

SAFETY DATA SHEET

Issuing Date: 17-Apr-2010

Revision Date: 30-Jun-2017

Version 21.03

according to Regulation (EC) No. 1907/2006

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

| | |
|---------------------------|---|
| Product Name | Nordic Vegetable oil candles |
| Product Identifier | 15201,15211,15301,15311,15401,15406,18101 |
| Synonyms | CE-1214 |
| REACH registration number | 01-2119491160-46-0002 01-2119491160-46-0000 |
| Issuing Date: | 17-Apr-2010 |
| Version | 21.03 |
| Revision Date: | 30-Jun-2017 |
| Supersedes Date: | 08-Dec-2015 |

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

| | |
|----------------------|---------------|
| Recommended Use | Ambient light |
| Uses advised against | None known. |

1.3 Details of the supplier of the safety data sheet

| | |
|----------|--|
| Supplier | PJ Nordic A/S Under Egen 20 DK-7500 Holstebro info@pjnordic.com |
|----------|--|

1.4 Emergency Telephone Number

For Emergency Contact NCEC Tel: +(45) 82 12 12 12 Giftinformation (DK), Bispebjerg Hospital (open 24 hours)

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture**GHS / CLP - Regulation (EC) No 1272/2008**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS].

2.2 Label elements**Label according to Regulation (EC) No. 1272/2008**

Hazard pictograms None

Signal Word None

Hazard Statements None

Precautionary Statements None

2.3 Other hazards

Other hazards

None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| Chemical Name | CAS-No | Weight % | REACH Registration No | EC-No | GHS / CLP Classification 1272/2008 [CLP] | EC Index Number | Notes |
|--------------------------------|-------------|----------|---|-----------|--|-----------------|-------|
| Fatty acids, C12-14, Me esters | 308065-15-8 | 100 | 01-21194911 60-46-0002; 01-21194911 60-46-0000 | 629-776-4 | NC | | |

3.2 Mixtures

Not applicable

4. FIRST AID MEASURES

4.1 Description of first-aid measures

General advice In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately if symptoms occur.

Skin contact Wash off immediately with plenty of water.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

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

Main Symptoms No information available.

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

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media Carbon dioxide (CO₂). Alcohol-resistant foam. Water spray or fog. Dry chemical.

**Extinguishing Media Which Must
water jet. Not Be Used For Safety Reasons** Do NOT use

5.2 Special hazards arising from the substance or mixture

Special hazard May emit toxic fumes under fire conditions. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

5.3 Advice for firefighters

**Special protective equipment for
fire-fighters** Wear self-contained breathing apparatus and protective suit.

**Protective equipment and
precautions for firefighters** Cool containers with flooding quantities of water until well after fire is out.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Use personal protective equipment.

Advice for emergency responders Wear protective gloves/protective clothing and eye/face protection. In the case of vapor formation use a respirator with an approved filter.

6.2 Environmental precautions

Environmental precautions Dike far ahead of spill; use dry sand to contain the flow of material. Keep out of drains, sewers, ditches and waterways.

6.3 Methods and materials for containment and cleaning up

Methods for containment Ventilate the area. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

6.4 Reference to other sections

Other information No information available.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Since empty containers retain product residue, follow label warnings even after container is emptied. Keep away from open flames, hot surfaces and sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities

Storage Conditions Can be stored in most common storage vessels including carbon steel, aluminum, fiberglass and stainless steel. Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials.

7.3. Specific end use(s)

Specific end uses Not applicable.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

Exposure Guidelines No information available.
Not available

Recommended monitoring procedures

Predicted No Effect Concentration (NEC)

| Chemical Name | Fresh Water | Marine water | Intermittent release |
|--------------------------------|-------------|--------------|----------------------|
| Fatty acids, C12-14, Me esters | 2 mg/L | 0.2 mg/L | 0.00255 mg/L |

| Chemical Name | Freshwater sediment | Marine sediment | Sewage treatment plant | Soil | air | Oral |
|--------------------------------|---------------------|-----------------|------------------------|-------------|-----|------------|
| Fatty acids, C12-14, Me esters | 26.6 mg/kg | 2.66 mg/kg | 100 mg/L | 10 mg/kg dw | | 66.6 mg/kg |

8.2 Exposure controls

Engineering Measures Use with local exhaust ventilation. Mechanical - may be necessary if working at elevated temperatures or in enclosed areas.

Personal protective equipment

General information Handle in accordance with good industrial hygiene and safety practice.

Eye Protection Wear safety glasses with side shields (or goggles). Wear suitable face shield.

Hand Protection Neoprene gloves. Nitrile rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Skin and Body Protection Wear protective gloves and protective clothing.

Respiratory Protection No special protective equipment required.

