



BENZYL BENZOATE BATCH NUMBER
4399202

BEN0021

CAS#: 120-51-4

FEMA#: 2138

CERTIFICATE OF ANALYSIS

PRODUCT IDENTIFICATION

| | |
|-------------------|--------------------|
| PRODUCT NAME | BENZYL BENZOATE -C |
| MOLECULAR FORM | C14H12O2 |
| MOLECULAR WT | 212.24 |
| MELTING POINT (C) | 70 deg C |
| BOILING POINT (C) | 323 deg C |
| FLASH POINT (F) | 298 deg F |
| | |
| BEST BEFORE DATE | JUNE 2022 |

PHYSICAL SPECIFICATIONS

RANGE

RESULTS

| | | |
|------------------------|---|----------|
| APPEARANCE | COLORLESS OILY LIQUID | CONFORMS |
| ODOR | SLIGHT AROMATIC ODOR | CONFORMS |
| SPECIFIC GRAVITY (25C) | 1.1160 to 1.1200 | 1.1184 |
| REFRACTIVE INDEX (20C) | 1.5680 to 1.5700 | 1.5694 |
| SOLUBILITY | MISCIBLE IN ALCOHOL; INSOLUBLE IN GLYCERINE, WATER | |

ANALYTICAL SPECIFICATIONS

RANGE

RESULTS

| | | |
|----------------|-----------|--------|
| PURITY (BY GC) | 99.0% MIN | 99.93% |
|----------------|-----------|--------|

OTHER SPECIFICATIONS

RANGE

RESULTS

| | | |
|--------------------------|----------|----------|
| ACID VALUE | 1.0 MAX | 0.05 |
| SOLIDIFICATION PT, DEG C | >= 18°C | 18 C |
| CHLORINATED COMPOUNDS** | NEGATIVE | NEGATIVE |

STABILITY

STABLE UNDER NORMAL CONDITIONS

STORAGE

STORE IN COOL DRY PLACE AWAY FROM HEAT AND SUNLIGHT.
SHELF LIFE CONSIDERATIONS APPLY ONLY FOR ORIGINAL UNOPENED CONTAINERS

FRAGRANCE ALLERGENS

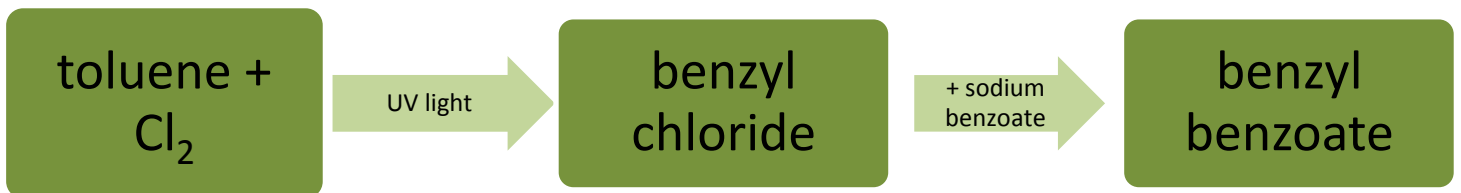
BENZYL BENZOATE

Contains the following fragrance allergens as detailed in the 7th Amendment to the EU Cosmetic Directive 76/768/EEC:

| | Allergen | CAS number | Content % |
|----|--|-------------|-----------|
| 1 | Alpha isomethylionone | 127-51-5 | - |
| 2 | Amyl cinnamal | 122-40-7 | - |
| 3 | Amylcinnamyl alcohol | 101-85-9 | - |
| 4 | Anisyl alcohol | 105-13-5 | - |
| 5 | Benzyl alcohol | 100-51-6 | 0.1% max |
| 6 | Benzyl benzoate | 120-51-4 | 99% min |
| 7 | Benzyl cinnamate | 103-41-3 | - |
| 8 | Benzyl salicylate | 118-58-1 | - |
| 9 | Butylphenyl methylpropional (Lilial) | 80-54-6 | - |
| 10 | Cinnamal | 104-55-2 | - |
| 11 | Cinnamyl alcohol | 104-54-1 | - |
| 12 | Citral | 5392-40-5 | - |
| 13 | Citronellol | 106-22-9 | - |
| 14 | Coumarin | 91-64-5 | - |
| 15 | Eugenol | 97-53-0 | - |
| 16 | Farnesol | 4602-84-0 | - |
| 17 | Geraniol | 106-24-1 | - |
| 18 | Hexyl cinnamal | 101-86-0 | - |
| 19 | Hydroxycitronellal | 107-75-5 | - |
| 20 | Hydroxyisohexyl 3-cyclohexene carboxaldehyde (Lyral) | 31906-04-4 | - |
| 21 | Isoeugenol | 97-54-1 | - |
| 22 | Limonene | 5989-27-5 | - |
| 23 | Linalool | 78-70-6 | - |
| 24 | Methyl 2-octynoate | 111-12-6 | - |
| 25 | Evernia furfuracea (Treemoss) extract | 90028-67-4 | - |
| 26 | Evernia prunastri (Oakmoss) extract | 90028-68-55 | - |

