



CARUS® Mn S manganese sulfate is an important component in radium removal systems utilizing Hydrous Manganese Oxide (HMO). This NSF certified manganese sulfate provides one of the components necessary for the production of HMO. CARUSOL® liquid permanganate completes the system, allowing for the formation of highly adsorbent hydrous manganese oxide.

## PRODUCT SPECIFICATIONS

Assay	≥ 29.4% as MnSO <sub>4</sub> • H <sub>2</sub> O
pH, 5% solution	5.0 - 8.0
Insolubles, %	≤ 0.2%

## Standards and Specifications

CARUS Mn S manganese sulfate is certified by the National Sanitation Foundation (NSF) to ANSI/NSF Standard 60: Drinking Water Treatment Chemicals - Health Effects.

## CHEMICAL/PHYSICAL DATA

Formula	MnSO <sub>4</sub> • H <sub>2</sub> O
Formula Weight	169.0 g/mol
Form	Clear solution
Density	Approximately 10.88 lbs/gal

## APPLICATIONS

CARUS Mn S manganese sulfate is utilized as a major component in the creation of Hydrous Manganese Oxide (HMO) for the removal of radium.

## CARUS CORPORATION

During its more than 98-year history, Carus' ongoing emphasis on research and development, technical support, and customer service has enabled the company to become the world leader in permanganate, manganese, oxidation and base-metal catalyst technologies.

## SHIPPING CONTAINERS

### 55-gallon (208.2 L) Closed head HDPE Drum

(Un specifications: 3H1) Made of high density polyethylene (HDPE.) Weighs 20.5 lbs (9.3 kg). The net weight is 598 lbs. The drum stands approximately 35.1 in. tall, has an outside diameter of 23.4 in. (89.1 cm tall, OD 59.4 cm).

### 275-gallon (1041 L) IBC (Intermediate Bulk Container)

Weighs 139 lbs (65 kg). The net weight is 3000s (1106.8 kg). The IBC dimensions are 45.4 in. high, 48 in. long, and 40 in. wide. The IBC has a 2" butterfly valve with NPT threads in bottom sump.

### Bulk Shipping

Quantities from 3000-4200 gallons are available.

## HANDLING, STORAGE, AND INCOMPATIBILITY

CARUS Mn S manganese sulfate should be stored in a cool, dry area in a closed container. Segregated from permanganates, other oxidizing agents, peroxides, and chlorates. Protect containers against physical damage.

## SHIPPING

CARUS Mn S manganese sulfate is not regulated by the Department of Transportation (DOT). The proper shipping name is Manganese Compound.

