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| 1.1 Product identifier: Bergamot Oil FCF Italy | | | |
| Substance name: Citrus Aurantium Bergamia Peel Oil | | | |
| CAS Number: 68648-33-9 | | EC Number: 289-612-9 | |
| FEMA Number: 2153 | FDA Number: 182.20 | CoE Number: 137 | |
| Index No: | | Reach Registration No: 01-2120117613-65-XXXX | |
| 1.2 Relevant identified uses of the substance or mixture and uses advised against | | | |
| Identified uses: Odour agent/ flavouring agent. Ingredient for industrial manufacturing. | | | |
| Uses advised against: Not for personal use in this form or concentration. | | | |
| 1.3 Details of the supplier of the safety data sheet | | | |
| Company | | Penny Price Aromatherapy Ltd | |
| | | Unit D3 Radius Court | |
| | | Maple Drive | |
| | | Hinckley | |
| | | Leicestershire LE10 3BE | |
| Email | | info@penny-price.com | |
| 1.4 Emergency Telephone Number | | 00 44 (0) 1455 251020 opening hours Mon – Thurs 9am – 5pm, Fri 9am – 2pm. <u>Or call NHS 111 or NHS 999</u> | |
| 2. Hazards Identification | | | |
| 2.1 Classification of the substance or mixture | | | |
| Classified according to Regulation (EC) 1272/2008 (CLP) as amended | Physical and Chemical Hazards | Flam. Liq. 3 = H226 | |
| | Human Health | Asp. Tox. 1 = H304 | Skin Irrit. 2 = H315 |
| | | Skin Sens. 1 = H317 | Eye Irrit. 2 = H319 |
| | Environment | Aquatic Chronic 3 = H412 | |
| 2.2 Label Element Labelling according to Regulation (EC) No.1272/2008: | | | |
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| Signal Word. DANGER | | | |
| Hazard statements. | | | |
| H226 | Flammable Liquid and Vapour | H304 | May be fatal if swallowed and enters airways |
| H315 | Causes skin irritation | H317 | May cause an allergic skin reaction |
| H317 | May cause an allergic skin reaction. | H319 | Causes serious eye irritation |
| H412 | Harmful to aquatic life with long lasting effects. | | |
| 2.3 Other hazards – Results of PBT and vPvB | | | |
| Precautionary Statements: | | | |
| P210 | Keep away from heat / sparks/ open flames/ hot surface. No smoking | P273 | Avoid release to the environment |
| P280 | Wear protective gloves / eye protection / face protection | P301+P310 | IF SWALLOWED: Immediately call a POISON CENTRE or doctor |
| P302+P352 | IF ON SKIN: Wash with plenty of 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. |
| P331 | Do NOT induce vomiting | | |
| Other Hazards | Because of the potential presence of various furocoumarins the product can have phototoxic effects (skin). | | |

3. 1 Composition / information on ingredients:

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| 3.1 | Substance | Botanical Origin | Citrus bergamia, RISSO et POITEAU | |
| | | Production Process | Obtained by physical means from the outer part of fresh bergamot fruits peel. | |
| | | Chemical Identification & Grade | 100% Natural Complex Substance | |
| | | EU Chemical Name | Bergamot, ext. | |
| | | EU Number | 289-612-9 | |
| | | EINECS CAS Number | 89957-91-5 | |
| | | CAS Number | 8007-75-8 | |
| Substance name | Index number under CLP Annex VI | Weight % content (or range) | CL, M-Factor, ATE | |
| Limonene | CAS No: 5989-27-5 EC No: 227-813-5 | 20-55% | Aspiration hazard 1 Environmental hazard chronic 1 Flammable liquid 3 Skin irritation 2 Skin Sensation 1B | |

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| Linalool | CAS No: 78-70-6 EC No: 201-134-4 | 3-45% | Acute Toxicity 5 Eye damage/ irritation 2A Flammable Liquid 4 Skin irritation 2 |
| Linalyl Acetate | CAS No: 115-95-7 EC No: 204-116-4 | 15-40% | Eye damage/ irritation 2A Flammable liquid 4 Skin irritation 2 |
| Beta Pinene | CAS No: 127-91-3 EC NO: 204-872-5 | 3-12% | Aspiration hazard 1 Flammable liquid 3 Skin irritation 2 Skin Sensation 1B |
| Gamma Terpinene | CAS No: 99-85-4 EC No: 202-794-6 | 2-12% | Aspiration hazard 1 Flammable liquid 3 Skin irritation 3 |
| Alpha Pinene | CASE No. 80-56-8 EC No. 201-291-9 | 0.5 -4% | Aspiration hazard 1 Flammable liquid 3 Skin irritation 2 Skin sensation 1B Acute Toxicity 5 |
| Beta Myrcene | CAS No. 123-35-3 EC No. 204-622-5 | 0.5 -2.5% | Aspiration hazard 1 Eye damage / irritation 2A Flammable liquid 3 Skin irritation 2 |