PROCESS FLOW CHART

BENZYL BENZOATE



Madar Corporaion Limited hereby certifies that the products has no added antioxidants, diluents, colorants or preservatives, nor are any solvents used in the extraction process.



GMO CERTIFICATE

BENZYL BENZOATE

to the best of its knowledge does not derive from a genetically modified source (GMO) as specified in Regulation (EC) No 1829/2003 nor have GMO materials been used in its manufacture or as additives.

IFRA CERTIFICATE

BENZYL BENZOATE

Madar Corporation Limited hereby certifies that the above material complies with the requirements of the INTERNATIONAL FRAGRANCE ASSOCIATION - IFRA-48th Amendment / published June 10th 2015) provided it is used in following application (class) at a maximum concentration level of:

| IFRA category | Maximum level of use (%) |
|---------------|--------------------------|
| Class 1 | 1.7% |
| Class 2 | 2.2% |
| Class 3A | 8.9% |
| Class 3B | 8.9% |
| Class 3C | 8.9% |
| Class 3D | 8.9% |
| Class 4A | 26.7% |
| Class 4B | 8.9% |
| Class 4C | 8.9% |
| Class 4D | 8.9% |
| Class 5 | 14.0% |
| Class 6 | 42.8% |
| Class 7A | 4.5% |
| Class 7B | 4.5% |
| Class 8A | 2.0% |
| Class 8B | 2.0% |
| Class 9A | 5.0% |
| Class 9B | 5.0% |
| Class 9C | 5.0% |
| Class 10A | 2.5% |
| Class 10B | 2.5% |
| Class 11 | Not restricted |

The above values were calculated based on the following IFRA restricted materials: <benzyl benzoate - 100%>

The IFRA Standards regarding use restrictions are based on safety assessments by the Panel of Experts of the RESEARCH INSTITUTE FOR FRAGRANCE MATERIALS (RIFM) and are enforced by the IFRA Scientific Committee.

It is the ultimate responsibility of our customer to ensure the safety of the final product by further testing if need be. Evaluation of the Fragrance ingredient was made according to the safety requirements contained in the relevant section of the IFRA Code of Practice.

