

SAFETY DATA SHEET

Product name: Apomorphine hydrochloride hemihydrate Page: 1/12
Revision Date: Print date: 2018-08-23
Product No.: SDS-ID: CA-EN/1.0

1. IDENTIFICATION

Product identifier

Product name: Apomorphine hydrochloride hemihydrate

CAS-No.: 41372-20-7

Container size: different sizes

Recommended use and restrictions on use

Identified use(s): Active ingredient in the pharmaceutical industry.

Details of the supplier of the safety data sheet

Supplier: Chr. Olesen Synthesis A/S
Kanalholmen 8-12
DK-2650 Hvidovre
Denmark
Tel:+45 3679 4500
Fax:+45 3834 1572
info@COSynthesis.dk
www.cosynthesis.dk,

Supplier: ACIC
81 Sinclair Boulevard
Brantford, Ontario
N3S 7X6, CANADA
Tel:1-800-265-6727
sales@acic.com

Responsible for safety data sheet authoring: info@COSynthesis.dk

Emergency telephone number

Emergency telephone: Alberta & NWT:
Poison & Drug Information Service (PADIS): 1-800-332-1414
British Columbia:
Drug and Poison Information Centre (DPIC): 604-682-5050 / 1-800-567-8911
Ontario:
Poison Centre: 1-800-268-9017
Québec:
Poison Control Centre: 1-800-463-5060

SAFETY DATA SHEET

Product name: Apomorphine hydrochloride hemihydrate Page: 2/12
Revision Date: Print date: 2018-08-23
Product No.: SDS-ID: CA-EN/1.0

2. HAZARDS IDENTIFICATION

Classification of the hazardous product

Caution - substance not yet fully tested.

WHMIS 2015: Acute (Oral) Toxicity — Category 3

Label elements



Danger

Contains: Apomorphine hydrochloride
CAS: 41372-20-7

H301 Toxic if swallowed.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P261 Avoid breathing dust.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P330 Rinse mouth.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local regulations.

Other hazards

Dust may irritate the eyes and the respiratory system.

PBT/vPvB: This substance is not classified as PBT or vPvB.

Other: May form combustible dust concentrations in air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

WHMIS 2015:

<u>%:</u>	<u>CAS-No.:</u>	<u>EC No.:</u>	<u>REACH Reg. No.:</u>	<u>Chemical name:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
100	41372-20-7	627-402-4	-	Apomorphine hydrochloride	Acute (Oral) Toxicity Category 3	

SAFETY DATA SHEET

Product name: Apomorphine hydrochloride hemihydrate Page: 3/12
Revision Date: Print date: 2018-08-23
Product No.: SDS-ID: CA-EN/1.0

4. FIRST-AID MEASURES

Description of first-aid measures

Inhalation: Dust inhalation: In case of problems:
Move into fresh air and keep at rest. In case of persistent throat irritation or coughing: Seek medical attention and take along these instructions.

Skin contact: Remove contaminated clothes and rinse skin thoroughly with water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact: Do not rub eye. Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.

Ingestion: Immediately rinse mouth and drink plenty of water (200-300 ml). Induce vomiting, if person is conscious. Get medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms/effects: See section 11 for more detailed information on health effects and symptoms.

Indication of any immediate medical attention and special treatment needed

Medical attention/treatments: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Extinguishing media: Use fire-extinguishing media appropriate for surrounding materials. Follow the general fire precautions indicated by the workplace.

Specific hazards arising from the hazardous product

Specific hazards: During fire, health hazardous gases may be formed.

Advice for fire-fighters

Protective equipment for fire-fighters: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid inhalation of dust. Use work methods which minimise dust production. Follow precautions for safe handling described in this safety data sheet.

Environmental precautions

Environmental precautions: Avoid spreading dust or contaminated materials.

Methods and material for containment and cleaning up

Spill Cleanup Methods: Use a vacuum cleaner. If not possible, moisten dust with water before it is collected with shovel, broom or the like.

Reference to other items

References: For personal protection, see section 8.
For waste disposal, see section 13.

SAFETY DATA SHEET

Product name: Apomorphine hydrochloride hemihydrate Page: 4/12
Revision Date: Print date: 2018-08-23
Product No.: SDS-ID: CA-EN/1.0

7. HANDLING AND STORAGE

Precautions for safe handling

Safe handling advice: Avoid eating, drinking and smoking when using the product. Avoid inhalation of dust. Avoid contact with skin and eyes. Wash hands after handling. Change contaminated clothing. Observe good chemical hygiene practices.

Technical measures: Use work methods which minimize dust production.

Technical precautions: During dust-raising work: Local exhaust is recommended.

Conditions for safe storage, including any incompatibilities

Technical measures for safe storage: No special precautions.

