

Safety Data Sheet

according to Regulation (EC) 1907/2006 (REACH)



Revision date: 1/17/2022
Supersedes date: 12/17/2020

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

1.1. Product identifier:

Product trade name: Kalama* 3-Phenyl Propanol FCC
Company product number: 3PPFCC
REACH registration number: 01-2120756397-42-0002
Substance name: 3-Phenylpropan-1-ol
Substance identification number: EC 204-587-6
Other means of identification: Not Available

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

Uses: Flavor and fragrance ingredient/additive. See Annex for covered uses.
Uses advised against: None identified

1.3. Details of the supplier of the safety data sheet:

Manufacturer/Supplier: Emerald Kalama Chemical, LLC
1296 NW Third Street
Kalama, WA 98625 United States
Telephone: +1-360-673-2550

EU Only Representative: 1499 SE Tech Center Place, Suite 300
Vancouver, WA 98683 United States
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B-1210 Brussels
Belgium
Telephone: +32 (0) 2 403 7239
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Email: product.compliance@emeraldmaterials.com

For further information about this SDS:

1.4. Emergency telephone number:

ChemTel (24 hours): 1-800-255-3924 (USA); +1-813-248-0585 (outside USA).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture:

Product classification according to Regulation (EC) 1272/2008 (CLP) as amended:

Skin Corrosion, category 1B, H314

See Section 2.2 for full text of H (Hazard) statements (EC 1272/2008).

2.2. Label elements:

Product labeling according to Regulation (EC) 1272/2008 (CLP) as amended:

Hazard pictogram(s):



Signal word:

Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.

Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

Supplemental information: No Additional Information

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Annex III and ECHA Guidance on Labelling and Packaging. Regulations in individual countries/regions may determine which statements are required on the product label. See product label for specifics.

2.3. Other hazards:

PBT/vPvB criteria: This product does not meet the PBT and vPvB classification criteria.
Endocrine disrupting properties: No specific information available.
Other hazards: No Additional Information

See Section 11 for toxicological information.

SECTION 3: Composition/information on ingredients

3.1. Substance:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Weight%</u>	<u>Classification</u>	<u>H Statements</u>
0000122-97-4	3-Phenylpropan-1-ol	99-100	Skin Corr. 1B	H314
<u>CAS-No.</u>	<u>Chemical Name</u>	<u>REACH Registration No.</u>	<u>EC/List Number</u>	
0000122-97-4	3-Phenylpropan-1-ol	01-2120756397-42-0002	204-587-6	
<u>CAS-No.</u>	<u>Chemical Name</u>	<u>M-factor</u>	<u>SCLs</u>	<u>ATE</u>
0000122-97-4	3-Phenylpropan-1-ol	N/A	N/E	Not Available

See Section 16 for full text of H (Hazard) statements (EC 1272/2008).

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

SECTION 4: First aid measures

4.1. Description of first aid measures:

General: If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

Following eye contact: Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. Get medical attention immediately.

Following skin contact: Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. Get medical attention immediately.

Following inhalation: If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a POISON CENTER or doctor/physician if you feel unwell.

Following ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

Protection of first aid responders: Wear proper personal protective clothing and equipment.

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

Burns, Eye redness and pain, Irritation. Pre-existing skin problems may be aggravated by prolonged or repeated contact. See section 11 for additional information.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media:

Suitable: Use water spray, ABC dry chemical, foam or carbon dioxide. Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unsuitable: None known.

5.2. Special hazards arising from the substance or mixture:

Unusual fire/explosion hazards: Product is not considered a fire hazard, but will burn if ignited. Run off water from

firefighting may have corrosive effects. Closed container may rupture (due to build up in pressure) when exposed to extreme heat.

Hazardous combustion products: Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See section 10 (10.6 Hazardous decomposition products) for additional information.

5.3. Advice for firefighters:

Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations.

See section 9 for additional information.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

See Section 8 for recommendations on the use of personal protective equipment. If spilled in an enclosed area, ventilate. Eliminate ignition sources. Personal Protective Equipment must be worn.

6.2. Environmental precautions:

Do not flush liquid into public sewer, water systems or surface waters.

