natural
BULK SUPPLIES

SAFETY DATA SHEET
CRAN-MERRY ORANGE FRAGRANCE OIL

1. PRODUCT INFORMATION AND COMPANY IDENTIFICATION

Product Name: Cran-Merry Orange Fragrance Oil

Company: Natural Bulk Supplies, 318 Half Day Rd, # 348,
Buffalo Grove, IL 60089 Phone: 847-489-7180

Emergency Contact: Infotrac: 800-535-5053(North America) +1-352-323-3500 (International)

2. HAZARD IDENTIFICATION

GHS US classification
Skin sensitization,
Category 1
H317 May cause an allergic skin reaction

Full text of H statements : see section 16

GHS US labeling
Hazard pictograms (GHS US)

Signal word (GHS US) : Warning

Hazard statements (GHS US) :
H317 - May cause an allergic skin reaction

Precautionary statements (GHS US) :
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - If on skin: Wash with plenty of water.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Other hazards which do not result in classification
No additional information available

Unknown acute toxicity (GHS US)
Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	Product identifier	%	GHS US classification
BENZYL BENZOATE	(CAS-No.) 120-51-4	30 – 70	Acute Tox. 4 (Oral), H302
4-tert-butylcyclohexyl acetate	(CAS-No.) 32210-23-4	5 – 10	Skin Sens. 1B, H317
1-(5,6,7,8-Tetrahydro-3,5,5,6,8,8,-hexamethyl-2-naphthyl)ethan-1-one	(CAS-No.) 21145-77-7	1 – 5	Acute Tox. 4 (Oral), H302
ALDEHYDE C 16	(CAS-No.) 77-83-8	1 – 5	Skin Sens. 1B, H317
LIMONENE	(CAS-No.) 5989-27-5	1 – 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304
CITRAL	(CAS-No.) 5392-40-5	0.5 – 1	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317
ALLYL CYCLO HEXYL PROPIONATE	(CAS-No.) 2705-87-5	< 0.5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Sens. 1, H317

Full text of hazard classes and H-statements : see section 16

4. FIRST AID MEASURES

Description of first aid measures
First-aid measures general :
If you feel unwell, seek medical advice.

First-aid measures after inhalation :
Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact :
Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact :
Rinse eyes with water as a precaution.

First-aid measures after ingestion :
Call a poison center/doctor/physician if you feel unwell.

Most important symptoms and effects (acute and delayed)
Symptoms/effects after inhalation :
Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact :
May cause an allergic skin reaction.

Symptoms/effects after eye contact :
None under normal conditions.

Symptoms/effects after ingestion :
None under normal conditions.

Immediate medical attention and special treatment, if necessary
Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media
Suitable extinguishing media :
Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media :
Do not use a heavy water stream.

Specific hazards arising from the chemical
Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.

Special protective equipment and precautions for fire-fighters
Firefighting instructions :

Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting :
Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
General measures :
Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel
Protective equipment :
Wear recommended personal protective equipment.

Emergency procedures :
Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

For emergency responders
Protective equipment :
Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures :
Evacuate unnecessary personnel. Stop leak if safe to do so.

Environmental precautions
Avoid release to the environment.

Methods and material for containment and cleaning up
For containment :
Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.

Methods for cleaning up :
Take up liquid spill into absorbent material.

Other information :
Dispose of materials or solid residues at an authorized site.

Reference to other sections
For further information refer to section 13.

7. HANDLING AND STORAGE

Precautions for safe handling
Additional hazards when processed :
Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling :
Ensure good ventilation of the work station. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear personal protective equipment.

Hygiene measures :
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Conditions for safe storage, including any incompatibilities
Technical measures :
Keep in a cool, well-ventilated place away from heat.

Storage conditions :
Keep cool. Protect from sunlight.

Packaging materials :
Store always product in container of same material as original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
VERTENEX (32210-23-4)
Not applicable

TONALID (21145-77-7)
Not applicable

D-LIMONENE (5989-27-5)
Not applicable

BENZYL BENZOATE (120-51-4)
Not applicable

CITRAL (5392-40-5)

ACGIH	Local name	Citral
ACGIH	ACGIH OEL TWA	5 ppm (IFV - Inhalable fraction and vapor)
ACGIH	Remark (ACGIH)	TLV® Basis: Body weight eff; URT irr; eye dam. Notations: Skin; DSEN; A4 (Not classifiable as a Human Carcinogen)
ACGIH	Regulatory reference	ACGIH 2024

ALLYL CYCLO HEXYL PROPIONATE (2705-87-5)
Not applicable

ALDEHYDE C 16 (77-83-8)
Not applicable

Appropriate engineering controls
Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

Individual protection measures/Personal protective equipment
Personal protective equipment:
Wear recommended personal protective equipment.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

natural
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9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Color	No data available
Odor	No data available
Odor threshold	No data available
pH	No data available
Melting point	Not applicable
Freezing point	No data available
Boiling point	No data available
Flash point	> 100 °C
Relative evaporation rate (butyl acetate = 1)	No data available
Flammability	Not applicable
Vapor pressure	No data available
Relative vapor density at 20°C	No data available
Relative density	No data available
Solubility	No data available
Partition coefficient n-octanol/water (Log Pow)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosion limits	No data available
Explosive properties	No data available
Oxidizing properties	No data available

Other information

No additional information available

10. STABILITY AND REACTIVITY

Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

Chemical stability

Possibility of hazardous reactions
No additional information available

Conditions to avoid
None under recommended storage and handling conditions (see section 7).

