



CERTIFICATE OF ANALYSIS

| | |
|------------------|----------------------|
| PRODUCT | : Menthol Crystals |
| Batch Number | : 4409208 |
| Best Before Date | : September 2023 |
| Appearance | : Pale yellow Liquid |
| Odour | : Characteristic |
| Relative Density | : 0.936 |
| Refractive Index | : 1.479 |
| Optical Rotation | : -17.67 |



ALLERGENS LIST

Menthol Crystals

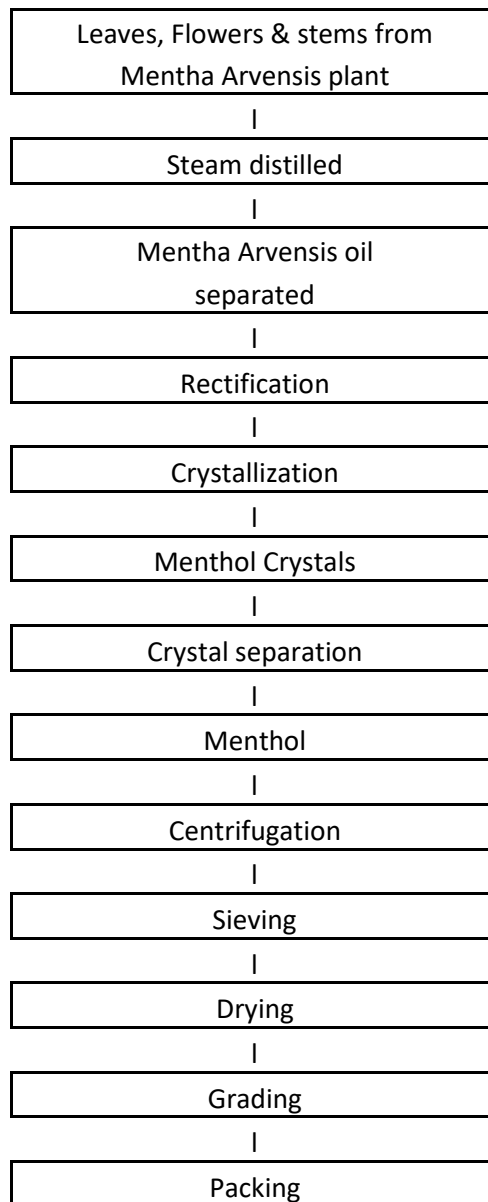
| Product | CAS number | | % |
|--|------------|---------------------|---|
| Amyl cinnamic alcohol | 101-85-9 | Not found in nature | - |
| Amyl cinnamic aldehyde | 122-40-7 | Not found in nature | - |
| Anisyl alcohol | 105-13-5 | | - |
| Benzyl alcohol | 100-51-6 | | - |
| Benzyl benzoate | 120-51-4 | | - |
| Benzyl cinnamate | 103-41-3 | | - |
| Benzyl salicylate | 118-58-1 | | - |
| Cinnamic alcohol | 104-54-1 | | - |
| Cinnamic aldehyde | 104-55-2 | | - |
| Citral | 5392-40-5 | | - |
| Citronellol | 106-22-9 | | - |
| Coumarin | 91-64-5 | | - |
| Eugenol | 97-53-0 | | - |
| Farnesol | 4602-84-0 | | - |
| Geraniol | 106-24-1 | | - |
| Hexyl cinnamic aldehyde | 101-86-0 | Not found in nature | - |
| Hydroxycitronellal | 107-75-5 | Not found in nature | - |
| Hydroxymethylpentylcyclohexenecarboxaldehyde | 31906-4-4 | Not found in nature | - |
| Isoeugenol | 97-54-1 | | - |
| 2-(4-tert-butylbenzyl)propionaldehyde | 80-54-6 | | - |
| Limonene | 5989-27-5 | | - |
| Linalol | 78-70-6 | | - |
| Methylheptine carbonate | 111-12-6 | Not found in nature | - |
| Methyl ionone | 127-51-5 | Not found in nature | - |
| Oakmoss extract | 9028-68-55 | | - |
| Treemoss extract | 84696-53-7 | | - |

- not detected



Process flow Chart

Menthol Crystals





CERTIFICATE OF GMO STATUS

For the purpose of this statement 'genetically modified organism (GMO)' is defined in Directive 2001/18/EC as an organism in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination.

This is to certify that to the best of our knowledge and belief the Menthol crystals that this company supplies are not produced by gene modification or derived from genetically modified organisms or from the use of genetically modified organisms.

