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1 Identification

Product identifier

Product name: Ropivacaine (hydrochloride [hydrate])

Stock number: H37891 CAS Number: 132112-35-7 EC number: 663-286-1

Relevant identified uses of the substance or mixture and uses advised against. Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet Manufacturer/Supplier:

Alfa Aesar Thermo Fisher Scientific Chemicals, Inc.

30 Bond Street

30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757 Email: tech@alfa.com

www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number: During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage. Hazards not otherwise classified No information known.

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms



GHS05

Signal word Danger

Signal word Danger
Hazard statements
H318 Causes serious eye damage.
Precautionary statements
P280 Wear eye protection / face protection.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
WUMING classification



Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System)



Health (acute effects) = 2 Flammability = 1
Flammability = 1
Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances CAS# Description: 132112-35-7 Ropivacaine (hydrochloride [hydrate]) Concentration: ≤100%

Identification number(s): EC number: 663-286-1

4 First-aid measures

Description of first aid measures

After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.

After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek medical treatment. Information for doctor

Most important symptoms and effects, both acute and delayed Causes serious eye damage.

(Contd. on page 2)

Product name: Ropivacaine (hydrochloride [hydrate])

Indication of any immediate medical attention and special treatment needed No further relevant information available.

(Contd. of page 1)

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Hydrogen chloride (HCI)
Advice for firefightors

Advice for firefighters
Protective equipment:
Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.

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Ensure adequate ventilation

Environmental precautions: Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleaning up: Pick up mechanically.

Prevention of secondary hazards: No special measures required.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

Protective Action Criteria for Chemicals PAC-1: Substance is not listed. PAC-2: Substance is not listed.

PAC-3: Substance is not listed

7 Handling and storage

Handling Precautions for safe handling

Precautions for safe nanoling
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires: No information known.

Conditions for safe storage, including any incompatibilities Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Store away from oxidizing agents. Further information about storage conditions:

Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: No data

Exposure controls

Personal protective equipment

Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Maintain an ergonomically appropriate working environment.
Breathing equipment: Use suitable respirator when high concentrations are present.
Recommended filter device for short term use:
Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protection of hands:
Impervious gloves

Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Eye protection:
Tightiy sealed goggles
Safety glasses with side shields / NIOSH (US) or EN 166(EU)
Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties General Information

Appearance: Form:

Odor:

Solid

Odor threshold:

Not determined Not determined

pH-value:

Not applicable

Change in condition Melting point/Melting range:

Not determined

(Contd. on page 3)

Product name: Ropivacaine (hydrochloride [hydrate])

(Contd. of page 2) Boiling point/Boiling range: Sublimation temperature / start: Not determined Not determined Flash point: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Not determined Not determined Not determined Not determined Auto igniting: Not determined

Not determined

Danger of explosion: Explosion limits: Lower: Upper: Not determined Not determined Vapor pressure: Density: Relative density Vapor density Not applicable. Not determined Not determined. Not applicable. Evaporation rate Solubility in / Miscibility with Not applicable.

Water: Not determined
Partition coefficient (n-octanol/water): Not determined. Viscosity: dynamic: kinematic: Not applicable.

Not applicable. No further relevant information available. Other information

10 Stability and reactivity

Reactivity No information known.

Chemical stability Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions Reacts with strong oxidizing agents

Conditions to avoid No further relevant information available.

Incompatible materials: Oxidizing agents

Hazardous decomposition products:

Hazardous decomposition products: Carbon monoxide and carbon dioxide

Nitrogen oxides Hydrogen chloride (HCI)

11 Toxicological information

Information on toxicological effects
Acute toxicity: No effects known.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion: May cause irritation
Eye irritation or corrosion: Causes serious eye damage.
Sensitization: No sensitizing effects known.
Germ cell mutagenicity: No effects known.
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: No effects known.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Not applicable

12 Ecological information

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability No further relevant information available.
Bioaccumulative potential No further relevant information available.
Mobility in soil No further relevant information available.

Additional ecological information: General notes:

Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.
Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.

14 Transport information

UN-Number DOT, ADN, IMDG, IATA Not applicable

UN proper shipping name DOT, ADR, ADN, IMDG, IATA Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Not applicable

(Contd. on page 4)

Version 1 Product name: Ropivacaine (hydrochloride [hydrate]) (Contd. of page 3)

Packing group DOT, ADR, IMDG, IATA Not applicable Environmental hazards: Not applicable Special precautions for user Not applicable Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. Transport/Additional information: DOT Marine Pollutant (DOT): No UN "Model Regulation": Not applicable

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms



Signal word Danger Hazard statements

Hazard Sattements
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Precautionary statements
P280
Wear eye protection / face protection.
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P310
Immediately call a POISON CENTER/doctor.

National regulations

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes.

This product is not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).

SARA Section 313 (specific toxic chemical listings) Substance is not listed.

California Proposition 65

Prop 65 - Chemicals known to cause cancer Substance is not listed.

Prop 65 - Developmental toxicity Substance is not listed.

Prop 65 - Developmental toxicity, female Substance is not listed.

Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed. National regulations

market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Department issuing SDS: Global Marketing Department
Date of preparation/Revision: Print date, revision date and version number are in the header of each page.
Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods DOT: US Department of Transportation
IMDG: International Maintime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal done, 50 percent
LD50: Lethal done, 50 percent
DSD: Lethal dose, 50 percent
PSD: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
VPUS: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
ARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

HSA