

Section 1. Product and Company Identification

Product Name Dextromethorphan Hydrobromide
CAS Number 6700-34-1

Parchem - fine & specialty chemicals

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EMERGENCY RESPONSE NUMBER
CHEMTEL

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Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

Physical Hazards

Not classified.

Health Hazards

Acute toxicity, oral - Category 4

Serious eye damage/eye irritation - Category 2B

Specific target organ toxicity, single exposure - Category 3 respiratory tract irritation

Specific target organ toxicity, single exposure - Category 3 narcotic effects

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard Statements

Harmful if swallowed. Causes eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary Statements

Prevention

Use only outdoors or in a well-ventilated area. Wash thoroughly after handling.

Response

If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in



eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Risk: Harmful if swallowed. Harmful to aquatic organisms.

Section 3. Composition / Information on Ingredients

Common Name	Dextromethorphan Hydrobromide
Synonym(s)	Dextromethorphan HBr
Formula	$C_{18}H_{25}NO \cdot HBr \cdot H_2O$
CAS Number	6700-34-1

Section 4. First Aid Measures

General Information: Remove to fresh air. Remove contaminated clothing. Persons developing serious hypersensitivity reactions must receive immediate medical attention. Upon eye or skin contact, flush affected area with copious quantities of water. Obtain medical attention. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Inhalation: May cause irritation of respiratory tract. Avoid inhalation. Remove from exposure area to fresh air immediately. Perform artificial respiration if necessary. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

Skin contact: May cause irritation. Remove contaminated clothing and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15 - 20 minutes). Get medical attention immediately.

Eye contact: May cause irritation. Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15 - 20 minutes). Get medical attention immediately.

Ingestion: May cause irritation. Remove by gastric lavage. Protect against aspiration. Emetics are rarely successful and are potentially dangerous. Leave 15 - 30g. of sodium sulfate in the stomach as a saline cathartic and a slurry of activated charcoal. Maintain airway, respiration and blood pressure. Use oxygen and perform artificial respiration if indicated (Gosselin, Clinical Toxicology of Commercial products, 5th Edition).

Information for doctor

Basic treatment:

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for pulmonary edema.
- Monitor and treat, where necessary, for shock.
- DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5



ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

Advanced treatment:

- Consider or tracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive pressure ventilation using a bag valve mask tight be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV DSW TKO. If signs of hypovolemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary edema.
- Hypotension with signs of hypovolemia required the cautious administration of fluids. Fluid overload might create complications
- Proparacaine hydrochloride should be used to assist eye irrigation.

Dextromethorphan is well absorbed from gastrointestinal. It is the liver and excreted as the uncharged dextromethorphan and demethylated morphine compound.

Antidote: No specific antidote. Treat symptomatically and supportively.

Environmental impact rating (0 - 4): No data available

Acute Aquatic toxicity: No data available

Degradability: No data available

Log Bio Concentration Factor (BCF): No data available

Log Octanol/Water partition coefficient: No data available

Section 5. Firefighting Measures

Vapor Pressure (mmHg): Not applicable

Upper Explosive Limit (%): Not applicable

Specific Gravity (Water =1): Not applicable

Lower Explosive Limit (%): Not applicable

Flash Points: No data available

Suitable extinguishing agents: Water spray, dry chemical powder, carbon dioxide, or foam as appropriate for surrounding fire and materials.

Special hazards caused by the material, its products of combustion or resulting gases: This material is assumed to be combustible dry powder. It is advisable to ground mechanical equipment in contact with dry material to dissipate the potential build-up of static electricity. When heated to decomposition material emits toxic fumes of NO_x and HBr. Emits toxic fumes under fire condition

Protective Equipment: As with all fires, evacuate personnel to safe area. Fire-fighters should use self-contained breathing equipment and protective clothing.

Fire Incompatibility: Avoid contamination with Oxidizing agents i.e. Nitrates, Oxidizing acids, chlorine, bleaches, pool chlorine etc. as ignition may result.