Neither MADAR Corporation Ltd. nor our suppliers can guarantee against or be held responsible for potential cross-pollination between crops, or any other unforeseen contamination risks.



SAFETY DATA SHEET

Menthol Crystals

This Safety Data Sheet contains information concerning the potential risks to those involved in handling, transporting and working with the material, as well as describing potential risks to the consumer and the environment. This information must be made available to those who may come into contact with the material or are responsible for the use of the material. This Safety Data Sheet is prepared in accordance with formatting described in the REACH Regulation (EC) No 1907/2006, and described in CLP Regulation (EC) No 1272/2008.

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

1.1 Product identifier Product name Menthol crystals

| | |
|----------------------------|-----------------------|
| EC number: | 218-690-9 |
| EC name: | L-menthol |
| CAS number (EC inventory): | 2216-51-5 |
| Registration number | 01-2119458866-21-0043 |

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

Multiple uses in the Flavour and Fragrance industries

1.3 Details of the supplier of the safety data sheet

MADAR Corporation Limited
19-20 Sandleheath Industrial Estate
Fordingbridge
Hampshire
SP6 1PA

Approved Sellers: Mystic Moments, New Directions, World of Moulds

SECTION 2: Hazards Identification

2.1 Classification of the substance

Classification in accordance with the Dangerous Substances Directive 67/548/EEC

Hazard Symbol

Xi

Risk Phrases

R38 – Irritating to skin

Safety Phrases

S36/37 – Wear suitable protective clothing and gloves

Classification in accordance with the Classification Labelling and Packaging Regulation EC (no) 1272/2008

Hazard Statements

H315 - Causes skin irritation

H319 – Causes serious eye irritation

Precautionary Statements

P305+351+338 – IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

2.2 Label elements

Signal Word **WARNING**

Pictograms



GHS07

2.3 Other hazards

SECTION 3: Composition

3.1 Substances

Menthol crystals 100 %

SECTION 4: First Aid Measures

4.1 Description of first aid measures

EYE CONTACT: Irrigate the eyes with copious volumes of water for at least 15 minutes with the eye lids held open. Seek medical advice if inflammation persists

INHALATION: Remove person to fresh air, remove any contaminated clothing, in case of breathing difficulty seek medical advice.

SKIN CONTACT: Wash affected area with soap and running water, if irritation persists seek medical advice.



INGESTION: Dilute internally with water, do not induce vomiting. Seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatments needed

Symptomatic treatment as required

SECTION 5: Firefighting Measures

5.1 Extinguishing media Foam, CO₂, Dry Powder

5.2 Special hazards arising from the substance or mixture Combustion products: Carbon monoxide, Carbon dioxide, Smoke

5.3 Advice for fire fighters Do Not Use Water as extinguishing media. No special fire fighting equipment required.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear clothing suitable for an emergency

6.2 Environmental precautions

Contain the leak with earth or sand. Prevent from entering drains, sewers and water courses. If this cannot be done, advise the local authority.

6.3 Methods and materials for containment and clearing up

Absorb spillage onto sand or earth. Transfer to a suitable container for disposal.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Handle in a well ventilated area, away from sources of ignition, DO NOT SMOKE.

7.2 Conditions for safe storage, including any incompatibilities

Store in well-filled, tightly closed containers away from heat, light and sources of ignition.

7.3 Specific end uses

Used in Flavours and Fragrances.

SECTION 8. Exposure Controls/Personal Protection

8.1 Control parameters No data available

| Substance | 8 hour exposure limit | 15 minute exposure limit | Source, Type |
|-----------|-----------------------|--------------------------|--------------|
|-----------|-----------------------|--------------------------|--------------|



DNELs for workers **No data available**

| Exposure pattern | Route | DNEL | Dose descriptor |
|------------------------------|--------------|-------------|------------------------|
| Acute - systemic effects | Dermal | | |
| Acute - systemic effects | Inhalation | | |
| Acute - local effects | Dermal | | |
| Acute - local effects | Inhalation | | |
| Long-term - systemic effects | Dermal | | |
| Long-term - systemic effects | Inhalation | | |
| Long-term - local effects | Dermal | | |
| Long-term - local effects | Inhalation | | |

PNECs **No data available**

| Compartment | PNEC | Dose descriptor |
|--------------------|-------------|------------------------|
| Fresh water | | |
| Sewage treatment | | |

8.2 Exposure controls

Engineering controls – Use suitable handling equipment

Respiratory protection – Use only in well ventilated areas. Use protection in poor ventilation.