6.3. Methods and material for containment and cleaning up:

Contain by diking with sand, earth or other non-combustible material. Wear proper personal protective clothing and equipment. Absorb spill with an inert material. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and launder before reuse.

6.4. References to other sections:

See Section 8 for recommendations on the use of personal protection and Section 13 for waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling:

As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Do not get in eyes, on skin or clothing. Do not breathe dust, vapor, aerosol, mist or gas. Do not ingest, taste, or swallow. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions. Wash contaminated clothing before reuse. Provide eyewash fountains and safety showers in the work area.

7.2. Conditions for safe storage, including any incompatibilities:

Store cool and dry, under well-ventilated conditions. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning. Empty container contains residual product which may exhibit hazards of product. Product can easily oxidize. It is recommended that opened containers be padded with nitrogen. Protect from light.

7.3. Specific end use(s):

Further information concerning special risk management measures: see annex of this safety data sheet (exposure scenarios).

SECTION 8: Exposure controls / personal protection

8.1. Control parameters:

Occupational exposure limits (OEL):

<u>Chemical Name</u>	<u>EU OELV</u>	<u>EU IOELV</u>	<u>ACGIH - TWA/Ceiling</u>	<u>ACGIH - STEL</u>
3-Phenylpropan-1-ol	N/E	N/E	N/E	N/E
<u>Chemical Name</u>	<u>UK WEL</u>	<u>Ireland OEL</u>		
3-Phenylpropan-1-ol	N/E	N/E		

N/E=Not established (no exposure limits established for the listed substances for listed country/region/organization).

Derived No Effect Levels (DNELs):

3-Phenylpropan-1-ol

<u>Population</u>	<u>Route</u>	<u>Acute (local)</u>	<u>Acute (systemic)</u>	<u>Long Term (local)</u>	<u>Long Term (systemic)</u>
Workers	Inhalation	medium hazard (no threshold derived)	N/E	medium hazard (no threshold derived)	24,68 mg/m ³
Workers	Dermal	medium hazard (no threshold derived)	N/E	medium hazard (no threshold derived)	14 mg/kg bw/day

<u>Population</u>	<u>Route</u>	<u>Acute (local)</u>	<u>Acute (systemic)</u>	<u>Long Term (local)</u>	<u>Long Term (systemic)</u>
General population	Inhalation	medium hazard (no threshold derived)	N/E	medium hazard (no threshold derived)	3,7 mg/m ³
General population	Dermal	medium hazard (no threshold derived)	N/E	medium hazard (no threshold derived)	5 mg/kg bw/day
General population	Oral	N/E	N/E	N/E	2,5 mg/kg bw/day

Predicted No Effect Concentration (PNECs):**3-Phenylpropan-1-ol**

<u>Compartment</u>	<u>PNEC</u>
Freshwater	0,061 mg/L
Freshwater sediment	0,513 mg/kg dw
Marine water	0,006 mg/L
Marine water sediment	0,051 mg/kg dw
Intermittent releases	0,61 mg/L
Soil	0,067 mg/kg dw
STP	3 mg/L
Oral	No potential for bioaccumulation

N/E=Not established; N/A=Not applicable (not required); bw=body weight; dw=dry weight; ww=wet weight.

8.2. Exposure controls:

Appropriate engineering controls: Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear safety glasses with side shields (or goggles) and a face shield.

Hand protection: Avoid skin contact when mixing or handling the material by wearing impervious and chemical resistant gloves. In case of prolonged immersion or frequently repeated contact, gloves with breakthrough times greater than 480 minutes (protection class 6) are recommended. For brief contact or splash applications, gloves with breakthrough times of 60 minutes or greater are recommended (protection class 3 or greater). Suggested materials for protective gloves: Butyl rubber, Neoprene, Viton. The protective gloves to be used must comply with the specifications of the Regulation (EU) 2016/425 and the resultant standard EN 374. Suitability and durability of a glove is dependent on usage (e.g. frequency and duration of contact, other chemicals which may be handled, chemical resistance of glove material and dexterity). Always seek advice of the glove supplier as to the most suitable glove material.