Section 6. Accidental Release Measures

Person related safety precautions

Minor Spills

- Clean up waste regularly and abnormal spills immediately.
 - Avoid breathing dust and contact with skin and eyes.
 - Wear protective clothing, gloves, safety goggles and dust mask.
 - Dampen with water to prevent dusting before sweeping.
 - Ensure adequate ventilation. Switch off electrical equipment and any other sources of ignition.
- Evacuate area.

Major Spills

- Clean area of personnel and move upwind.
- Alert Emergency responders and tell them location and nature of hazard.
- Wear full body protective clothing, with breathing apparatus.
- Stop leak if safe do so.
- Contain spill with sand, earth or vermiculite.
- Neutralize / decontaminate residue
- Collect solid residues and seal in labeled drums for disposal.

Measures for environmental protection: Ventilate area and wash spill site with sodium hypochlorite solution after material pick up is complete. Keep away from drains, surface-and groundwater and soil.

Measures for cleaning/collecting: Collect residues manually, wipe with a small quantity of sodium hypochlorite, place in a bag and hold for waste disposal. Avoid raising dust/mist.

Section 7. Handling and Storage

Handling Information for safe handling: Avoid contact with eyes, skin or clothing. Avoid breathing dust or mist. Use with adequate dust control. Wash thoroughly after handling. Wear fresh clothing daily. Wash contaminated clothing before reuse. Do not permit eating, drinking and smoking near material.

Information about protection against explosions and fires: Dust can be comb1ne with a1r to form an explosive mixture

Storage

Requirements to be met by storerooms and receptacles: Store container tightly sealed at a cool and dry place with sufficient ventilation.

Information about storage conditions: Store away from incompatible substances.

Further information about storage conditions: Keep drums tightly sealed. Protect from exposure to the light. This material should be handled and stored as per label instructions to ensure product integrity.



Section 8. Exposure Controls / Personal Protection

Exposure Limit: 10 microgram/m³

Additional Occupational Exposure limit values for possible hazards during processing: Observe general threshold limit for dust.

Additional information

Personal Protective Equipment

General Protective and Hygienic Measures: Keep away from foodstuffs, beverages and feed. Do not eat or drink while working. Wash hands before breaks and the end of work. Vacuum clean contaminated clothing. Do not blow or brush off contamination. Do not inhale dust/smoke/mist.

Breathing equipment: Respiratory Protection Protecting mask

In case of untended release

Short term filter device: 3 M full face mask.

Breathing equipment is only to be used in order to handle the residual risk of short term jobs. If all other risk minimizing measures have been carried out. e. g. retention and/or local exhaust.

Protection of hands: Chemical resistant gloves.

Eye Protection: Safety Goggles or face shield

Body protection: PVC full apron/Air pressure suit

Section 9. Physical and Chemical Properties

Physical & Chemical Properties

Appearance: Practically white crystalline powder.

Odor: Having a faint odor.

Melting Point/Melting Range: Melts at about 126°C with decomposition

Boiling Point/Boiling range: Not Available

Flash Point: Not Available

Specific Gravity (Water=1): Not applicable

Bulk density (20°C): 0.5 to 0.9 g/lee (Tapfed Density)

Solubility in/Miscibility with water at 20°C: Sparingly soluble in water, freely soluble in alcohol and in chloroform.

pH (20°C): 5.2 to 6.5

Identification: Complies as per EP specifications.

Acidity/Alkalinity: Complies as per EP specifications.

Specific Optical Rotation: Between +28° and +30°

Assay: Between 99% and 101%.

Particle size: Normal particle size is 98% particles passes through 60 mesh B S sieve. In some cases, particle size is as per the requirement of the customer.

Volatile Component (% vol): Not applicable

Relative Vapor Density (Air=1): Not applicable

Evaporation Rate: Not applicable



Section 10. Stability and Reactivity

Thermal decomposition/condition to be avoided: When heated to decomposition material emits toxic fumes of NO_x and HBr. Emits toxic fumes under fire conditions. May burn but does not ignite readily. Prevent dispersion of dust in air. Do not allow spilled material to contaminate water sources.