4. First Aid Measures

4.1 General

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| Inhalation | Remove person to fresh air and keep comfortable for breathing. Obtain medical attention if required. |
| Eye contact | Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. |
| Skin contact | Take off all contaminated clothing. Rinse skin with water/shower. If irritation persists seek medical attention |
| Ingestion | Rinse mouth out with water. Do NOT induce vomiting. Immediately call POISON CENTER or GP. |

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

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| Symptoms | Inhalation can cause slight headache. Contact can cause eye irritation, slight skin rash |
| Acute and delayed effects | No post-disorder effects are reported. |

4.3 Indication of any immediate medical attention and special treatment need

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| Immediate medical attention and special treatment | See point 4.1 |
| First Aid Specific Means | Eye wash fountain / safety shower should be available in the work area. |

5. Firefighting Measures

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| 5.1 Extinguishing Media: | |
| Suitable extinguishing media: | Small fire: use CO ₂ , foam, dry powder. Large fire: use water spray or fog. Cool containing vessels with water jet to prevent pressure build-up, auto- ignition or explosion. |
| Unsuitable extinguishing media: | Pressurised water jet. |
| 5.2 Special hazards arising from the substances or mixture | |
| Hazardous combustion products: | Vapours may form explosive mixture with air. In case of fire, the following can be released: Carbon monoxide (CO), Carbon dioxide (Co ₂), smoke, soot. |
| Advice for firefighters | Standard procedures for chemical fires. Spray extinguishing media to base of flames. Use adequate protections for respiratory apparatus, avoid vapour inhalation. |
| 6 Accidental release measures | |
| 6.1 Personal precautions, protective equipment, and emergency procedures | |
| 6.1.1 For non-emergency personnel | |
| Protective equipment: | In case of unintentional important release of the product in enclosed space use respiratory protection (Gas filter A, Colour code brown: consider the maximum duration for wear) must be worn. Use insulating device for respiratory protection with an independent air supply in circumstances which are unclear. Use adequate protections solvent resistant: security shoes, bodysuit, gloves, and protective goggles (see section 8). |
| Emergency procedures: | Remove any ignition source and ensure adequate ventilation in working areas following accidental releases. |
| 6.1.2 For Emergency responders | As per non-emergency personnel. |
| 6.2 Environmental precautions | Avoid release to the environment. Keep away from drains. Keep away from surface and ground water. |
| 6.3 Methods for cleaning up – | Keep away from heat and non-combustible absorbing sawdust (sand, specific binder). Using suitable pumping systems for inflammable materials. Refer to Section 13 for appropriate methods of waste treatment. |
| 6.3.1 For containment: | |
| 6.3.2 For cleaning up: | |
| 6.3.3. Other information: | |
| 6.4 Reference to other sections | See sections 4,8 and 13 |
| 7. Handling and storage | |
| 7.1 Precautions for safe handling; During handling keep original container closed. | |
| Protective measures: | |
| Measures to prevent fire: | Avoid any sources of ignition. Avoid exposing to high temperature during processing. |
| Measures to prevent aerosol and dust generation: | Maintain adequate local and general ventilation where product is handled. |