Hand Protection – Wear gloves

Eye protection – Wear goggles

Skin protection – Wear suitable protective clothing

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: Colourless crystals

Odour: Fresh, minty

Odour threshold: No data available

pH: Not applicable

Melting point: 43°C

Boiling point: 212°C

Flashpoint: >100°C

Evaporation rate: No data available
Flammability: Combustible
Upper/lower flammability limits: No data available
Vapour pressure: No data available
Vapour density: No data available
Relative density: 0.89
Solubility in water: Sparingly soluble
Solubility in other solvents: Soluble
Partition coefficient (log Kow): No data available
Autoignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Explosive properties: No data available
Oxidising properties: None

9.2 Other information

Particle size: Not applicable

SECTION 10: Stability and Reactivity

- 10.1 Reactivity: Will react with oxidising agents
- 10.2 Chemical stability: Stable under proper storage conditions.
- 10.3 Possibility of hazardous reactions: Not if stored correctly
- 10.4 Conditions to avoid: Do not leave containers open to the air. Avoid storage at elevated temperatures and sources of ignition.
- 10.5 Incompatible materials: Oxidising agents
- 10.5 Hazardous decomposition products: On combustion may produce smoke, carbon monoxide and carbon dioxide.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

Toxicokinetics

- (a) acute toxicity: LD₅₀ 3180 mg/kg (Rat)
- (b) skin corrosion/irritation: Causes skin irritation
- (c) serious eye damage/irritation: No data available
- (d) respiratory/skin sensitisation: May cause an allergic skin reaction
- (e) germ cell mutagenicity: No data available
- (f) carcinogenicity: No data available
- (g) reproductive toxicity: No data available
- (h) STOT-single exposure: No data available
- (i) STOT-repeated exposure: No data available
- (j) aspiration hazard: No data available

SECTION 12: Ecological Information

- 12.1 Toxicity: No data available
- 12.2 Persistence and degradability: No data available

- 12.3 Bioaccumulative potential: No data available
- 12.4 Mobility in soil: No data available
- 12.5 Results of PBT and vPvB assessment: No data available
- 12.6 Other adverse effects

SECTION 13: Disposal Considerations

13.1 Waste treatment methods – Do not dispose into drainage systems. Ensure disposal is within local and national guidelines. Consult a specialist waste disposal company for correct disposal procedure and/or seek other expert advice.

SECTION 14: Transport Information

| | ADR | IMDG | ICAO |
|---|------------------|----------|----------|
| 14.1 UN Number | No class | | |
| 14.2 UN Proper shipping name | Menthol crystals | | |
| 14.3 Transport hazard class(es) | No class | No class | No class |
| 14.4 Packing group | No class | | |
| 14.5 Environmental hazards | | | |
| 14.6 Special precautions for user | | | |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | | | |

SECTION 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This substance is listed as existing in Europe

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

SECTION 16: Other Information

Revision information:

List of Abbreviations used in this SDS:

- CAS Chemical Abstracts Service
 CLP Classification, Labelling and Packaging Regulation (EC) no 1272/2008
 DSD Dangerous Substances Directive 67/548/EEC
 DPD Dangerous Preparations Directive 1999/45/EC
 EC European Community/Commission
 PBT Persistent, Bioaccumulative and Toxic



REACH Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) no 1907/2006

vPvB very Persistent, very Bioaccumulative

References: Food Cosmetics Toxicology 2 327 (1964)

The information in this safety data sheet is based on the properties of the material known to Madar Corporation Ltd at the time the data sheet was issued. The safety data sheet is intended to provide information for a health and safety assessment of the material and the circumstances under which it is packaged, stored or applied in the workplace. This document is not intended for quality assurance purposes.



SPECIFICATION

MENTHOL CRYSTALS

| | |
|---------------------------|--|
| Chemical formula | : C ₁₀ H ₂₀ O |
| Botanical source | : Mentha arvensis |
| Cas No. | : 2216-51-5 |
| FEMA No. | : 2665 |
| EINECS No. | : 201-939-0 |
| Appearance | : Colourless crystals |
| Odour | : Resembling that of peppermint |
| Appearance of solution | : Complies with BP/Ph Eur |
| Identification | : Complies with BP/Ph Eur |
| Acidity or alkalinity | : Complies with BP/Ph Eur |
| Melting point | : about 43 ⁰ C |
| Specific optical rotation | : -48 ⁰ to -51 ⁰ |
| Non volatile residue | : Maximum 0.05% m/m |
| Related substances | : Complies with BP/Ph Eur |



Vegan / Vegetarian Certificate

We hereby confirm that, to the best of our knowledge and belief, no animals or animal products are used or present in the production or processing of the Menthol Crystals that John Kellys (London) Limited supplies.