



CARUS[®] POTASSIUM PERMANGANATE HIGH PURITY

EINECS Reference No. 231-760-3, No. 025-002-9 | CAS Registry No 7722-64-7

High Purity is recommended where high purity levels of potassium permanganate are required such as in oxidation reactions, pharmaceutical preparation, or industrial applications.

HIGH PURITY GRADE

Assay

Guaranteed $\geq 99.0\%$ KMnO_4

Water Insolubles, % m/m ≤ 1.0

CHEMICAL/PHYSICAL DATA

Formula	KMnO_4
Formula Weight	158.0 g/mol
Form	Granular Crystalline
Specific Gravity	
Solid	2.703 g/cm ³
3% Solution	1.020 g/mL by weight, 20°C / 4°C
Bulk Density Approx.	1.45-1.60 g/cm ³
Decomposition may start at 150 °C / 302 °F	

SHIPPING CONTAINERS

22 kg pail (48.502 lb) net, with handle, made of HDPE.

DESCRIPTION

Crystals or granules are dark purple with a metallic sheen, sometimes with a dark bronze-like appearance. High Purity grade potassium permanganate has a sweetish, astringent taste and is odorless.

HANDLING, STORAGE & INCOMPATIBILITY

Protect containers against physical damage. When handling potassium permanganate, respirators should be worn to avoid irritation of or damage to mucous membranes. Eye protection should also be worn when handling potassium permanganate as a solid or in solution.

Potassium permanganate is stable and will keep indefinitely if stored in a cool, dry area in closed containers. Concrete floors are preferred to wooden decks. To clean up spills and leaks, follow the steps recommended in the SDS. Be sure to use goggles, rubber gloves, and respirator when cleaning up a spill or leak.

Avoid contact with acids, peroxides, and all combustible organic or readily oxidizable materials including inorganic oxidizable materials and metal powders. With hydrochloric acid, chlorine gas is liberated. Potassium permanganate is not combustible, but will support combustion. It may decompose if exposed to intense heat. Fires may be controlled and extinguished by using large quantities of water. Refer to the SDS for more information.



CORROSIVE PROPERTIES

Potassium permanganate is compatible with many metals and synthetic materials. Natural rubbers and fibers are often incompatible. Solution pH and temperature are also important factors. The material must be compatible with either the acid or alkali also being used.

In neutral and alkaline solutions, potassium permanganate is not corrosive to iron, mild steel, or stainless steel; however, chloride corrosion of metals may be accelerated when an oxidant such as potassium permanganate is present in solution. Plastics such as polypropylene, polyvinyl chloride Type I (PVC I), epoxy resins, fiberglass reinforced plastic (FRP), Penton, Lucite, Viton A, and Hypalon are suitable. Teflon FEP and TFE, and Tefzel ETFE are best. Refer to Material Compatibility Chart.

Aluminum, zinc, copper, lead, and alloys containing these metals may be (slightly) affected by potassium permanganate solutions. Actual studies should be made under the conditions in which the product will be used.



SHIPPING

Potassium permanganate is classified by the Hazardous Materials Transportation Board (HMTB) as an oxidizer. It is shipped under Interstate Commerce Commission's (ICC) Tariff 19.

Proper Shipping Name:	Potassium Permanganate (RQ-100/45.4)
Hazard Class:	Oxidizer
Identification Number:	UN 1490
Label Requirements:	Oxidizer
Packaging Requirements:	49 CFR Parts 100 to 199

APPLICATIONS

Listed below are some of the many applications of potassium permanganate as a powerful oxidizing agent. The optimum condition under which it is to be used can be easily established through technical service evaluations or laboratory testing.

- Oxidation and Synthesis
- Municipal Wastewater Treatment
- Industrial Wastewater Treatment
- Metal Surface Treatment
- Equipment Cleaning
- Purification of Gases
- Mining and Metallurgical
- Slag Quenching
- Food Processing



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