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| Measures to protect the environment: | |
| Advice on general occupational hygiene: | Avoid contact with skin and eyes. Wear adequate protective gloves and eye/face protection. Do not ingest or apply to the skin as such. No smoking. Remove contaminated clothing. Good personal washing routines should be followed. If at risk of contamination, foods, beverages, and other articles of consumption must not be stored or consumed at the work areas. |
| 7.2 Conditions for safe storage, including any incompatibilities | |
| Technical measures and storage conditions: | |
| Packaging Materials: | |
| Requirements for storage and vessels: | To be stored in stainless steel drums, preferably under inert atmosphere (nitrogen) with minimum head space, protected from daylight. The container used during transportation must be considered only as a temporary container and it must not be considered in any case adequate for medium- or long-term warehousing. Store in a dry, aerated place, away from any heat source and ignition source at temperature from 5°C to 20°C |
| Storage Class: Further information on storage containers: | |
| 7.3 Specific end use(s). | Use as odour agent/ flavouring agent. The information in this section are not related to the use of the product in combination with any other materials or any other process altering its characteristics. |
| Recommendations: | |
| Industrial sector specific solutions: | |
| 8. Exposure controls/Personal protection | |
| 8.1 Control parameters | No further information available |
| 8.2 Exposure controls | |
| 8.2.2 Personal Protection equipment | |
| 8.2.2.1 Eye / face protection | Protective goggles with built in frame tested to EN166 (should be checked regularly). |
| 8.2.2.2 Skin Protection | |
| Hand protection | Suitable gloves tested to EN373 (should be checked regularly). Always use the clean, dry hands. |
| Other skin protection | Protective work clothing solvent resistant (should be checked regularly). |
| 8.2.2.3 Respiratory protection | Not necessary in adequate local with general ventilation. Avoid breathing vapours. |
| Ventilation | |
| 8.2.2.4 Thermal hazards | None |
| 8.2.3 Environmental exposure controls | The usual precautions in handling chemicals have to be observed. |

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| 9. Physical and chemical properties- C of A | |
| 9.1 Information on basic physical and chemical properties | |
| Colour | |
| Appearance | Colourless liquid |
| Odour | Citrusy |
| Melting Point / freezing point | < - 30°C at 101.3 kPa |
| Boiling point /Initial boiling point & boiling range | |
| Flammability | |
| Lower and upper explosion limit | Not determined |
| Flash point °C | 56°C |
| Auto- ignition temperature | 235°C at 101.89 kPa |
| Decomposition | Not determined |
| pH | Not applicable |
| Kinematic Viscosity | Not determined |
| Solubility | In alcohol and other oils. 87% of the substance have solubility >40 mg/L into water. |
| Partition coefficient n-octanol/ water (log value) | 4.38 at 25°C for the component Limonene; 3.38 at 25°C for the component Linalool; 4.39 at 25°C for the component Linalyl Acetate. |
| Vapour Pressure | 123.1 Pa at 25°C |
| Density and /or relative density | Not determined |
| Relative vapour density @20°C | 0.8678 |
| Particle characteristics | |
| Explosive Properties | None |
| Oxidising Properties | None |
| 9.2 Other information | No information available |
| Specific gravity d_{20}^{20} | |
| Optical rotation @ 20°C | |
| Refractive index @ 20°C | |
| Typical analysis of major components | |
| 10. Stability and reactivity | |
| 10.1 Reactivity | This substance does not react with water. The substance is unreactive if it is stored according to the recommendations in Sections 7 and in accordance with the identified uses (see Subsection 1.2). |
| 10.2 Chemical Stability | Stable Substance when stored according to recommendations in Section 7 and in accordance with the identified uses (see Subsection 1.2). Shelf Life is 18 months from the date of production, I the recommended storage conditions (see Section 7). |
| 10.3 Possibility of hazardous reactions: | None if used according to storage and handling conditions (see Section 7) and identified uses (see subsection 1.2). |
| 10.4 Conditions to avoid: | Avoid exposure to any heat source. |