| IFRA category includes | IFRA category |
|---|---------------|
| Toys (****) | Class 1A |
| Insect Repellent intended to be applied on the skin | Class 1B |
| Lip Products of all types (solid and liquid lipsticks, balms, clear or coloured etc...)(****) | Class 2 |
| Deodorant and Antiperspirant products of all types (spray, stick, roll-on, under-arm and body etc...) | Class 3A |
| Hydroalcoholic products applied to recently shaved skin (EdT range) | Class 3B |
| Hydroalcoholic products applied to recently shaved skin (fine fragrance range) | Class 3C |
| Eye Products of all types (eye shadow, mascara, eyeliner, eye make-up, etc...) | Class 3D |
| Men's Facial Creams, Balms, Wipes, Refreshing Tissues | Class 4A |
| Tampons | Class 4B |
| Hydroalcoholic Products applied to unshaved skin (EdT range) | Class 4C |
| Ingredients of Perfume Kits, Scent Strips for Hydroalcoholic Products, "scratch and sniff", other paper products | Class 4D |
| Hydroalcoholic Products applied to unshaved skin, Fine Fragrance range | Class 5A |
| Hair Styling Aids Sprays of all types (pumps, aerosol sprays, etc...). Hair Deodorant | Class 6 |
| Body Creams, Oils, Lotions of all types (including baby creams, lotions, oils) | Class 7 |
| Fragrance Compounds for Cosmetic Kits, Foot Care Products | Class 8 |
| Fragrancing Creams of all types | Class 9A |
| Women's Facial Creams/Facial Make-up/Facial Wipes. Facial Masks, Hand Cream | Class 9B |
| Mouthwash, Toothpaste (****) | Class 9C |
| Intimate Wipes, Baby Wipes | Class 10A |
| Make-up Removers of all types (not including face cleansers) | Class 10B |
| Hair Styling Aids Non-Spray of all types (mousse, gels, leave-in conditioners etc...) | Class 11A |
| Nail Care, all Powders & Talcs (including baby powders and talcs) | Class 11B |
| Liquid Soap, Bar Soap (toilet soap), Depilatory, Conditioner (rinse-off), Shampoos of all types (including baby shampoos) Face Cleansers of all types (washes, gels, scrubs, etc...) Shaving Creams of all types (stick, gels, foams, etc...) Body Washes of all types (including baby washes) and Shower Gels of all types Bath Gels, Foams, Mousses, Salts, Oils and other products added to bathwater | |
| Feminine pads/Liners | |
| Aerosols (including air fresheners sprays but not including deodorant/antiperspirants, hair styling aids spray) | |
| Hand wash/Machine Wash Laundry Detergents of all types (liquid, powder, tablet, etc...) including Laundry Bleaches Other Household Cleaning Products (fabric cleaners, soft surface cleaners, carpet cleaners etc...), Dry Cleaning Kits Fabric Softeners of all types including softener sheets. Hand Dishwashing Detergent. Hard Surface Cleaners of all types (bathroom and kitchen cleansers, furniture polish etc...), Shampoos for pets | |
| Diapers | |
| All non-skin contact, including: Air Fresheners and fragrancing of all types (excluding aerosol products): plug-ins, solid substrate, membrane delivery; Toilet blocks; Joss Sticks, Incense; Insecticides (mosquito coil, paper, electrical, etc...excluding aerosols); Plastic articles (excluding toys); Candles; Fuels; Paints. | |
| All incidental skin contact, including: Machine Dish wash Detergents and Deodorizers. Machine only Laundry Detergents (e.g. liquid tabs) Deodorizers/Maskers (e.g. fabric drying machine deodorizers, carpet powder) Pot pourri, fragrancing sachets, liquid refills for air fresheners, etc... Shoe polishes; Cat Litter; Animal Sprays (excluding aerosols); Treated Textiles; Odoured Distilled Water | |

(****) Fragrance materials for use in these applications need also FEMA-GRAS conformity.

Date of issue: 11/11/2016

This safety data sheet complies with the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Product name BENZYL BENZOATE

Issue date 26-Mar-2015

Revision date 28-Jan-2019

Version 5

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

1.1. Product Identifier

| | |
|----------------------------------|-----------------------|
| Product code | BEN0021 |
| Product name | BENZYL BENZOATE |
| REACH registration number | 01-2119976371-33-0002 |
| EC No. | 204-402-9 |
| CAS No | 120-51-4 |
| Synonyms | Benzoic acid ester |
| Pure substance/mixture | Substance |
| Contains Benzyl benzoate | |
| Formula | C14H12O2 |
| Molecular weight | 212.25 |

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

| | |
|------------------------------------|--------------------------|
| Sold to the general public? | No |
| Recommended Use | Industry Use |
| Uses advised against | No information available |

1.3. Details of the supplier of the safety data sheet

Supplier

Madar Corporation Limited
19 - 20 Sandheath Industrial Estate
Fordingbridge
SP6 1PA
Tel: (+44) 1425 655555

For further information, please contact

| | |
|-----------------------|----------------------------------|
| Contact Point | technical@madarcorporation.co.uk |
| E-mail address | |

1.4. Emergency telephone number

| | |
|---------------------|----------|
| Emergency telephone | CHEMTREC |
|---------------------|----------|

| |
|--|
| Emergency telephone - +1-703-741-5970 |
|--|

| | |
|---------------|-------------------|
| Europe | CCN# 17256 |
|---------------|-------------------|

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

| | |
|--------------------------|---------------------|
| Acute toxicity - Oral | Category 4 - (H302) |
| Acute aquatic toxicity | Category 1 - (H400) |
| Chronic aquatic toxicity | Category 2 - (H411) |