Thermal hazards Not available.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls Not available.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Physical State @20°C Liquid

| | | |
|--|---|--------------------|
| Form | Liquid | |
| Color | Water white to Yellow | |
| Odor | Musty | |
| <u>Property</u> | <u>Values</u> | <u>Note</u> |
| pH | Not available | |
| Melting/freezing point | 6.5 °C / 43.7 °F | |
| Boiling point / boiling range | 261.85 - 295.85 °C / 503.33 - 564.53 °F | |
| Flash point | 141.5 °C / 286.7 °F | Closed cup |
| Evaporation rate | Not available | |
| Upper flammability limit | Not available | . |
| Lower Flammability Limit | Not available | |
| Flammability (solid, gas) | Not available | @ 25 °C |
| Vapor pressure | < 0.55 Pa | |
| Vapor density | Not available | |
| Relative density | 867.1 - 870.2 kg/m ³ | |
| Solubility | < 0.06 mg/l @ 20° C | |
| Partition Coefficient (n-octanol/water) | 5.4 - 6.4 | |
| Autoignition temperature | 220 °C / 428 °F | |
| Decomposition temperature | Not available | @ 20 °C |
| Viscosity | Not available | . |
| Explosive properties | Not applicable | |
| Oxidizing properties | Not available | |
| Dissociation constant (Henry) | Not available | |
| <u>9.2 Other information</u> | | |
| Viscosity, dynamic | 3.65 mPa s | |
| Specific gravity | Not available | |
| Surface tension | Not available | |
| Density | Not available | |

10. STABILITY AND REACTIVITY

10.1 Reactivity

Reactivity Strong oxidizing agents. Strong bases.

10.2 Chemical stability

Stability Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization None under normal processing.

10.4 Conditions to Avoid

Conditions to Avoid Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible Materials

Incompatible Materials Strong oxidizing agents. Strong bases.

10.6 Hazardous Decomposition Products

Hazardous Decomposition Products None under normal use conditions.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity Not Classified. Based on the available data, the classification criteria are not met.

Skin corrosion/irritation Not Classified. Based on the available data, the classification criteria are not met. **Serious eye damage/eye irritation** Not Classified. Based on the available data, the classification criteria are not met. **Skin sensitization** Not Classified. Based on the available data, the classification criteria are not met. **Respiratory sensitization** No data available.

Germ cell mutagenicity Not Classified. Based on the available data, the classification criteria are not met.

Carcinogenicity No data available.

Reproductive toxicity Not Classified. Based on the available data, the classification criteria are not met. **STOT - single exposure** Not Classified. Based on the available data, the classification criteria are not met. **STOT - repeated exposure** Not Classified. Based on the available data, the classification criteria are not met. **Aspiration hazard** Not Classified. Based on the available data, the classification criteria are not met.

| Chemical Name | CAS-No | Oral LD50 | Dermal LD50 | Inhalation LC50 | | |
|--------------------------------|--|---|---|---|---|---|
| Fatty acids, C12-14, Me esters | 308065-15-8 | LD50: 2000 mg/kg, bw, OECD 401, Read-across 111-82-0. Species: Rat | - | LC50: > 5 mg/L, 4 hours, OECD 436, Read-across 111-82-0, Species: Rat | | |
| Chemical Name | Carcinogenicity | Developmental toxicity | Eye Damage | Mutagenicity | Germ Cell Mutagenicity: Chromosome aberration | Germ Cell Mutagenicity: Ames Test |
| Fatty acids, C12-14, Me esters | | NOAEL: 1000 mg/kg bw/day, OECD 414, Read-across 22047-49-0, Result: No effect, Species: Rat | In vivo, OECD 405, Result: Not irritating, Test Duration: 24 hours, Observation Period: 72 hours, Species: Rabbit | | OECD 473, Read-across 111-82-0, Result: Negative, Species: CHL/IU | OECD 471, Read-across 111-82-0, Result: Negative. Species: Salmonella Typhimurium (Salmonella enterica) |
| Chemical Name | Neurological Effects | Effects on fertility | Reproductive toxicity | Skin corrosion/irritation | Toxicokinetics, metabolism and distribution | Sensitization |
| Fatty acids, C12-14, Me esters | | | NOAEL: 1000 mg/kg bw, OECD 422, Read-across 67762-38-3, Result: No effect, Species: Rat | OECD 404, Read-across 111-82-0, Result: Not irritating, Test Duration: 4 hours, Species: Rabbit | In vivo, OECD 417, Read-across 111-62-6, Result: Rapidly hydrolysed, Species: Rat | |
| Chemical Name | Skin sensitization | STOT - single exposure | STOT - repeated exposure | Aspiration hazard | | |
| Fatty acids, C12-14, Me esters | In vivo, OECD 406, EU Method B.6, Read-across 111-82-0, Result: Not sensitising, Species: Guinea pig | | NOAEL: 5500 mg/kg bw/day, Sub-chronic, OECD 408, Read-across 111-62-6, Result: No effect, Species: Rat | | | |

