MENTHOL CRYSTALS

Safety Data Sheet 0X-001-081-ZZ

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Name : MENTHOL CRYSTALS

CAS No : 2216-51-5

Formula : C10H20O

Synonyms : (-)-(1R,2S,5R)-menthol / (-)-menthyl alcohol / (-)-para-menthan-3-ol / (-)-p-menthan-3-ol / (-)-trans-para-methan-cis-3-ol / (-)-trans-p-methan-cis-3-ol / (1R-(1alpha,2beta,5alpha))-5-methyl-2-(1-methylethyl)cyclohexanol / (1R)-(-)-menthol / (1R,2S,5R)-(-)-2-isopropyl-5-methylcyclohexanol / (1R,2S,5R)-(-)-isopropyl-2-methyl-5-cyclohexanol / (1R,2S,5R)-(-)-menthol / (1R,2S,5R)-2-isopropyl-5-methylcyclohexanol / (1R,3R,4S)-(-)-menthol / (R)-(-)-menthol / 1-menthol / 1-para-menthan-3-ol / 1-p-menthan-3-ol / 1R-menthol / 2-isopropyl-5-methylcyclohexanol, (1R,2S,5R)- / 2-isopropyl-5-methylcyclohexanol, (1R,2S,5R)-(-)- / 5-methyl-2-(methylethyl)cyclohexanol, L- / cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1R,2S,5R)- / cyclohexanol, 5-methyl-2-(1-methylethyl)-, [1 theta-(1 alpha,2 beta,5 alpha)]- / cyclohexanol, 5-methyl-2-(1-methylethyl)-, [1R-(1alpha,2beta,5alpha)]- / D-(-)-menthol / FEMA No 2665 / L-(-)-menthol / L-5-methyl-2-(methylethyl)cyclohexanol / levomenthol / levo-menthol / L-menthol / menthol H&R,L- / menthol, (1R)- / menthol, (1R)-(-)- / menthol, (R)-(-)- / menthol, levo- / menthol,(1R,2S,5R)-(-)- / menthol,(1R,3R,4S)-(-)- / menthol,L- / menthol,L-(-)- / U.S.P. menthol

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Industrial uses: Uses of substances as such or in preparations* at industrial sites

Use of the substance/mixture : Pharmaceutical product
Food industry: Flavouring agent
Cosmetic product: component
Laboratory chemical

1.3. Details of the supplier of the safety data sheet

Berje
700 Blair Road
Carteret, NJ 07008 - USA
T 973-748-8980 - F 973-680-9618
berje@berjeinc.com - www.berjeinc.com

1.4. Emergency telephone number

Emergency number : 1-800-424-9300 24 Hours Emergency Chemtrec. ERR - CCN2624

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Aquatic Acute 3	H402

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H315 - Causes skin irritation
H319 - Causes serious eye irritation
H402 - Harmful to aquatic life

Precautionary statements (GHS-US) : P264 - Wash hands thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing
P321 - Specific treatment (see ... on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P501 - Dispose in a safe manner in accordance with local/national regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	GHS-US classification
MENTHOL CRYSTALS (Main constituent)	(CAS No) 2216-51-5	100	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Aquatic Acute 3, H402

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.

First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact : Tingling/irritation of the skin.

Symptoms/injuries after eye contact : Irritation of the eye tissue. Inflammation/damage of the eye tissue.

Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Dizziness. Gastrointestinal complaints. Vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. ABC powder. MAJOR FIRE: Water spray. Alcohol-resistant foam.

Unsuitable extinguishing media : Solid water jet ineffective as extinguishing medium.

5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD. Material presenting a fire hazard. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD. Temperature above flashpoint: higher fire/explosion hazard.

Explosion hazard : DIRECT EXPLOSION HAZARD. Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD. Dust cloud can be ignited by a spark.

Reactivity : Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions	:	Cool tanks/drums with water spray/remove them into safety.
Protection during firefighting	:	Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	:	Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit. See "Material-Handling" to select protective clothing.
Emergency procedures	:	Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.
Measures in case of dust release	:	In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. Dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment.