2.2. Label Elements**Product identifier**

Contains Benzyl benzoate

**Signal word**

Warning

Hazard statements

H302 - Harmful if swallowed

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements

P102 - Keep out of reach of children

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P273 - Avoid release to the environment

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other Hazards

H313 - May be harmful in contact with skin

SECTION 3: Composition/information on ingredients

3.1 Substances**Chemical nature**

Aromatic ester.

| Chemical Name | EC No. | CAS No. | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | REACH registration number |
|--|---------|----------|-------------|---|---------------------------|
| Benzyl benzoate | Present | 120-51-4 | >99 | Acute Tox. 4 (H302)(EFFA) Aquatic Acute 1 (H400) (EFFA) Aquatic Chronic 2 (H411) (EFFA) Acute Tox. 5 (H313)(EFFA) | No data available |
| Dibenzyl ether - indirect synthetic impurity | Present | 103-50-4 | 0.01 - <0.1 | Aquatic Acute 1 (H400) (EFFA) Skin Sens. 1 (H317) (EFFA) Skin Irrit. 3 (316) (EFFA) Aquatic Chronic 1 (H410) (EFFA) Acute Tox. 5 (H303)(EFFA) | No data available |
| Benzyl alcohol - indirect synthetic impurity | Present | 100-51-6 | 0.01 - <0.1 | Acute Tox. 4 (H302) Eye Irrit. 2 (H319) | No data available |

| | | | | | |
|---|---------|----------|-------------|---|-------------------|
| | | | | (ECHA) Acute Tox. 5 (H313)(ECHA) | |
| Diphenylmethane - indirect synthetic impurity | Present | 101-81-5 | 0.01 - <0.1 | Aquatic Acute 1 (H400) (ECHA) Aquatic Chronic 1 (H410) (ECHA) Acute Tox. 5 (H303)(ECHA) | No data available |
| Benzaldehyde - indirect synthetic impurity | Present | 100-52-7 | 0.01 - <0.1 | Aquatic Acute 2 (H401) (ECHA) Eye Irrit. 2 (H319) (ECHA) Skin Irrit. 3 (H316) (ECHA) Acute Tox. 4 (H302) (ECHA) Flam. Liq. 4 (H227)(ECHA) Acute Tox. 4 (H332)(ECHA) STOT-SE 3 (H335) (ECHA) | No data available |

Full text of H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------|--|
| Inhalation | Move to fresh air in case of accidental inhalation of vapors. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. |
| Skin contact | Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Wash contaminated clothing before reuse. Consult a physician if necessary. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| Ingestion | Do not induce vomiting without medical advice. Clean mouth with water. Never give anything by mouth to an unconscious person. Get medical attention. |

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

| | |
|-----------------|-------------|
| Symptoms | None known. |
|-----------------|-------------|

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

| | |
|---------------------------|------------------------|
| Note to physicians | Treat symptomatically. |
|---------------------------|------------------------|

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Dry chemical, CO₂, alcohol-resistant foam or water spray

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors

Hazardous combustion products Irritating or toxic substances may be emitted upon burning, combustion, or decomposition.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. Stop leak if you can do it without risk.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Collect spillage.

6.3. Methods and material for containment and cleaning up

Methods for Containment

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up

Cover liquid spill with sand, earth or other non-combustible absorbent material. Use personal protective equipment as required. Dam up. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

6.4. Reference to other sections

See Section 12: ECOLOGICAL INFORMATION.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Ensure adequate ventilation, especially in confined areas.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Protect from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Material Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Chemical Name | European Union | United Kingdom | France | Spain | Germany |
|--|----------------|---|---|---|---|
| Benzyl alcohol - indirect synthetic impurity 100-51-6 | - | - | - | - | TWA: 22 mg/m ³ TWA: 5 ppm Ceiling / Peak: 44 mg/m ³ Ceiling / Peak: 10 ppm Skin |
| Chemical Name | Italy | Portugal | Netherlands | Finland | Denmark |
| Benzyl alcohol - indirect synthetic impurity 100-51-6 | - | - | - | TWA: 10 ppm TWA: 45 mg/m ³ | - |
| Benzaldehyde - indirect synthetic impurity 100-52-7 | - | - | - | TWA: 1 ppm TWA: 4.4 mg/m ³ Ceiling: 4 ppm Ceiling: 17.4 mg/m ³ | - |
| Chemical Name | Austria | Switzerland | Poland | Norway | Ireland |
| Benzyl alcohol - indirect synthetic impurity 100-51-6 | - | Skin TWA: 5 ppm TWA: 22 mg/m ³ | TWA: 240 mg/m ³ | - | - |
| Benzaldehyde - indirect synthetic impurity 100-52-7 | - | - | STEL: 40 mg/m ³ TWA: 10 mg/m ³ | - | - |