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Acute toxicity

| Chemical Name | CAS-No | Toxicity to Fish (LC50)* | Toxicity to algae (EC50)* | Toxicity to daphnia and other aquatic invertebrates (EC50)* | Toxicity to Microorganisms (EC50)* | Toxicity to other organisms |
|---------------|--------|--------------------------|---------------------------|---|------------------------------------|-----------------------------|
| | | | | | | |

| | | | | | | |
|--------------------------------|-------------|--|---|---|---|---|
| Fatty acids, C12-14, Me esters | 308065-15-8 | LC50: > 1 mg/L, 96 hours, OECD 203. Read-across 111-82-0, Species: Japanese rice-fish (<i>Oryzias latipes</i>) | EL50: >=100 mg/L, 72 hours, OECD 201, Species: Green algae (<i>Desmodesmus subcapitata</i>) | EC50: >100 mg/L, 7 days, OECD 211, Species: Water flea (<i>Daphnia magna</i>) | NOEC: >=1000 mg/kg, 3 hours, OECD 209, Read-across 111-82-0, Species: Activated sludge of a predominantly domestic sewage | - |
|--------------------------------|-------------|--|---|---|---|---|

Chronic Toxicity

| Chemical Name | CAS-No | Toxicity to fish (NOEC or ECx)* | Toxicity to algae (NOEC or ECx)* | Toxicity to daphnia and other aquatic invertebrates (NOEC or ECx)* | Toxicity to Microorganisms (NOEC or ECx)* | Toxicity to other organisms |
|--------------------------------|-------------|---------------------------------|----------------------------------|---|---|--|
| Fatty acids, C12-14, Me esters | 308065-15-8 | | | NOELR: >100 mg/L, 21 days, OECD 211. Species: Water flea (<i>Daphnia magna</i>) | NOEC >= 1000 mg/l, 3 hours, OECD 209. Read-across 111-82-0. Activated sludge of a predominantly domestic sewage | NOEC: 1000 mg/kg, 28 days, Soil dw. OECD 222. Read-across 111-82-0. Species: Earthworm (<i>Eisenia fetida</i>) |

12.2 Persistence and degradability**Persistence and degradability**

| Chemical Name | CAS-No | Ready Biodegradation Test (OECD 301) | Percent degradation (Aerobic biodegradation) | Percent degradation (Aerobic biodegradation-soil) | Percent degradation (Anaerobic biodegradation) |
|--------------------------------|-------------|--------------------------------------|--|---|--|
| Fatty acids, C12-14, Me esters | 308065-15-8 | | 78%, OECD 301C, Test Duration: 28 days, Read-across 111-82-0, Result: Readily biodegradable, Species: Activated sludge of a predominantly domestic sewage. | | |

| Chemical Name | CAS-No | Abiotic Degradation Hydrolysis | Half-life (Photolysis-aqueous) | Abiotic Degradation Photolysis |
|--------------------------------|-------------|---|--------------------------------|--------------------------------------|
| Fatty acids, C12-14, Me esters | 308065-15-8 | t1/2 (pH 7): 7,283 yr at 25 °C. HYDROWIN v2.00. | | 29.2 h DT50 (24h day), AOPWIN v1.92. |

12.3 Bioaccumulative potential**Bioaccumulative potential**

| Chemical Name | CAS-No | Octanol/water partition coefficient | Bioconcentration factor (BCF) |
|--------------------------------|-------------|-------------------------------------|---------------------------------------|
| Fatty acids, C12-14, Me esters | 308065-15-8 | 5.41 - 6.41 | 201 L/kg, BCFBAF v3.01, Species: Fish |

12.4 Mobility in soil**Mobility**

| Chemical Name | CAS-No | log Koc | Dissociation constant (Henry) |
|--------------------------------|-------------|---------------------------|-------------------------------|
| Fatty acids, C12-14, Me esters | 308065-15-8 | 3.85 @ 25 °C, KOCWIN v2.0 | |

12.5 Results of PBT and vPvB assessment**PBT and vPvB assessment**

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6 Other adverse effects
 Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from Residues / Unused Products Keep out of drains, sewers, ditches and waterways. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

EWC Waste Disposal No Not available.

Disposal recommendations Keep out of drains, sewers, ditches and waterways. Disposal should be in accordance with applicable regional, national and local laws and regulations.

13.2 Additional information.

Additional information No information available.