Skin and body protection: Use good laboratory/workplace procedures including personal protective clothing: labcoat, safety glasses and protective gloves.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Wear an approved respirator (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the applicable exposure limit(s) of any chemical substance listed in this SDS.

Further information: Eyewash fountains and safety showers are recommended in the work area.

Environmental exposure controls: See Sections 6 and 12.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties:**

Physical state:	Liquid
Colour:	Clear, Colorless
Odour:	Characteristic
Odour threshold:	Not Available
Melting point/Freezing point:	-18 °C (-0.4 °F)
Boiling point °C:	236-238 °C
Boiling point °F:	457-460 °F
Flammability:	Not flammable
Lower and upper explosion limit:	LEL: Not Available UEL: Not Available
Flash point:	117 °C (242 °F) ISO 3679
Auto-ignition temperature:	405 °C (761 °F)
Decomposition temperature:	Not Available
pH:	Not Available
Kinematic viscosity:	Not Available
Solubility in water:	7799 mg/L @ 20°C
Partition coefficient n-octanol/water (log value):	1.6 (OECD 117)

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Vapour pressure: 25 Pa at 20 °C, 35 Pa at 25 °C, 143 Pa at 50 °C
Density and/or relative density: 0.998-1.002 (25°C)
Relative vapour density: > 1
Particle characteristics: Not Applicable
% Volatile by weight: 100%
VOC: 100%

Amounts specified are typical and do not represent a specification.

9.2. Other information:

Information with regard to physical hazard classes:

Explosive properties: Not explosive

Oxidising properties: Not oxidizing

Other safety characteristics:

Evaporation rate: Not Available

SECTION 10: Stability and reactivity

10.1. Reactivity:

None known.

10.2. Chemical stability:

This product is stable.

10.3. Possibility of hazardous reactions:

Hazardous polymerization will not occur.

10.4. Conditions to avoid:

Avoid exposure to air, moisture, ignition sources and elevated temperatures.

10.5. Incompatible materials:

Avoid contact with strong oxidizing agents.

10.6. Hazardous decomposition products:

Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity: Not classified (based on available data, the classification criteria are not met).

<u>Chemical Name</u>	<u>Inhalation LC50</u>	<u>Species</u>	<u>Oral LD50</u>	<u>Species</u>	<u>Dermal LD50</u>	<u>Species</u>
3-Phenylpropan-1-ol	N/E	N/E	2250 mg/kg	Rat/ adult	<5000 mg/kg	Rabbit/ adult

Skin corrosion/irritation: Causes severe skin burns - Category 1B. 3-PHENYLPROPAN-1-OL: OECD 431 Skin corrosion and OECD 439 Skin irritation in vitro tests: Corrosive (at 100% concentration); Not corrosive and not irritating (at <=50% concentration).

<u>Chemical Name</u>	<u>Skin irritation</u>	<u>Species</u>
3-Phenylpropan-1-ol	Corrosive (OECD 431 & 439)	In-Vitro

Serious eye damage/irritation: Causes serious eye damage - Category 1.

<u>Chemical Name</u>	<u>Eye irritation</u>	<u>Species</u>
3-Phenylpropan-1-ol	Corrosive	In-Vitro

Respiratory or skin sensitization: Not classified (based on available data, the classification criteria are not met).

<u>Chemical Name</u>	<u>Skin sensitisation</u>	<u>Species</u>
3-Phenylpropan-1-ol	Non-sensitizer	Weight of evidence

Carcinogenicity: Not classified (no relevant information found).

Germ cell mutagenicity: Not classified (based on available data, the classification criteria are not met). 3-PHENYLPROPAN-1-OL: Mutagenicity was negative in in-vitro genotoxicity assays.

Reproductive toxicity: Not classified (based on available data, the classification criteria are not met). 3-PHENYLPROPAN-1-OL: Reproductive and Developmental toxicity screening test (gavage) found a NOAEL = 300 mg/kg/day for reproductive and developmental toxicity.

Specific target organ toxicity (STOT) - single exposure: Not classified (based on available data, the classification criteria

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are not met).