Derived No Effect Level (DNEL)

Workers

dermal Long Term: 2.6 mg/kg bw/day

Inhalation Short Term: 102 mg/m³; Long Term: 5.1 mg/m³

Derived No Effect Level (DNEL)

General Population

oral Short Term: 78 mg/kg bw/day; Long Term: 0.4 mg/kg bw/day

dermal Long Term: 1.3 mg/kg bw/day

Inhalation Short Term: 25 mg/m³; Long Term: 1.25 mg/m³

Predicted No Effect Concentration (PNEC)

Fresh Water 0.017 mg/L

Sea Water 0.002 mg/L

Sea sediment 1.07 mg/kg sediment dw

Soil 2.12 mg/kg soil dw

Impact on Sewage Treatment 100 mg/L

8.2. Exposure controls

Engineering controls

Showers
Eyewash stations
Ventilation systems

Ensure adequate ventilation, especially in confined areas

Personal Protective Equipment

| | |
|---------------------------------|--|
| Eye/Face Protection | Avoid contact with eyes. Wear safety glasses with side shields (or goggles). |
| Hand protection | Wear protective nitrile rubber gloves. |
| Skin and Body Protection | Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. |
| Respiratory protection | Ensure adequate ventilation, especially in confined areas. |

Environmental exposure controls Prevent product from entering drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | | | |
|-----------------------|-------------------------------|-----------------------|---------------------|
| Physical state | Liquid | Odor | Characteristic Odor |
| Appearance | Clear Viscous | Odor threshold | Not applicable |
| Color | Colorless to almost colorless | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|---------------------------------------|---------------------|-------------------------|
| pH | | |
| Melting point / freezing point | 18-21 °C / 64-70 °F | |
| Boiling point / boiling range | 323 °C / 614 °F | |
| Flash Point | 148 °C / 298 °F | |
| Evaporation Rate | <1 | |
| Flammability (solid, gas) | | |
| Flammability Limit in Air | | |
| Upper flammability limit: | | |
| Lower flammability limit: | | |
| Vapor pressure | 0.0000305kPa | (25°C) |
| Vapor Density | 7.3 (Air = 1) | |
| Specific gravity | 1.116 - 1.200 | (25°C) |
| Water solubility | 14.1 < 15.9 mg/L | (20°C) |
| solubility(ies) | | |
| Partition coefficient | logPow - 3.97 | n-octanol/water (25°C) |
| Autoignition Temperature | 480 °C / 896 °F | |
| Decomposition temperature | | |
| Kinematic viscosity | | |
| Dynamic viscosity | 6.53251 mPa s | (30°C) |
| Explosive properties | Not an explosive | |
| Oxidizing properties | Not oxidising | |

9.2. Other information

| | |
|-------------------------|----------------|
| Molecular weight | 212.25 |
| VOC content (%) | 100 |
| Density | Not applicable |
| Bulk Density | Not applicable |

SECTION 10: Stability and reactivity

10.1. Reactivity**10.2. Chemical stability**

Stable under recommended storage conditions.

Explosion data

| | |
|----------------------------------|-------|
| Sensitivity to Mechanical Impact | None. |
| Sensitivity to Static Discharge | None. |

10.3. Possibility of hazardous reactions**Possibility of Hazardous Reactions**

None under normal processing.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight. Keep out of reach of children.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None under normal use conditions.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity****Product Information**

Harmful if inhaled.

Inhalation

Avoid breathing vapors or mists.

Eye Contact

Avoid contact with eyes.

Skin contact

Avoid contact with skin. May be harmful in contact with skin.

Ingestion

Harmful if swallowed.