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| 10.5 Incompatible Materials: | Avoid exposure to any heat source. | | |
| 10.6 Hazardous Decomposition Products | No known hazardous decomposition products under recommended storage and handling conditions. In case combustion: Carbon monoxide (CO), Carbon dioxide (CO ₂). | | |
| 11. Toxicological information | | | |
| 11.1 Information on hazard classes as defined in Regulation (EC) No 1272 /2008 | | | |
| Acute toxicity: | Oral Route | LD50: > 1000 mg/kg bw (male) (method: rat (albino) gavage – equivalent Guideline 401 OECD). | |
| | Dermal Route | LD50: > 20000 mg/kg bw (method: rabbit (albino) – equivalent Guideline 402). | |
| | Other Routes | No determined. | |
| Skin corrosion /irritation: | Dermal Sensitisation: - Considered as a skin sensitizer due to the content of Limonene and Linalool. | | |
| Seriously eye damage/irritation: | Not determined. | | |
| Respiratory or skin sensitisation: | Not determined. | | |
| Germ cell mutagenicity: | | | |
| Carcinogenicity: | Not determined. | | |
| Reproductive toxicity: | Oral Route | Adverse effect observed NOAEL: 365 mg/kg bw/day (rat) (read across with Coriander study) | |
| | Owner company | Lorillard, Inc. | |
| | Report Date | 12.4.1989 | |
| Developmental Toxicity | Oral Route | Adverse effect observed NOAEL: 365 mg/kg bw/day (rat) (read across with Coriander study) | |
| | Owner company | Lorillard, Inc. | |
| | Report Date | 12.4.1989 | |
| Summary of evaluation of the CMR properties: | | | |
| STOT- single exposure, | No determined. | | |
| STOT-repeated exposure: | Oral Route | Target Organs | Urogenital, kidneys, digestive, stomach |
| Aspiration hazard: | Can be fatal if swallowed and enters airways due to volatile hydrocarbon content >10% | | |
| Based on available information on Bergamot oil and its constituents, Bergamot oil is expected to be readily and fully absorbed by the oral route (approximately 100%). Dermal absorption is expected to be lower. However, as no specific information is available on the extent of dermal and inhalation absorption, this is assumed to be comparable to oral absorption as a worst case. For risk assessment purposes, the absorption after oral, dermal and inhalation exposure are therefore assumed to be identical and route-to-route extrapolation from the oral to inhalation and dermal route is not required. | | | |
| 12. Ecological information | | | |
| 12.1 | Toxicity | Aquatic Environment | Harmful to aquatic life with long lasting effects. |




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| | | Acute – Fish (Semi-static Freshwater) | LL50 (24h): 57 mg/ l test mat. (nominal)-Oncorhynchus mykiss – metodo OECD Guideline 203 (Fish, Acute Toxicity Test). LL50 (48h): 18 mg/l test mat. (nominal) - Oncorhynchus mykiss – metodo OECD Guideline 203 (Fish, Acute Toxicity Test). LL50 (72h): 18 mg/l test mat. (nominal) - Oncorhynchus mykiss – metodo OECD Guideline 203 (Fish, Acute Toxicity Test). LL50 (96h): 18 mg/l test mat. (nominal) - Oncorhynchus mykiss – metodo OECD Guideline 203 (Fish, Acute Toxicity Test). |
| | | Acute – Aquatic Invertebrates (Static Freshwater) | EL50 (24h): 60 mg/l test mat. OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test). EL50 (48h): 33 mg/l test mat. OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test). NOEL (48h): 18 mg/l test mat. (nominal) – OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test). |
| | | Acute – Algae & Aquatic Plants (Static Freshwater) | EL50 (72h): 11 mg/l test mat. (Tested as WAF) (nominal) OECD Guideline 201 (Alga, Growth Inhibition Test). |
| | | Acute – Other Organisms | Not tested. |
| | | Chronic – Other Organisms | Not tested. |
| 12.2 | Persistence and Degradability | This substance is considered as a NCS readily biodegradable and therefore is not persistent. | |
| 12.3 | Bio accumulative potential | As the constituents are readily biodegradable. | |
| 12.4 | Mobility in soil | This substance is considered as a readily biodegradable NCS. Based on the ready biodegradability of the NCS, | |

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| | | simulations test in surface water, sediment and soil are not required. |
| 12.5 | Results of PBT and vPvB Assessment | This substance is not PBT or vPvB. |
| 12.6 | Endocrine disrupting properties | |
| 12.7 | Other effects | Not determined. |

13. Disposal considerations

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| 13.1 Waste treatment methods | The containers used for this product must be completely empty before disposal. Disposal of contents and containers in accordance with local/regional/national/international regulations. Disposal of this product in the environment is illegal. |
| 13.1.1. Product /Packaging disposal: | |
| 13.1.2 Waste treatment-relevant information: | |
| 13.1.3 Sewage disposal-relevant information: | |
| 13.1.4 Other disposal-relevant recommendations: | |