Incompatible materials
No additional information available

Hazardous decomposition products
No additional information available

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

VERTENEX (32210-23-4)

ATE US (oral)	3370 mg/kg body weight

TONALID (21145-77-7)

ATE US (oral)	1000 mg/kg body weight
ATE US (dermal)	7940 mg/kg body weight

D-LIMONENE (5989-27-5)

LD50 oral rat	> 2000 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Read-across, Oral)
LD50 dermal rabbit	> 5000 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Weight of evidence, Dermal)

BENZYL BENZOATE (120-51-4)

LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male/female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2 ml/kg (Modification of Draize 1959 method, 4 h, Rabbit, Experimental value, Dermal)

ATE US (oral)	1160 mg/kg body weight

ALLYL CYCLO HEXYL PROPIONATE (2705-87-5)

ATE US (oral)	380 mg/kg body weight
ATE US (dermal)	1600 mg/kg body weight

ALDEHYDE C 16 (77-83-8)

LD50 oral rat	5470 mg/kg (Rat, Male/female, Weight of evidence, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male/female, Experimental value, Dermal)
ATE US (oral)	5470 mg/kg body weight

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

D-LIMONENE (5989-27-5)
IARC group 3 - Not classifiable

Reproductive toxicity : Not classified
STOT-single exposure : Not classified

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : None under normal conditions.
Symptoms/effects after ingestion : None under normal conditions.

12. ECOLOGICAL INFORMATION

Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

TONALID (21145-77-7)

EC50 - Crustacea [1]	0.61 mg/l
NOEC chronic fish	0.035 mg/l

D-LIMONENE (5989-27-5)

LC50 - Fish [1]	720 µg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	0.36 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

BENZYL BENZOATE (120-51-4)

LC50 - Fish [1]	2.32 mg/l (EU Method C.1, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	3.09 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

ALDEHYDE C 16 (77-83-8)

LC50 - Fish [1]	4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, GLP)
ErC50 algae	36 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

Persistence and degradability

D-LIMONENE (5989-27-5)

Persistence and degradability	Readily biodegradable in water.
ThOD	3.29 g O2/g substance

BENZYL BENZOATE (120-51-4)

Persistence and degradability	Readily biodegradable in water.

D-LIMONENE (5989-27-5)

Persistence and degradability	Not readily biodegradable in water.

Mobility in soil

D-LIMONENE (5989-27-5)

Ecology - soil	Adsorbs into the soil.

BENZYL BENZOATE (120-51-4)

Surface tension	0.027 N/m (210 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.8 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Low potential for mobility in soil.

ALDEHYDE C 16 (77-83-8)

Surface tension	59 N/m (19.6 °C, 0.79 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.34 – 2.74 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Ecology - soil	Low potential for adsorption in soil.

Other adverse effects
No additional information available

13. DISPOSAL CONSIDERATIONS

Disposal methods
Regional waste regulation :

Disposal must be done according to official regulations.

Waste treatment methods :
Dispose of contents/container in accordance with licensed collector’s sorting instructions.

Sewage disposal recommendations :
Disposal must be done according to official regulations.

Product/Packaging disposal recommendations :
Disposal must be done according to official regulations.

Additional information :
Do not re-use empty containers.

14. TRANSPORT INFORMATION

Department of Transportation (DOT)
In accordance with DOT
Transport document description (DOT) : UN3082 Environmentally hazardous substances, liquid, n.o.s. (BENZYL BENZOATE), 9, III
UN-No.(DOT) : UN3082
Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. BENZYL BENZOATE
Class (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
Packing group (DOT) : III - Minor Danger
Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 241
DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) : 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description “Other regulated substances, liquid or solid, n.o.s.”, as appropriate. In addition, for solid materials, special provision B54 applies.
146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.
173 - An appropriate generic entry may be used for this material.

335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as “Environmentally hazardous substances, solid, n.o.s,” UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging.
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 155
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : No Limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : No Limit
DOT Vessel Stowage Location : A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
Emergency Response Guide (ERG) Number : 171
Other information : No supplementary information available.

15. REGULATORY INFORMATION

US Federal regulations

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylcyclopenta-gamma-2-benzopyran	CAS-No. 1222-05-5	1 – 5%

16. OTHER INFORMATION

Full text of H-phrases:
H226 Flammable liquid and vapor
H302 Harmful if swallowed
H304 May be fatal if swallowed and enters airways

H312 Harmful in contact with skin
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation

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