The following values are calculated based on chapter 3.1 of the GHS document

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

Oral LD50 > 2,000 mg/kg**Dermal LD50** > 2,000 mg/kg

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|----------------------|-------------------------|--|
| Benzyl benzoate | >2,000 mg/kg (Rat) | 4000 mg/kg (Rabbit) | >5.57 mg/L (similar materials, 4 hours, Rat) |
| Dibenzyl ether - indirect synthetic impurity | = 2500 mg/kg (Rat) | | |
| Benzyl alcohol - indirect synthetic impurity | = 1230 mg/kg (Rat) | = 2 g/kg (Rabbit) | = 8.8 mg/L (Rat) 4 h |
| Diphenylmethane - indirect synthetic impurity | = 2250 mg/kg (Rat) | > 5 g/kg (Rabbit) | |
| Benzaldehyde - indirect synthetic impurity | = 1292 mg/kg (Rat) | > 1250 mg/kg (Rabbit) | |

Skin corrosion/irritation Not expected to cause skin irritation.**Serious eye damage/eye irritation** Not classified.**Sensitization** Not expected to cause skin sensitization.**Germ cell mutagenicity** Not classified.**Carcinogenicity** Not classified.

| | |
|---------------------------------|--|
| Reproductive toxicity | This product does not contain any known or suspected reproductive hazards above the threshold value. |
| STOT - single exposure | Not classified. |
| STOT - repeated exposure | Not classified. |
| Aspiration hazard | Not classified. |

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life

Toxic to aquatic life with long lasting effects

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical Name | Crustacea | Algae/aquatic plants | Fish |
|--|--|---|--|
| Benzyl benzoate | 48 hr EC50 - 3.09 mg/L, Chronic NOEC - 1.73 mg/L (Daphnia magna) | 72hr EC50 - 0.475 mg/L; NOEC - 0.247 mg/L (Pseudokirchneriella subcapitata) | 96 hr LC50 - 2.32 mg/l (Brachydanio rerio) |
| Benzyl alcohol - indirect synthetic impurity | 23: 48 h water flea mg/L EC50 | | 10: 96 h Lepomis macrochirus mg/L LC50 static 460: 96 h Pimephales promelas mg/L LC50 static |
| Benzaldehyde - indirect synthetic impurity | 50: 24 h Daphnia magna mg/L EC50 | | 7.5: 96 h Lepomis macrochirus mg/L LC50 static 6.8 - 8.53: 96 h Pimephales promelas mg/L LC50 flow-through 0.8 - 1.44: 96 h Lepomis macrochirus mg/L LC50 flow-through 10.6 - 11.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 12.69: 96 h Oncorhynchus mykiss mg/L LC50 static |

12.2. Persistence and degradability

Readily biodegradable.

12.3. Bioaccumulative potential

Low potential for bioaccumulation.

Bioconcentration factor (BCF) 193.4 L/kg wet-wt

| Chemical Name | Partition coefficient |
|--|-----------------------|
| Benzyl alcohol - indirect synthetic impurity | 1.1 |
| Benzaldehyde - indirect synthetic impurity | 1.48 |

12.4. Mobility in soil

Mobility in soil

log Koc - 3.8

12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

12.6. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--|---|
| Waste from Residues/Unused Products | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| Contaminated packaging | Do not reuse container. Improper disposal or reuse of this container may be dangerous and illegal. |

SECTION 14: Transport information

IMDG

| | |
|--|--|
| 14.1 UN/ID no | 3082 |
| 14.2 Proper Shipping Name | Environmentally Hazardous Substance, liquid n.o.s. |
| 14.3 Hazard Class | 9 |
| 14.4 Packing group | III |
| 14.5 Marine pollutant | This material meets the definition of a marine pollutant |
| Environmental hazard | Yes |
| 14.6 Special Provisions | 274, 335, 969 |
| EmS-No | F-A, S-F |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | IBC02 |

RID

| | |
|----------------------------------|--|
| 14.1 UN/ID no | 3082 |
| 14.2 Proper Shipping Name | Environmentally Hazardous Substance, liquid n.o.s. |
| 14.3 Hazard Class | 9 |
| 14.4 Packing group | III |
| 14.5 Environmental hazard | Yes |
| 14.6 Special Provisions | None |