14. TRANSPORT INFORMATION

IMDG

14.1 UN Number Not regulated
14.2 UN Proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing Group Not regulated
14.5 Environmental Hazards Not regulated
14.6 Special precautions for user None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code No information available
Pollution Category Pollution Category: Y
Ship Type Ship Type: 2

IATA

14.1 UN no Not regulated
14.2 UN Proper shipping name Not regulated
14.3 Hazard Class Not regulated
14.4 Packing Group Not regulated
14.5 Environmental Hazards Not regulated
14.6 Special precautions for user None

ICAO

14.1 UN no Not regulated
14.2 UN Proper shipping name Not regulated
14.3 Hazard Class Not regulated
14.4 Packing Group Not regulated
14.5 Environmental Hazards Not regulated
14.6 Special precautions for user None

ADR

14.1 UN no Not regulated
14.2 UN Proper shipping name Not regulated
14.3 Hazard Class Not regulated
14.4 Packing Group Not regulated
14.5 Environmental Hazards Not regulated

14.6 Special precautions for user None

RID

14.1 UN no Not regulated
 14.2 UN Proper shipping name Not regulated
 14.3 Hazard Class Not regulated
 14.4 Packing Group Not regulated
 14.5 Environmental Hazards Not regulated
 14.6 Special precautions for user None

ADN

14.1 UN no Not regulated
 14.2 UN Proper shipping name Not regulated
 14.3 Hazard Class Not regulated
 14.4 Packing Group Not regulated
 14.5 Environmental Hazards Not regulated
 14.6 Special precautions for user None

15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulations**

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I Not Listed

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II, Part A Not Listed

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II, Part B Not Listed

Persistent Organic Pollutants per (EC) 850/2004 - Annex 1 - Substances Subject to Prohibition Not Listed

European Pollutant Release and Transfer Registry (E-PRTR) (166/2006) - Threshold Quantities Not Listed

AUTHORIZATIONS - REACH Title VII

Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorisation Not Listed

Restrictions on Use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended Not Listed

Other Regulations

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

National regulatory information

Not a hazardous substance or preparation according to EC-directives 67/548/EEC or 1999/45/EC

15.2 Chemical Safety Assessment**Chemical Safety Assessment**

A Chemical Safety Assessment has been carried out for this substance

WGK - Classification (VwVwS)

WGK 1

International Inventories

Australian Inventory of Chemical Substances (AICS) -
 Canadian Domestic Substances List (DSL) -
 Canadian Non-Domestic Substances List (NDSL) -
 China Inventory of Existing Chemical Substances (IECSC) -
 Europe European List of Notified Chemical Substances (ELINCS) -

| | |
|--|----------|
| European Inventory of Existing Commercial Chemical Substances (EINECS) | - |
| Japan Existing and New Chemical Substances (ENCS) | - |
| Korean Existing and Evaluated Chemical Substances (KECL) | - |
| New Zealand Inventory of Chemicals (NZIoC) | - |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | - |
| Taiwan | Complies |
| United States Toxic Substances Control Act Section 8(b) Inventory (TSCA) | - |

16. OTHER INFORMATION

16.1 Indication of changes

Issuing Date: 17-Apr-2010
Revision Date: 30-Jun-2017 **Reason for revision** Change in
SECTION 14: Transport information

16.2 Abbreviations and acronyms

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS-No: Chemical Abstracts Service number
CLP - The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008)
EINECS: European Inventory of Existing Commercial Chemical Substances
EC-Number: EINECS and ELINCS Number (see also EINECS and ELINCS)
EC50: Calculated concentration causing a 50% reduction in cellular reproduction
GHS- Globally Harmonized System of Classification and Labeling of Chemicals (GHS)
IATA - International Air Transport Association
LC50: Lethal Concentration to 50% of a test population
LD50: Lethal Dose to 50% of a test population (Median Lethal Dose)
PVC- Polyvinylchloride
REACH- Registration, Evaluation and Authorization of Chemicals
STEL - Short term exposure limit
STP- Sewage treatment plant

16.3 Key literature references and sources for data

No information available

16.4 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]

16.5 Full text of H-Statements referred to under sections 2 and 3

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

16.6 Training Advice

No information available

16.7 Further information

Disclaimer

The submission of the SDS may be required by law, but this is not an assertion that the substance is hazardous when used in accordance with proper safety practices and normal handling procedures. Data supplied are for use only in connection with occupational safety and health. The information contained herein has been compiled from sources considered by PJ Nordic A/S to be dependable and is accurate to the best of the Company's knowledge. The information relates to the specific product designated herein, and does not relate to use in combination with any other material of any other process. PJ Nordic A/S assumes no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the controlled product.

End of SDS