Specific target organ toxicity (STOT) - repeated exposure: Not classified (based on available data, the classification criteria are not met). 3-PHENYLPROPAN-1-OL: Repeated dose study, oral, rat: NOAEL (no-observed-adverse-effect-level) =1000 mg/kg bw/day.

Aspiration hazard: Not classified (no relevant information found).

Other toxicity information: No additional information available.

Information on likely routes of exposure:

General: Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure.

Eyes: Causes serious eye damage.

Skin: Causes skin burns.

Inhalation: Exposure to vapors or mists may cause severe irritation and burns of the nose, throat and respiratory tract.

Ingestion: May be harmful if swallowed. Ingestion may cause severe irritation and burns of the mouth, throat and digestive tract.

11.2. Information on other hazards

Endocrine disrupting properties: No specific information available.

Other information: No additional information available.

SECTION 12: Ecological information

12.1. Toxicity:

<u>Chemical Name</u>	<u>Species</u>	<u>Acute</u>	<u>Acute</u>	<u>Chronic</u>
3-Phenylpropan-1-ol	Fish	LC50 >61 mg/L (96 hours) (OECD 203)	N/E	N/E
3-Phenylpropan-1-ol	Invertebrates	EC50 60.6 mg/L (48 hours) (OECD 202)	N/E	N/E
3-Phenylpropan-1-ol	Algae	EC50 109 mg/L (72 hours) (OECD 201)	N/E	EC10 94.1 mg/L(72 hours) (OECD 201)
3-Phenylpropan-1-ol	Micro-organisms	NOEC 30 mg/L (N/E) (OECD 301F)		

12.2. Persistence and degradability:

<u>Chemical Name</u>	<u>Biodegradation</u>
3-Phenylpropan-1-ol	Readily biodegradable (OECD 301F)

12.3. Bioaccumulative potential:

<u>Chemical Name</u>	<u>Bioconcentration Factor (BCF)</u>	<u>Log Kow</u>
3-Phenylpropan-1-ol	N/E	1.6 (OECD 117)

12.4. Mobility in soil:

<u>Chemical Name</u>	<u>Mobility in soil (Koc/Kow)</u>
3-Phenylpropan-1-ol	53

12.5. Results of PBT and vPvB assessment:

Not Available.

12.6. Endocrine disrupting properties:

No specific information available.

12.7. Other adverse effects:

No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods:

Dispose of unused contents (incineration) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate.

See Section 8 for recommendations on the use of personal protective equipment.

SECTION 14: Transport information

The information below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions.

14.1. UN number or ID number: UN1760

14.2. UN proper shipping name:

Corrosive liquid, n.o.s. (3-Phenylpropan-1-ol)

14.3. Transport hazard class(es):

U.S. DOT hazard class: 8

Canada TDG hazard class: 8

Europe ADR/RID/ADN hazard class: 8

IMDG Code (ocean) hazard class: 8

ICAO/IATA (air) hazard class: 8

A "N/A" listing for the hazard class indicates the product is not regulated for transport by that regulation.

14.4. Packing group: II

14.5. Environmental hazards:

Marine pollutant: Not Applicable

Hazardous substance (USA): Not Applicable

14.6. Special precautions for user:

Not Applicable

14.7. Maritime transport in bulk according to IMO instruments

Not Applicable

SECTION 15: Regulatory information

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

Europe REACH (EC) 1907/2006: Applicable components are registered, exempt or otherwise compliant. EU REACH is only relevant to substances either manufactured or imported into the EU. Emerald Kalama Chemical has met its obligations under the EU REACH regulation. EU REACH information regarding this product is provided for informational purposes only. Each Legal Entity may have differing EU REACH obligations, depending on their place in the supply chain. Emerald's compliance with EU REACH does not imply automatic coverage for Downstream Users located in the EU. For material manufactured outside of the EU, the importer of record must understand and meet their specific obligations under the regulation.