ADR

| | |
|----------------------------------|--|
| 14.1 UN/ID no | 3082 |
| 14.2 Proper Shipping Name | Environmentally Hazardous Substance, liquid n.o.s. |
| 14.3 Hazard Class | 9 |
| Labels | 9, Marine Pollutant |
| 14.4 Packing group | III |
| 14.5 Environmental hazard | Yes |
| 14.6 Special Provisions | 274, 335, 375, 601 |
| Classification code | M6 |
| Tunnel restriction code | (-) |

ICAO (air)

| | |
|----------------------------------|--|
| 14.1 UN/ID no | 3082 |
| 14.2 Proper Shipping Name | Environmentally Hazardous Substance, liquid n.o.s. |
| 14.3 Hazard Class | 9 |
| 14.4 Packing group | III |
| 14.5 Environmental hazard | Yes |
| 14.6 Special Provisions | None |

IATA

| | |
|----------------------------------|--|
| 14.1 UN/ID no | 3082 |
| 14.2 Proper Shipping Name | Environmentally Hazardous Substance, liquid n.o.s. |
| 14.3 Hazard Class | 9 |
| 14.4 Packing group | III |
| 14.5 Environmental hazard | Yes |
| 14.6 Special Provisions | A97, A158, A197 |
| ERG Code | 9L |

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

| Chemical Name | French RG number | Title |
|--|------------------|-------|
| Benzyl alcohol - indirect synthetic impurity 100-51-6 | RG 84 | - |

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorization and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

15.2. Chemical safety assessment

No information available

SECTION 16: Other information**Full text of H-Statements referred to under section 3**

H302 - Harmful if swallowed

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

H313 - May be harmful in contact with skin

Key literature references and sources for data

Key Source: European Chemicals Agency, <http://echa.europa.eu>

Issue date 26-Mar-2015

Revision date 28-Jan-2019

Revision note Not applicable.

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

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Classification and labeling according to the IFRA/IOFI Labeling Manual 2017.

End of Safety Data Sheet



BEN0021

CAS#: 120-51-4

BENZYL BENZOATE -C

FEMA#: 2138

PRODUCT IDENTIFICATION

| | |
|-------------------|--------------------|
| PRODUCT NAME | BENZYL BENZOATE -C |
| MOLECULAR FORM | C14H12O2 |
| MOLECULAR WT | 212.00 |
| MELTING POINT (C) | |
| BOILING POINT (C) | 323 deg C |
| FLASH POINT (F) | 298 deg F |
| SHELF LIFE (DAYS) | 730 |

| PHYSICAL SPECIFICATIONS | RANGE | METHOD |
|-------------------------|---|--------------|
| APPEARANCE | COLORLESS OILY LIQUID | VISUAL |
| ODOR | SLIGHT AROMATIC ODOR | ORGANOLEPTIC |
| SPECIFIC GRAVITY (25C) | 1.1160 to 1.1200 | FCC METHOD |
| REFRACTIVE INDEX (20C) | 1.5680 to 1.5700 | FCC METHOD |
| SOLUBILITY | MISCIBLE IN ALCOHOL; INSOLUBLE IN GLYCERINE, WATER | FCC METHOD |

| ANALYTICAL SPECIFICATIONS | RANGE | METHOD |
|---------------------------|--|-----------|
| GC ANALYSIS | BENZYL ALCOHOL: 0.1 % MAX DIBENZYL ETHER: 0.05 % MAX BENZALDEHYDE: 0.02% MAX | CHEM_20.M |
| PURITY (BY GC) | 99.0% MIN | CHEM_20.M |

| OTHER SPECIFICATIONS | RANGE | METHOD |
|--------------------------|----------|------------|
| ACID VALUE | 1.0 MAX | FCC METHOD |
| ALDEHYDE, % | 0.05 MAX | USP TEST |
| SOLIDIFICATION PT, DEG C | >= 18°C | BP TEST |
| CHLORINATED COMPOUNDS** | NEGATIVE | FCC METHOD |

STABILITY

STABLE UNDER NORMAL CONDITIONS

STORAGE

STORE IN COOL DRY PLACE AWAY FROM HEAT AND SUNLIGHT.
SHELF LIFE CONSIDERATIONS APPLY ONLY FOR ORIGINAL UNOPENED CONTAINERS



VEGAN / VEGETARIAN DECLARATION

BENZYL BENZOATE

to the best of our knowledge is suitable for both vegan and vegetarian diets.