Materials to be avoided: N/A

Dangerous reactions: N/A

Dangerous products of decomposition: N/A

Incompatibilities: Alkalis and oxidizing agents.

Stability: Material is stable from a safety point of view. Stable under normal temperatures and pressures.

Hazardous Polymerization: Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

Section 11. Toxicological Information

Acute toxicity

LD/LC 50 values that are relevant for classification

Toxicity Data for Dextromethorphan Hydrobromide: CAS 6700-34-1

Oral Child - TDLO: 30 mg/Kg

Oral Rat - LD50: 350 mg/Kg

Subcutaneous Rat - LD50: 600 mg/Kg

Oral mouse - LD50: 165 mg/Kg

Subcutaneous mouse - LD50: 153 mg/Kg

Intravenous mouse - LD50: 35 mg/Kg

Intravenous dog - LD50: 30 mg/Kg

Intravenous rabbit - LD50: 15 mg/Kg

Subcutaneous guinea pig - LD50: 150 mg/Kg

Unknown mammal - LD50: 150 mg/Kg

Subcutaneous Rat - LD50: 423 mg/Kg

Subcutaneous mouse - LD50: 275 mg/Kg

Subcutaneous dog - LD50: 157 mg/Kg

Intravenous cat - LD50: 19,800 IJQ/Kg

Oral guinea pig - LD50: 336 mg/Kg

Carcinogen

Bromine Compounds (Organic or Inorganic):

US Environmental Defense Scorecard Suspected Carcinogens

Reference(s) P65-MC



Section 12. Ecological Information

Refer to data for ingredients, which follows:

DEXTROMETHORPHAN HYDROBROMIDE:

- Harmful to aquatic organisms.
 - Bromide ion may be introduced to the environment after the dissociation of various salts and complexes or degradation of organobromide compounds.
- Although not a significant toxin in mammalian or avian systems it is highly toxic to rainbow trout and Daphnia magna. Bromides may also affect the growth of microorganisms and have been used for this purpose in industry.
- Bromides in drinking water are occasionally subject to disinfection processes involving ozone or chlorine.
- Bromide may be oxidized to produce hypobromous acid which in turn may react with natural organic matter to form brominated compounds. The formation of bromoform has been well documented, as has the formation of bromoacetic acid, bromopicrin, cyanogen and bromoacetone. Bromates may also be formed following ozonation or chlorination if PH is relatively high. Bromates may be animal carcinogens.
- DO NOT discharge in to sewer or waterways.

Water hazard class

Do not allow product to reach ground water, water course, or sewage system.
Danger to drinking water

Ecotoxicity: Toxic to aquatic organisms.

EC50 (daphnies 48h): 14.5 mg/l

Environment toxicity: Not available

Special remarks on the product of biodegradation: Not available

LC50 (Fish 96h): 4.9 mg/L

IC50 (Algae 72h): 2.4 mg/L

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

IATA/ICAO (Air)

UN Number: UN3077

Hazard Class: Class 9

Packing Group: PG III

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S
(Dextromethorphan Hydrobromide)



ADR/RID (Road/Railway)

UN Number: UN3077

Hazard Class: Class 9

Packing Group: PG III

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S
(Dextromethorphan Hydrobromide)

IMDG (Sea)

UN Number: UN3077

Hazard Class: Class 9

Packing Group: PG III

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S
(Dextromethorphan Hydrobromide)

Identification: Not applicable

Special provision for Transport: Not applicable

Section 15. Regulatory Information

Markings according to EC guidelines: The product has been classified and marked in accordance with EC Directives / Ordinance on Hazardous materials.

Xn - Harmful

Code letter and Hazard designation of product:

Risk phrases

R22: Harmful if swallowed

R51/53: Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

R63: Possible risk of harm to unborn child.

R64: May cause harm to breastfed babies.

Safety phrases

S22: Do not breathe dust

S36: Wear suitable protective clothing

S60: This material and its container must be disposed of as hazardous waste

NFPA Rating

Health: 2

Flammability: 1

Reactivity: 0



Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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