6.1.2. For emergency responders

Protective equipment	:	Equip cleanup crew with proper protection.
Emergency procedures	:	Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	:	Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Powdered form: no compressed air for pumping over spills.
Methods for cleaning up	:	Stop dust cloud by humidifying. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Powdered form: no compressed air for pumping over. Avoid raising dust. Keep away from naked flames/heat. Finely divided: spark- and explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
Hygiene measures	:	Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
Incompatible products	:	Strong bases. Strong acids.
Incompatible materials	:	Sources of ignition. Direct sunlight.
Heat and ignition sources	:	KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Prohibitions on mixed storage	:	KEEP SUBSTANCE AWAY FROM: oxidizing agents. organic materials. alcohols.
Storage area	:	Store in a cool area. Store in a dry area. Keep only in the original container. Meet the legal requirements.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	:	SUITABLE MATERIAL: glass. cardboard. plastics.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

MENTHOL CRYSTALS (2216-51-5)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Materials for protective clothing : GIVE GOOD RESISTANCE: butyl rubber. chloroprene rubber.

Hand protection : Gloves.

Eye protection : Face shield. In case of dust production: protective goggles.

Skin and body protection : Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing.

Respiratory protection : Dust production: dust mask with filter type P2.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Crystalline solid. Grains.

Colour : Colourless-white

Odour : Peppermint odour

Odour threshold : No data available

pH : No data available

Melting point : 43 °C

Freezing point : No data available

Boiling point : 212 °C

Flash point : > 200 °F

Relative evaporation rate (butylacetate=1) : No data available

Flammability (solid, gas) : No data available

Explosive limits : No data available

Explosive properties : No data available

Oxidising properties : No data available

Vapour pressure : < 0.1 hPa

Relative density : No data available

Relative vapour density at 20 °C : 5.4

Density : 890 kg/m³

Molecular mass : 156.30 g/mol

Solubility : Insoluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Soluble in acetic acid. Soluble in petroleum spirit.
Water: 0.043 g/100ml

Log Pow : 3.3

Log Kow : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

9.2. Other information

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Upon combustion: CO and CO2 are formed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

MENTHOL CRYSTALS (2216-51-5)	
LD50 oral rat	3300 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
ATE US (oral)	3300.000 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after skin contact : Tingling/irritation of the skin.

Symptoms/injuries after eye contact : Irritation of the eye tissue. Inflammation/damage of the eye tissue.

Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Dizziness. Gastrointestinal complaints. Vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - air : TA-Luft Klasse 5.2.5/I.

Ecology - water : Mild water pollutant (surface water). Harmful to fishes. Harmful to invertebrates (Daphnia). Inhibition of activated sludge.

MENTHOL CRYSTALS (2216-51-5)	
LC50 fish 1	15.6 mg/l (96 h; Brachydanio rerio)
EC50 Daphnia 1	44 mg/l (24 h; Daphnia magna; Other isomer)
EC50 other aquatic organisms 1	237 mg/l (Activated sludge)
LC50 fish 2	18.9 mg/l (96 h; Pimephales promelas)

12.2. Persistence and degradability

MENTHOL CRYSTALS (2216-51-5)	
Persistence and degradability	Readily biodegradable in water. Photodegradation in the air.
ThOD	2.97 g O_2/g substance

12.3. Bioaccumulative potential

MENTHOL CRYSTALS (2216-51-5)	
BCF fish 1	0.5 - 11 (Cyprinus carpio; Test duration: 6 weeks)
Log Pow	3.3
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge unmonitored into the environment.

Additional information : Hazardous waste according to Directive 2008/98/EC.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

MENTHOL CRYSTALS (2216-51-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2 H315

Eye Irrit. 2 H319

Aquatic Chronic 3 H412
Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
No additional information available

National regulations
No additional information available

15.3. US State regulations

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

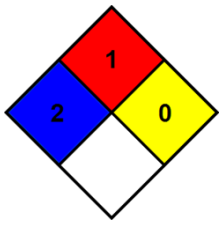
Full text of H-phrases:

Aquatic Acute 3	Hazardous to the aquatic environment — Acute Hazard, Category 3
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation
H319	Causes serious eye irritation
H402	Harmful to aquatic life

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal Protection : B

B - Safety glasses, Gloves

SDS US (Berje)

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