



CARUS EUROPE



AQUOX[®] POTASSIUM PERMANGANATE PHARMA GRADE

CAS Registry No. 7722-64-7 & EINECS Reference No. 231-760-3 Data Sheet

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

PHARMA GRADE

Assay: Guaranteed $\geq 99.0\%$ KMnO_4

Water Insolubles, % m/m: ≤ 1.0

Chlorides: ppm < 200

Sulfates: ppm < 500

Specifications:

Pharma Grade meets British Pharmacopoeia (current edition) (monograph 0121)

CHEMICAL/PHYSICAL DATA

Formula: KMnO_4

Formula Weight: 158.0 g/mol

Form: Granular Crystalline

Specific Gravity:

Solid 2.703 g/cm³

3% Solution 1.020 g/mL by weight, 20°C / 4°C

Bulk Density Approx.: 1.45-1.60 g/cm³

Decomposition: May start at 150 °C / 302 °F

SOLUBILITY IN DISTILLED WATER

Temperature		Solubility	
°C	°F	g/L	oz/gal
0	32	27.8	3.7
20	68	65.0	8.6
40	104	125.2	16.7
60	140	230.0	30.7
70	158	286.4	38.3
75	167	323.5	43.2

SHIPPING CONTAINERS

25 kg pail (55.125 lb) net, with handle, made of HDPE, weighs 2.9 lbs (1.3 kg). It is tapered to allow nested storage of empty drums, stands approximately 15.9 inches (40.4 cm) high and has a maximum diameter of 12.4 inches (31.5 cm). Packaging weight tolerance +/- 1%.

DESCRIPTION

Crystals or granules are dark purple with a metallic sheen, sometimes with a dark bronze-like appearance. Pharma Grade is gray due to an additive. AQUOX has a sweetish, astringent taste and is odorless.

HANDLING, STORAGE & INCOMPATIBILITY

Protect containers against physical damage. When handling AQUOX, approved 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.

Store in accordance with the European Fire Association in Europe for Class II oxidizers. Additional regulations in Europe are REACH (Regulation for Registration, Evaluation, Authorization and Restriction of Chemicals), and CLP (Classification, Labeling, Packaging). REACH is a regulation that increases the responsibility of the industry to manage the risks that the chemical may pose. For REACH registration numbers, refer to the eSDS. Check local regulations to ensure proper storage.

AQUOX 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. AQUOX 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

AQUOX® 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, AQUOX is not corrosive to iron, mild steel, or stainless steel; however, chloride corrosion of metals may be accelerated when an oxidant such as AQUOX 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 AQUOX solutions. Actual studies should be made under the conditions in which the product will be used.



SHIPPING

Potassium Permanganate is classified as an oxidizer according to International Maritime Dangerous Goods Code (IMDG Code), Agreement Concerning the International Carriage of Dangerous Goods by road (ADR) and the Regulations concerning the International Carriage of Dangerous Goods by Rail (RID).

Proper Shipping Name:	Potassium Permanganate (RQ-100 lb/45.4 kg)
Hazard Class:	Oxidizer
Identification Number:	UN 1490
Label Requirements:	Oxidizer
Packaging Requirements:	ADR - Volume II - Part 4

APPLICATIONS

Listed below are some of the many applications of AQUOX 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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