

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

#### 1.1. Product identifier

Product form	: Mixture
Product name	: Dark Chocolate #EU27891F
UFI	: YK7G-T2UG-A009-DCWA
Product code	: EU27891F
Type of product	: Perfumes, fragrances
Product group	: Trade product

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

##### 1.2.1. Relevant identified uses

Main use category	: Industrial use, Professional use
Industrial/Professional use spec	: For professional use only Industrial
Use of the substance/mixture	: Perfumes, fragrances
Function or use category	: Odour agents

##### 1.2.2. Uses advised against

No additional information available

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

FRENCH COLOR & FRAGRANCE International GmbH  
Mittlerer Weg 35  
DE- 79424 Auggen  
Germany  
T 49-7631-931-8900  
[SDS@frenchcolor.com](mailto:SDS@frenchcolor.com) - [www.frenchcolor.com](http://www.frenchcolor.com)

#### 1.4. Emergency telephone number

Emergency number : 1-800-255-3924; +01-813-248-0585; China: +400-120-0751; Mexico: +01-800-099-0731;  
Brazil: +0-800-591-6042; India: +000-800-100-4086

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4	H302
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411
Full text of H- and EUH-statements: see section 16	

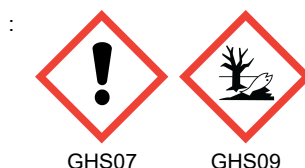
##### Adverse physicochemical, human health and environmental effects

Harmful if swallowed. Toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Warning

Hazard statements (CLP)

: H302 - Harmful if swallowed.

H411 - Toxic to aquatic life with long lasting effects.

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Precautionary statements (CLP)	: P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P273 - Avoid release to the environment. P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell. P330 - Rinse mouth. P391 - Collect spillage.
EUH-statements	: EUH208 - Contains Isovaleraldehyde, Acetyl Propionyl. May produce an allergic reaction.

### 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Benzyl benzoate	CAS-No.: 120-51-4 EC-No.: 204-402-9 EC Index-No.: 607-085-00-9 REACH-no: 01-2119976371-33	44.625 – 89.25	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Ethyl maltol	CAS-No.: 4940-11-8 EC-No.: 225-582-5	1 – 2	Acute Tox. 4 (Oral), H302
Isoamyl phenylacetate (do not sell)	CAS-No.: 102-19-2 EC-No.: 203-012-6	0.75 – 1.5	Aquatic Chronic 2, H411
Ethyl vanillin	CAS-No.: 121-32-4 EC-No.: 204-464-7 REACH-no: 01-211958961-24	0.5 – 1	Eye Irrit. 2, H319
Furfural substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, LT, LV, PL, PT, RO, SE, SK, NO, CH)	CAS-No.: 98-01-1 EC-No.: 202-627-7 EC Index-No.: 605-010-00-4	0.25 – 0.5	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335 Aquatic Chronic 3, H412
acetyl propionyl substance with national workplace exposure limit(s) (DE, SI, CH)	CAS-No.: 600-14-6 EC-No.: 209-984-8	0.25 – 0.5	Flam. Liq. 2, H225 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT RE 2, H373
Isovaleraldehyde substance with national workplace exposure limit(s) (AT, DE, LT, SI)	CAS-No.: 590-86-3 EC-No.: 209-691-5	0.125 – 0.25	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Skin Sens. 1B, H317 STOT SE 3, H335 Aquatic Chronic 2, H411

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

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

#### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Advice for firefighters

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

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

##### 6.1.2. For emergency responders

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

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.  
Storage temperature : 25 °C  
Storage area : Store in a well-ventilated place. Store away from heat.  
Special rules on packaging : Store in a closed container.  
Packaging materials : Do not store in corrodable metal.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

