clothing including eye and
face guards and respirators must be used to avoid contact with material
Continued on Page: 8
or breathing chemical vapors/fumes.
Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, Baker cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. Baker warrants that the chemical meets the specifications set forth on the label.

BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Baker will periodically revise this Material Safety Data Sheet.

Note: CHEMTREC, CANUTEC, and NATIONAL RESPONSE CENTER emergency telephone numbers are to be used ONLY in the event of CHEMICAL EMERGENCIES involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to Customer Service (1-800-JTBAKER) for assistance.

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Approved by Quality Assurance Department.