EU Authorizations and/or restrictions on use: Not Applicable

Other EU information: No Additional Information

National regulations: No Additional Information

Chemical inventories:

<u>Regulation</u>	<u>Status</u>
Australian Inventory of Industrial Chemicals (AIIC):	Y
Canadian Domestic Substances List (DSL):	Y
Canadian Non-Domestic Substances List (NDSL):	N
China Inventory of Existing Chemical Substances (IECSC):	Y
European EC Inventory (EINECS, ELINCS, NLP):	Y
Japan Existing and New Chemical Substances (ENCS):	Y
Japan Industrial Safety and Health Law (ISHL):	Y
Korean Existing and Evaluated Chemical Substances (KECL):	Y
New Zealand Inventory of Chemicals (NZIoC):	N
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Y
Taiwan Inventory of Existing Chemicals:	Y
U.S. Toxic Substances Control Act (TSCA) (Active):	Y

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory (or is not on the ACTIVE inventory for U.S. TSCA); 2) no information is available; or 3) the component has not been reviewed. A "Y" for New Zealand may mean that a qualified group standard may exist for the components in this product.

Chemical inventory notes: New Zealand: A qualified group standard may exist for the components in this product.

UK REACH: As the UK has formally left the European Union, EU REACH [(EC) 1907/2006] is no longer directly applicable within the UK. Please see UK REACH formatted SDS for information related to UK REACH compliance.

15.2. Chemical safety assessment:

A chemical safety assessment has been carried out for the substance or mixture.

SECTION 16: Other information

Hazard (H) Statements in the Composition section (Section 3):

H314 Causes severe skin burns and eye damage.

Reason for revision: Changes in Section(s): 1

Evaluation method for classification of mixtures: Not Applicable (substance)

Legend:

* : Trademark owned by Emerald Kalama Chemical, LLC.

ACGIH: American Conference of Governmental Industrial Hygienists

ATE: Acute toxicity estimate

EU OELV: European Union Occupational Exposure Limit Value

EU IOELV: European Union Indicative Occupational Exposure Limit Value

N/A: Not Applicable

N/E: None Established

SCL: Specific concentration limit

STEL: Short Term Exposure Limit

TWA: Time Weighted Average (exposure for 8-hour workday)

Users Responsibility/Disclaimer of Liability:

The information set forth herein is based on our current knowledge, and is intended to describe the product solely with respect to health, safety and the environment. As such, it must not be interpreted as a guarantee of any specific property of the product. As a result, the customer shall be solely responsible for deciding whether said information is suitable and beneficial.

Safety Data Sheet Preparer:
Product Compliance Department
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Vancouver, WA 98683
United States

Annex

Exposure Scenarios

Substance information:

Name of substance: 3-Phenylpropan-1-ol.
EC# 204-587-6 / CAS# 122-97-4.
REACH Registration number: 01-2120756397-42-0002

List of exposure scenarios:

ES1: Formulation - Formulation of fragrance compounds
ES2: Formulation - Formulation of fragranced end-products
ES3: Use at industrial sites - Industrial end-use of washing and cleaning products.
ES4: Use by professional workers - Professional end-use of washing and cleaning products
ES5: Use by professional workers - Professional end-use of polishes and wax blends.
ES6: Consumer use - Consumer end-use of fragranced end products

General remarks:

This substance is classified as having the potential to induce skin corrosion (H314) and the potential to cause serious eye damage (H318). However, the available data do not provide quantitative dose-response information. In these circumstances, Qualitative Chemical Safety Assessment (CSA) is appropriate when there is no basis for setting a DNEL or DMEL, with the aim of reducing or avoiding contact, through the implementation of risk management measures (RMMs) and operational conditions (OCs) that are proportional to the level of concern for the health hazard posed by the substance. Exposures should be controlled to a level that results in an acceptable level of risk (i.e. implementation of the RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern.

Environment: Completion of this section is not required for this chemical according to the REACH Guidance on Information Requirements and Chemical Safety Assessments, including Part A: Introduction to the Guidance Document, Page 9. as it does not meet criteria for being classified as a PBT, vPvB, or dangerous chemical.

Skin corrosion (H314): If the user complies with the following generic statements, risks due to skin corrosion can be considered to be adequately controlled: Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Serious eye damage (H318): If the user complies with the following generic statements, risks due to serious eye damage can be considered to be adequately controlled: Avoid direct eye contact with product, also via contamination on hands. Use suitable eye protection. Clean up contamination/spills as soon as they occur. Wash off eye contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any eye effects that may develop.