Furfural (98-01-1)	
<b>Austria - Occupational Exposure Limits</b>	
MAK (OEL TWA)	20 mg/m <sup>3</sup>
MAK (OEL TWA) [ppm]	5 ppm
OEL chemical category	Skin notation, Group B Carcinogen
<b>Belgium - Occupational Exposure Limits</b>	
OEL TWA	8 mg/m <sup>3</sup>
OEL TWA [ppm]	2 ppm
OEL chemical category	Skin
<b>Bulgaria - Occupational Exposure Limits</b>	
OEL TWA	10 mg/m <sup>3</sup>
<b>Croatia - Occupational Exposure Limits</b>	
GVI (OEL TWA) [1]	8 mg/m <sup>3</sup>
GVI (OEL TWA) [2]	2 ppm
KGVI (OEL STEL)	20 mg/m <sup>3</sup>
KGVI (OEL STEL) [ppm]	5 ppm
OEL chemical category	Skin notation
<b>Czech Republic - Occupational Exposure Limits</b>	
PEL (OEL TWA)	10 mg/m <sup>3</sup>
OEL chemical category	Potential for cutaneous absorption
<b>Denmark - Occupational Exposure Limits</b>	
OEL TWA [1]	7.9 mg/m <sup>3</sup>
OEL TWA [2]	2 ppm
OEL chemical category	Potential for cutaneous absorption

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>Furfural (98-01-1)</b>	
<b>Estonia - Occupational Exposure Limits</b>	
OEL TWA	8 mg/m <sup>3</sup>
OEL TWA [ppm]	2 ppm
OEL STEL	20 mg/m <sup>3</sup>
OEL STEL [ppm]	5 ppm
OEL chemical category	Skin notation
<b>Finland - Occupational Exposure Limits</b>	
HTP (OEL TWA) [1]	8 mg/m <sup>3</sup>
HTP (OEL TWA) [2]	2 ppm
HTP (OEL STEL)	20 mg/m <sup>3</sup>
HTP (OEL STEL) [ppm]	5 ppm
OEL chemical category	Potential for cutaneous absorption
<b>France - Occupational Exposure Limits</b>	
VLE (OEL C/STEL)	8 mg/m <sup>3</sup>
VLE (OEL C/STEL) [ppm]	2 ppm
OEL chemical category	Carcinogen category 2
<b>France - Biological limit values</b>	
BLV	200 mg/g creatinine Parameter: Total furoic acid - Medium: urine - Sampling time: end of shift (Background noise on non-exposed subjects)
<b>Greece - Occupational Exposure Limits</b>	
OEL TWA	20 mg/m <sup>3</sup>
OEL TWA [ppm]	5 ppm
OEL STEL	40 mg/m <sup>3</sup>
OEL STEL [ppm]	10 ppm
OEL chemical category	skin - potential for cutaneous absorption
<b>Hungary - Occupational Exposure Limits</b>	
AK (OEL TWA)	8 mg/m <sup>3</sup>
CK (OEL STEL)	20 mg/m <sup>3</sup>
OEL chemical category	Sensitizer, Potential for cutaneous absorption
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [1]	8 mg/m <sup>3</sup>
OEL TWA [2]	2 ppm
OEL STEL	20 mg/m <sup>3</sup>
OEL STEL [ppm]	5 ppm
OEL chemical category	Potential for cutaneous absorption
<b>Latvia - Occupational Exposure Limits</b>	
OEL TWA	10 mg/m <sup>3</sup>
<b>Lithuania - Occupational Exposure Limits</b>	
IPRV (OEL TWA)	8 mg/m <sup>3</sup>