Storage conditions: Store in tightly closed original container in a dry, cool and well-ventilated place.

Specific end-use(s)

Specific use(s): Not relevant

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits:

<u>CAS-No.:</u>	<u>Chemical name:</u>	<u>As:</u>	<u>Exposure limits:</u>	<u>Type:</u>	<u>Notes:</u>	<u>References:</u>
-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles	-	10 mg/m3	8h	ACGIH2015	New Brunswick
-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles	-	3 mg/m3	8h	ACGIH2015	New Brunswick
-	Particles (Insoluble or Poorly Soluble) Not Otherwise Classified, respirable fraction	-	3 mg/m3	8h	-	Saskatchewan
-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles	-	6 mg/m3	15min	-	-
-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles	-	10 mg/m3	8h	-	Saskatchewan
-	Particulates not otherwise regulated (PNOR), total dust	-	20 mg/m3	15min	-	-
-	Particulates not otherwise regulated (PNOR), total dust	-	10 mg/m3	TWA	3	Alberta
-	Particulates not otherwise regulated (PNOR), respirable fraction	-	3 mg/m3	TWA	3	Alberta
-	Particulates not otherwise regulated (PNOR), total dust	-	10 mg/m3	TWA	-	Quebec

SAFETY DATA SHEET

Product name:	Apomorphine hydrochloride hemihydrate	Page:	5/12
Revision Date:		Print date:	2018-08-23
Product No.:		SDS-ID:	CA-EN/1.0

-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles	-	10 mg/m3	8h	-	Nunavut
			20 mg/m3	15min		
-	Particles (Insoluble or Poorly Soluble) Not Otherwise Classified, respirable fraction	-	3 mg/m3	8h	-	Nunavut
			6 mg/m3	15min		
-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles	-	3 mg/m3	TWA	-	Newfoundla nd-Labrador
			10 mg/m3	TWA		Newfoundla nd-Labrador
-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles	-	3 mg/m3	TWA	-	Manitoba
			10 mg/m3	TWA		Manitoba
-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles	-	3 mg/m3	TWA	-	Nova Scotia
			10 mg/m3	TWA		Nova Scotia
-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles	-	3 mg/m3	TWA	-	Prince Edward Island
			10 mg/m3	TWA		Prince Edward Island
-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles	-	10 mg/m3	8h	-	NWT
			20 mg/m3	15min		
-	Particles (Insoluble or Poorly Soluble) Not Otherwise Classified, respirable fraction	-	3 mg/m3	8h	-	NWT
			6 mg/m3	15min		

SAFETY DATA SHEET

Product name: Apomorphine hydrochloride hemihydrate Page: 6/12
Revision Date: Print date: 2018-08-23
Product No.: SDS-ID: CA-EN/1.0

-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles	-	3 mg/m3	TWA	Ont	Ontario
-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles	-	10 mg/m3	TWA	Ont	Ontario
-	Particles (Insoluble or Poorly Soluble) Not Otherwise Classified, respirable fraction	-	3 mg/m3	TWA	-	BC
-	Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles	-	10 mg/m3	TWA	-	BC

Notes: References: see section 15 for legal references on occupational exposure limits.

Exposure controls

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust.

Respiratory equipment: In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter (type P2).

Hand protection: Risk of contact: Wear protective gloves. Nitrile gloves are recommended. Other types of gloves can be recommended by the glove supplier.

Eye protection: Use tight fitting goggles if dust is generated.

Hygiene measures: When using do not eat, drink or smoke. Wash hands after handling.

SAFETY DATA SHEET

Product name: Apomorphine hydrochloride hemihydrate
Revision Date:
Product No.:

Page: 7/12
Print date: 2018-08-23
SDS-ID: CA-EN/1.0

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form: Crystalline powder.
Colour: White/Grey
Odour: None
Odour threshold: Not available.
pH: Not available.
Melting point / freezing point: Not available.
Boiling point: Not available.
Flash point: Not available.
Evaporation rate: Not available.
Explosion limits: Not available.
Vapour pressure: Not available.
Vapour density: Not available.
Relative density: Not available.
Solubility: Not available.
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature (°C): Not available.
Decomposition temperature (°C): Not available.
Viscosity: Not available.
Oxidising properties: Not available.
Other information
Other data: Not available.

SAFETY DATA SHEET

Product name: Apomorphine hydrochloride hemihydrate

Page: 8/12

Revision Date:

Print date: 2018-08-23

Product No.:

SDS-ID: CA-EN/1.0

10. STABILITY AND REACTIVITY

Reactivity

Reactivity: None known.

Chemical stability

Stability: Stable under normal temperature conditions.

Possibility of hazardous reactions

Hazardous Reactions: None known.