14. Transport information

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| 14.1 UN Number or ID number | 1169 |
| 14.2 UN proper Shipping name | Extracts, aromatic, liquid |
| 14.3 Transport hazard class(es) | Class 3 |
| Transport Hazard Symbols IMDG, ADR, RID |   |
| ICAO, IATA |  |
| 14.4 Packing group | III |
| 14.5 Environmental hazards | Marine pollutant |
| 14.6 Special precautions for user | This product contains constituents that are flammable and dangerous for the environment. In case of pouring out, make sure to label new package, accordingly, reproducing original label with relevant symbols. |
| 14.7 Maritime transport in bulk according to IMO instruments | According to Annex 11 of MARPOL and the IBC Code. N/A |

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| 15 Regulatory information | |
| 15.1 Safety, health, and environmental regulations / legislation specific for the substance or mixture | No specific EU provisions and /or regulations apply to this substance. |
| 15.2 Chemical Safety Assessment | A study for the chemical safety assessment of the substances was conducted during the preparation of registration for REACH. |

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| 16. Other information | |
| (i) Indication of Changes: Revised Safety Data Sheet Format: From March 2019. – Section 2 and 3 have changed places, additional points added under each section in line with Regulation EC) No 1272/2008 Version 4.2 March 2021’. | |
| (ii) Abbreviations and acronyms: | |
| CSR | Chemical Safety Report |
| CSA | Chemical Safety Assessment |
| CLP | Regulation (EU) No. 1272 /2008 |
| Asp. Tox | Aspiration hazard |
| Aquatic Chronic | Aquatic hazard |
| Skin Irrit. | Skin Irritation hazard. |
| Skin Sens. | Skin Sensitisation hazard |
| Eye Irrit. | Eye Irritation hazard |
| Flam. Liq. | Flammable liquid hazard |
| WAF | Water Accommodated Fractions |
| LD50 | Lethal Dose 50 |
| LL50 | Lethal Loading 50 |
| EL50 | Effective Loading 50 |
| NOAEL | No-Observed Adverse Effect Level. |
| NOEL | No-Observed Effect Level |
| LOEL | Organisation for Economic Co-operation and Development |

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| (iii) Key Literature references and sources of date. | | | |
| | CAS | ID | Note |
| EINECS | 89957-91-5 | 289-612-9 | |
| TSCA | 8007-75-8 | - | |
| IECSC | 8007-75-8 | - | |
| KECI | 8007-75-8 | KE-26829 | |
| DSL | 8007-75-8 | - | |
| AICS | 8007-75-8 | - | |

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| ENCS-ISHL | 8007-75-8 | 11-(1)-575 | |
| NZIOC | 8007-75-8 | - | |
| PICCS | 8007-75-8 | - | |
| FDA | - | 21CFR182.20 | |
| CoE | - | 137 | |
| FEMA | 8007-75-8 | 2153 | |
| HS Code | - | 3301192000 | EU TARIFF |

(iv) Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 (CLP):

Contaminants: - This product has been analysed to ensure that the levels of heavy metals, phthalates and allergens respectively comply with the relevant regulations.

Classification according to Regulation (EC) 1272/2008 (CLP)

Classification procedure

(v) Relevant H-statements (number and full text):

(vi) Training advice:

(vii) Further information:

Shelf life

Minimum 12 months when stored in the advised conditions.

QC requirements

In line with general product specification. Always satisfy suitability for specific application. Retest after 6 months.

Disclaimer:

The data provided in this material safety data sheet is meant to represent typical data/analysis for this product and is correct to the best of our knowledge. The data was obtained from current and reliable sources, but is date supplied without warranty, expressed, or implied, regarding its correctness or accuracy. It is the user's responsibility to determine safe conditions for the use of this product and to assume liability for loss, injury, damage, or expense arising from improper use of this product. The information provided does not constitute a contract to supply to any specification or for any given application and buyers should seek to verify their requirements and product use.

WARNING/DISCLAIMER: The information in this MSDS is correct to the best of our knowledge, covering the involved product at the date of its publication. They apply to the product as such as per the described specifications. The information is not related to the use of the product in combination with any other material or any other process altering its characteristics. The end user should apply to the existing normative and laws covering the use of the product, the hygiene and security at work. the container used during transportation must be considered only as a temporary container and it must not be considered in any case adequate for medium or long-term warehousing. Upon receipt, our product must be stored as soon as possible in compliance with Section 7 of this MSDS. The



**Penny Price Aromatherapy/ Aroma Formulations
SAFETY DATA SHEET
According to Regulation (EC) No.1272/2008**

information given in this MSDS is in accordance with the Regulation (EU) No. 2015/830, Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008