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>Furfural (98-01-1)</b>	
IPRV (OEL TWA) [ppm]	2 ppm
TPRV (OEL STEL)	20 mg/m <sup>3</sup>
TPRV (OEL STEL) [ppm]	5 ppm
OEL chemical category	Carcinogen, Skin notation
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	10 mg/m <sup>3</sup>
NDSch (OEL STEL)	25 mg/m <sup>3</sup>
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA [ppm]	2 ppm
OEL chemical category	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, skin - potential for cutaneous exposure
<b>Romania - Occupational Exposure Limits</b>	
OEL TWA	10 mg/m <sup>3</sup>
OEL TWA [ppm]	2.5 ppm
OEL STEL	15 mg/m <sup>3</sup>
OEL STEL [ppm]	4 ppm
OEL chemical category	C2
<b>Slovakia - Occupational Exposure Limits</b>	
NPHV (OEL TWA) [1]	7.9 mg/m <sup>3</sup>
NPHV (OEL TWA) [2]	2 ppm
OEL chemical category	Potential for cutaneous absorption
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA) [1]	8 mg/m <sup>3</sup>
VLA-ED (OEL TWA) [2]	2 ppm
OEL chemical category	skin - potential for cutaneous absorption
<b>Spain - Biological limit values</b>	
BLV	200 mg/l Parameter: Furoic acid - Medium: urine - Sampling time: end of shift (with hydrolysis)
<b>Sweden - Occupational Exposure Limits</b>	
NGV (OEL TWA)	8 mg/m <sup>3</sup>
NGV (OEL TWA) [ppm]	2 ppm
KTV (OEL STEL)	20 mg/m <sup>3</sup>
KTV (OEL STEL) [ppm]	5 ppm
OEL chemical category	Skin notation
<b>United Kingdom - Occupational Exposure Limits</b>	
WEL TWA (OEL TWA) [1]	8 mg/m <sup>3</sup>
WEL TWA (OEL TWA) [2]	2 ppm
WEL STEL (OEL STEL)	20 mg/m <sup>3</sup>
WEL STEL (OEL STEL) [ppm]	5 ppm
WEL chemical category	Potential for cutaneous absorption

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Furfural (98-01-1)	
<b>Norway - Occupational Exposure Limits</b>	
Grenseverdi (OEL TWA) [1]	8 mg/m <sup>3</sup>
Grenseverdi (OEL TWA) [2]	2 ppm
Korttidsverdi (OEL STEL)	16 mg/m <sup>3</sup> (value calculated)
Korttidsverdi (OEL STEL) [ppm]	4 ppm (value calculated)
OEL chemical category	Skin notation
<b>Switzerland - Occupational Exposure Limits</b>	
MAK (OEL TWA) [1]	8 mg/m <sup>3</sup>
MAK (OEL TWA) [2]	2 ppm
OEL chemical category	Skin notation
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA [ppm]	0.2 ppm
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall exposure by the cutaneous route
<b>USA - ACGIH - Biological Exposure Indices</b>	
BEI	200 mg/l Parameter: Furoic acid with hydrolysis - Medium: urine - Sampling time: end of shift (nonspecific)
Isovaleraldehyde (590-86-3)	
<b>Austria - Occupational Exposure Limits</b>	
MAK (OEL TWA)	39 mg/m <sup>3</sup>
MAK (OEL TWA) [ppm]	10 ppm
MAK (OEL STEL)	39 mg/m <sup>3</sup>
MAK (OEL STEL) [ppm]	10 ppm
OEL C	39 mg/m <sup>3</sup>
OEL C [ppm]	10 ppm
<b>Germany - Occupational Exposure Limits (TRGS 900)</b>	
AGW (OEL TWA) [1]	39 mg/m <sup>3</sup>
AGW (OEL TWA) [2]	10 ppm
<b>Lithuania - Occupational Exposure Limits</b>	
IPRV (OEL TWA)	10 mg/m <sup>3</sup>
<b>Slovenia - Occupational Exposure Limits</b>	
OEL TWA	39 mg/m <sup>3</sup>
OEL TWA [ppm]	10 ppm
OEL STEL	39 mg/m <sup>3</sup>
OEL STEL [ppm]	10 ppm
acetyl propionyl (600-14-6)	
<b>Germany - Occupational Exposure Limits (TRGS 900)</b>	
AGW (OEL TWA) [1]	0.083 mg/m <sup>3</sup>
AGW (OEL TWA) [2]	0.02 ppm