Note that for all worker activities it is assumed that a good standard of occupational hygiene is implemented, which consists of the following

elements:

- Avoid direct contact with the substance or product;
- Wear gloves (tested to EN374) if direct hand contact with the substance is likely; wash off skin contamination immediately;
- Wear protective gloves and suitable eye protection at all times when handling the substance or product;
- Avoid splashes and spills;
- Avoid contact with contaminated tools and objects;
- Clean up contamination/spills as soon as they occur;
- Ensure regular cleaning of equipment and work area;
- Ensure suitable management/supervision is in place to check that the RMMs in place are being used correctly and OCs are followed correctly;
- Train staff on good practice to prevent / minimise exposures and to report any problems that may develop;
- Adopt good standards of personal hygiene;
- Where activities may lead to aerosol release, e.g., spraying, then additional skin and eye protection measures such as impervious suits and face shields may be required.

Exposure scenario (1): Formulation - Formulation of fragrance compounds**1. Exposure scenario (1)****Short title of the exposure scenario:**

Formulation - Formulation of fragrance compounds

List of use descriptors:

Process category (PROC): PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15

Environmental release category (ERC): ERC2

List of names of contributing worker scenarios and corresponding PROCs:

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
 PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions.

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition.

PROC5 Mixing or blending in batch processes. Covers mixing or blending of solid or liquid materials in the context of manufacturing or formulating sectors, as well as upon end use.

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities. Transfer includes loading, filling, dumping, bagging and weighing.

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities. Transfer includes loading, filling, dumping, bagging.

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing). Filling lines specifically designed to both capture vapour and aerosol emissions and minimise spillage.

PROC14 Tableting, compression, extrusion, pelletisation, granulation. This covers processing of mixtures and/or substances into a defined shape for further use.

PROC15 Use as laboratory reagent. Use of substances at small scale laboratory (< 1 l or 1 kg present at workplace).

Name of contributing environmental scenario and corresponding ERCs:

ERC2 Formulation into mixture.

For further information on standardized use descriptors see the European Chemical Agency (ECHA) Guidance on information requirements and chemical safety assessment, Chapter R.12: Use descriptor system (http://guidance.echa.europa.eu/docs/guidance_document/information_requirements_r12_en.pdf).

2. Conditions of use affecting exposure**2.1 Control of workers exposure****General:**

Avoid direct eye and skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Use suitable eye protection. Clean up contamination/spills as soon as they occur. Wash off eye contamination immediately. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any eye and skin problems that may develop.

2.2 Control of environmental exposure**General:**

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

3. Exposure estimation and reference to its source

<u>Effect/Compartment</u>	<u>Exposure estimate/PEC</u>	<u>RCR</u>	<u>Notes</u>
Not Applicable			
Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern.			

4. Guidance to the Downstream User to evaluate whether he works inside the boundaries set by the ES**Health**

Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario (2): Formulation of fragranced end-products**1. Exposure scenario (2)****Short title of the exposure scenario:**

Formulation of fragranced end-products

List of use descriptors:

Process category (PROC): PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC15

Environmental release category (ERC): ERC2

List of names of contributing worker scenarios and corresponding PROCs:

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions.

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition.

PROC5 Mixing or blending in batch processes. Covers mixing or blending of solid or liquid materials in the context of manufacturing or formulating sectors, as well as upon end use.

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities. Transfer includes loading, filling, dumping, bagging and weighing.

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities. Transfer includes loading, filling, dumping, bagging.

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing). Filling lines specifically designed to both capture vapour and aerosol emissions and minimise spillage.

PROC15 Use as laboratory reagent. Use of substances at small scale laboratory (< 1 l or 1 kg present at workplace).

Name of contributing environmental scenario and corresponding ERCs:

ERC2 Formulation into mixture.

For further information on standardized use descriptors see the European Chemical Agency (ECHA) Guidance on information requirements and chemical safety assessment, Chapter R.12: Use descriptor system (http://guidance.echa.europa.eu/docs/guidance_document/information_requirements_r12_en.pdf).