Conditions to avoid

Conditions/materials to avoid: Avoid exposure to high temperatures or direct sunlight.

Incompatible materials

Incompatible materials: Not available.

Hazardous decomposition products

Hazardous decomposition products: None in particular.

SAFETY DATA SHEET

Product name: Apomorphine hydrochloride hemihydrate Page: 9/12
Revision Date: Print date: 2018-08-23
Product No.: SDS-ID: CA-EN/1.0

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Caution - substance not yet fully tested.

Acute Toxicity (Oral): Toxic if swallowed.
Acute Toxicity (Dermal): Based on available data, the classification criteria are not met.
Acute Toxicity (Inhalation): Based on available data, the classification criteria are not met.
Skin Corrosion/Irritation: Based on available data, the classification criteria are not met.
Serious eye damage/irritation: Based on available data, the classification criteria are not met.
Respiratory or skin sensitization: Based on available data, the classification criteria are not met.
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive Toxicity: Based on available data, the classification criteria are not met.
STOT - Single exposure: Based on available data, the classification criteria are not met.
STOT - Repeated exposure: Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

Inhalation: Dust may irritate throat and respiratory system and cause coughing.

Skin contact: Prolonged contact may cause redness and irritation.

Eye contact: May irritate and cause redness and pain.

Ingestion: Toxic if swallowed.

Specific effects: Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

This product contains no ingredient listed on the IARC, NTP, OSHA, British Columbia and Quebec as carcinogenic.
Other provincial regulations may apply.

SAFETY DATA SHEET

Product name: Apomorphine hydrochloride hemihydrate Page: 10/12
Revision Date: Print date: 2018-08-23
Product No.: SDS-ID: CA-EN/1.0

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity: There are no data on the ecotoxicity of this product.

Persistence and degradability

Degradability: Not known.

Bioaccumulative potential

Bioaccumulative potential: No data available on bioaccumulation.

Mobility in soil

Mobility: No data available.

Results of PBT and vPvB assessment

PBT/vPvB: This substance is not classified as PBT or vPvB.

Other adverse effects

Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

14. TRANSPORT INFORMATION

UN number

UN-No: 2811

UN proper shipping name

Proper Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.
(Apomorphine hydrochloride)

Transport hazard class(es)

Class: 6.1

Packing group

PG: III

Environmental hazards

Marine pollutant: No.

Environmentally Hazardous substance: No.

Special precautions for user

Special precautions: None known.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk: Not relevant

SAFETY DATA SHEET

Product name:	Apomorphine hydrochloride hemihydrate	Page:	11/12
Revision Date:		Print date:	2018-08-23
Product No.:		SDS-ID:	CA-EN/1.0

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific to the product

Special provisions: This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.
TSCA, DSL: Not listed.
None of this product's components are listed under the Canadian Environmental Protection Act (CEPA).

National regulation: Hazardous Products Regulations.
Alberta: Occupational Health and Safety Code 2009.
British Columbia: Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, with amendments (2015).
Quebec: Regulation respecting the quality of the work environment, with amendments (2013-12-13).
Ontario: Control of Exposure to Biological or Chemical Agents R.R.O. 1990, Reg. 833, with amendments (2016).
Manitoba: Manitoba Workplace Safety and Health Act and Regulation 2016.
New Brunswick: New Brunswick Regulation 91-191 under the Occupational Health and Safety Act (o.c. 91-1035).
Newfoundland and Labrador: Occupational Health and Safety Regulations, 2012.
Northwest Territories (NWT): Safety Act - Occupational Health and Safety Regulations, with amendments (2015).
Nunavut: Safety Act - Occupational Health and Safety Regulations 2015.
Saskatchewan: The Occupational Health and Safety Regulations, 1996, with amendments (2016).
Yukon: Occupational Health and Safety Act, with amendments (2015).
ACGIH Threshold Limit Values (2018).
Canadian Environmental Protection Act, Reporting for the Domestic Substances List (DSL), with amendments.
Department of Justice. Canadian Environmental Protection Act 1999 (CEPA), 1999, c. 33, with amendments.
U.S. Department of health and human services: 2011 - Report on Carcinogens - 12th Edition.
International Agency for Research on Cancer (IARC): IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Lyon: IARC, World Health Organization.

SAFETY DATA SHEET

Product name:	Apomorphine hydrochloride hemihydrate	Page:	12/12
Revision Date:		Print date:	2018-08-23
Product No.:		SDS-ID:	CA-EN/1.0

16. OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

Abbreviations and acronyms PBT = Persistent, Bioaccumulative and Toxic.
used in the safety data sheet: vPvB = very Persistent and very Bioaccumulative.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Made by DHI - Environment and Toxicology, Artvej 5, DK-2970 Hørsholm, Denmark.
www.dhigroup.com.