2. Conditions of use affecting exposure**2.1 Control of workers exposure****General:**

Avoid direct eye and skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Use suitable eye protection. Clean up contamination/spills as soon as they occur. Wash off eye contamination immediately. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any eye and skin problems that may develop.

2.2 Control of environmental exposure**General:**

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

3. Exposure estimation and reference to its source**Effect/Compartment****Exposure estimate/PEC****RCR****Notes**

Not Applicable

Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern.

4. Guidance to the Downstream User to evaluate whether he works inside the boundaries set by the ES**Health**

Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario (3): Use at industrial sites - Industrial end-use of washing and cleaning products**1. Exposure scenario (3)****Short title of the exposure scenario:**

Use at industrial sites - Industrial end-use of washing and cleaning products

List of use descriptors:

Sector of use category (SU): SU0

Product category (PC): PC35

Process category (PROC): PROC2, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13

Environmental release category (ERC): ERC4

List of names of contributing worker scenarios and corresponding PROCs:

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions.

PROC4 Chemical production where opportunity for exposure arises.

PROC7 Industrial spraying. Air dispersive techniques i.e. dispersion into air (= atomization) by e.g. pressurized air, hydraulic pressure or centrifugation, applicable for liquids and powders.

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities. Transfer includes loading, filling, dumping, bagging and weighing.

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities. Transfer includes loading, filling, dumping, bagging.

PROC10 Roller application or brushing. This includes application of paints, coatings, removers, adhesives or cleaning agents to surfaces with potential exposure arising from splashes.

PROC13 Treatment of articles by dipping and pouring.

Name of contributing environmental scenario and corresponding ERCs:

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article).

Further explanations:

PC35 Washing and cleaning products.

For further information on standardized use descriptors see the European Chemical Agency (ECHA) Guidance on information requirements and chemical safety assessment, Chapter R.12: Use descriptor system (http://guidance.echa.europa.eu/docs/guidance_document/information_requirements_r12_en.pdf).

2. Conditions of use affecting exposure

2.1 Control of workers exposure**General:**

Avoid direct eye and skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Use suitable eye protection. Clean up contamination/spills as soon as they occur. Wash off eye contamination immediately. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any eye and skin problems that may develop.

2.2 Control of environmental exposure**General:**

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

3. Exposure estimation and reference to its source

<u>Effect/Compartment</u>	<u>Exposure estimate/PEC</u>	<u>RCR</u>	<u>Notes</u>
Not Applicable			
Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern.			

4. Guidance to the Downstream User to evaluate whether he works inside the boundaries set by the ES**Health**

Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario (4): Use by professional workers - Professional end-use of washing and cleaning products**1. Exposure scenario (4)****Short title of the exposure scenario:**

Use by professional workers - Professional end-use of washing and cleaning products

List of use descriptors:

Sector of use category (SU): SU0

Product category (PC): PC35

Process category (PROC): PROC2, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13

Environmental release category (ERC): ERC8a, ERC8d

List of names of contributing worker scenarios and corresponding PROCs:

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions.

PROC4 Chemical production where opportunity for exposure arises.

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities. Transfer includes loading, filling, dumping, bagging and weighing.

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities. Transfer includes loading, filling, dumping, bagging.

PROC10 Roller application or brushing. This includes application of paints, coatings, removers, adhesives or cleaning agents to surfaces with potential exposure arising from splashes.

PROC11 Non industrial spraying. Air dispersive techniques i.e. dispersion into air (= atomization) by e.g. pressurized air, hydraulic pressure or centrifugation, applicable for liquids and powders.

PROC13 Treatment of articles by dipping and pouring.

Name of contributing environmental scenario and corresponding ERCs:

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor).

ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor).

Further explanations:

PC35 Washing and cleaning products.

For further information on standardized use descriptors see the European Chemical Agency (ECHA) Guidance on information requirements and chemical safety assessment, Chapter R.12: Use descriptor system (http://guidance.echa.europa.eu/docs/guidance_document/information_requirements_r12_en.pdf).

2. Conditions of use affecting exposure**2.1 Control of workers exposure****General:**

Avoid direct eye and skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Use suitable eye protection. Clean up contamination/spills as soon as they occur. Wash off eye contamination immediately. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any eye and skin problems that may develop.

2.2 Control of environmental exposure**General:**

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

3. Exposure estimation and reference to its source

<u>Effect/Compartment</u>	<u>Exposure estimate/PEC</u>	<u>RCR</u>	<u>Notes</u>
Not Applicable			
Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern.			

4. Guidance to the Downstream User to evaluate whether he works inside the boundaries set by the ES**Health**

Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore

the risk is considered to be controlled to a level of no concern. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario (5): Use by professional workers - Professional end-use of polishes and wax blends

1. Exposure scenario (5)

Short title of the exposure scenario:

Use by professional workers - Professional end-use of polishes and wax blends

List of use descriptors:

Sector of use category (SU): SU0

Product category (PC): PC31

Process category (PROC): PROC2, PROC8a, PROC10, PROC11

Environmental release category (ERC): ERC8a

List of names of contributing worker scenarios and corresponding PROCs:

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions.

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities. Transfer includes loading, filling, dumping, bagging and weighing.

PROC10 Roller application or brushing. This includes application of paints, coatings, removers, adhesives or cleaning agents to surfaces with potential exposure arising from splashes.

PROC11 Non industrial spraying. Air dispersive techniques i.e. dispersion into air (= atomization) by e.g. pressurized air, hydraulic pressure or centrifugation, applicable for liquids and powders.

Name of contributing environmental scenario and corresponding ERCs:

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor).

Further explanations:

PC31 Polishes and wax blends.

For further information on standardized use descriptors see the European Chemical Agency (ECHA) Guidance on information requirements and chemical safety assessment, Chapter R.12: Use descriptor system (http://guidance.echa.europa.eu/docs/guidance_document/information_requirements_r12_en.pdf).

2. Conditions of use affecting exposure

2.1 Control of workers exposure

General:

Avoid direct eye and skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Use suitable eye protection. Clean up contamination/spills as soon as they occur. Wash off eye contamination immediately. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any eye and skin problems that may develop.

2.2 Control of environmental exposure

General:

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

3. Exposure estimation and reference to its source

Effect/Compartment	Exposure estimate/PEC	RCR	Notes
Not Applicable			

Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern.

4. Guidance to the Downstream User to evaluate whether he works inside the boundaries set by the ES

Health

Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario (6): Consumer use - Consumer end-use of fragranced end products

1. Exposure scenario (6)

Short title of the exposure scenario:

Consumer end-use of fragranced end products

List of use descriptors:

Product category (PC): PC3, PC8, PC28, PC31, PC35, PC39

Environmental release category (ERC): ERC8a, ERC8d

Name of contributing environmental scenario and corresponding ERCs:

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor).

ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor).

Further explanations:

PC3 Air care products.

PC8 Biocidal products.

PC28 Perfumes, fragrances.

PC31 Polishes and wax blends.

PC35 Washing and cleaning products.

PC39 Cosmetics, personal care products.

For further information on standardized use descriptors see the European Chemical Agency (ECHA) Guidance on information requirements and chemical safety assessment, Chapter R.12: Use descriptor system (http://guidance.echa.europa.eu/docs/guidance_document/)

information_requirements_r12_en.pdf).

2. Conditions of use affecting exposure

2.1 Control of consumer exposure

General:

Avoid direct eye and skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Use suitable eye protection. Clean up contamination/spills as soon as they occur. Wash off eye contamination immediately. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any eye and skin problems that may develop.

2.2 Control of environmental exposure

General:

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

3. Exposure estimation and reference to its source

Effect/Compartment

Exposure estimate/PEC

RCR

Notes

Not Applicable

Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern.

4. Guidance to the Downstream User to evaluate whether he works inside the boundaries set by the ES

Health

Implementation of the Risk Management Measures (RMMs) will ensure that the likelihood of an exposure occurring is negligible, and therefore the risk is considered to be controlled to a level of no concern. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.