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

acetyl propionyl (600-14-6)	
Chemical category	Skin notation, Skin sensitization
<b>Slovenia - Occupational Exposure Limits</b>	
OEL TWA	0.083 mg/m <sup>3</sup>
OEL TWA [ppm]	0.02 ppm
OEL STEL	0.083 mg/m <sup>3</sup>
OEL STEL [ppm]	0.02 ppm
OEL chemical category	Potential for cutaneous absorption
<b>Switzerland - Occupational Exposure Limits</b>	
MAK (OEL TWA) [1]	0.08 mg/m <sup>3</sup>
MAK (OEL TWA) [2]	0.02 ppm
KZGW (OEL STEL)	0.16 mg/m <sup>3</sup>
KZGW (OEL STEL) [ppm]	0.04 ppm
OEL chemical category	Sensitizer, Skin notation

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

### 8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Safety glasses

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing

##### Hand protection:

Protective gloves

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment



# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: light yellow. amber. Conforms to standard.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 93.3 °C (closed cup) ASTM D7094
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not soluble in water alone. Soluble in oils/fats.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: ≈ 1.09
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

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

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

#### Dark Chocolate #EU27891F

ATE CLP (oral)	539.843 mg/kg bodyweight
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#### Benzyl benzoate (120-51-4)

LD50 oral rat	500 mg/kg
LD50 oral	1160 mg/kg bodyweight
LD50 dermal rabbit	4000 mg/kg

#### Ethyl maltol (4940-11-8)

LD50 oral rat	1150 mg/kg
LD50 oral	1200 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg

#### Ethyl vanillin (121-32-4)

LD50 oral rat	1590 mg/kg
LD50 oral	3000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg

#### Furfural (98-01-1)

LD50 oral rat	125 mg/kg
LD50 oral	100 mg/kg bodyweight
LD50 dermal rabbit	500 – 1000 mg/kg
LD50 dermal	1100 mg/kg bodyweight
LC50 Inhalation - Rat	756 mg/m <sup>3</sup> (Exposure time: 1 h)
LC50 Inhalation - Rat (Vapours)	1 mg/l/4h

#### Isovaleraldehyde (590-86-3)

LD50 oral rat	5600 mg/kg
LD50 dermal rabbit	2730 mg/kg
LD50 dermal	2534 mg/kg bodyweight
LC50 Inhalation - Rat	42.7 mg/l/4h

#### acetyl propionyl (600-14-6)

LD50 oral rat	3 g/kg
LD50 oral	3000 mg/kg bodyweight

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>acetyl propionyl (600-14-6)</b>	
LD50 dermal rabbit	> 2000 mg/kg
LD50 dermal	2500 mg/kg bodyweight
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
<b>Furfural (98-01-1)</b>	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
<b>Furfural (98-01-1)</b>	
STOT-single exposure	May cause respiratory irritation.
<b>Isovaleraldehyde (590-86-3)</b>	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
<b>acetyl propionyl (600-14-6)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
<b>Benzyl benzoate (120-51-4)</b>	
Viscosity, kinematic	7.456 mm <sup>2</sup> /s
<b>11.2. Information on other hazards</b>	
No additional information available	
<b>SECTION 12: Ecological information</b>	
<b>12.1. Toxicity</b>	
Ecology - general	: Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.
<b>Benzyl benzoate (120-51-4)</b>	
LC50 - Fish [1]	2.32 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static])
NOEC (chronic)	0.168 mg/l
<b>Ethyl maltol (4940-11-8)</b>	
LC50 - Fish [1]	> 85 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
<b>Ethyl vanillin (121-32-4)</b>	
LC50 - Fish [1]	81.4 – 94.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
<b>Furfural (98-01-1)</b>	
LC50 - Fish [1]	13.4 – 19.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
LC50 - Fish [2]	16.79 – 26.35 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Isovaleraldehyde (590-86-3)	
LC50 - Fish [1]	2.98 – 3.54 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	177 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	80 mg/l (Species: Desmodesmus subspicatus)
EC50 96h - Algae [1]	78 mg/l (Species: Desmodesmus subspicatus)

### 12.2. Persistence and degradability

Benzyl benzoate (120-51-4)	
Persistence and degradability	May cause long-term adverse effects in the environment.

### 12.3. Bioaccumulative potential

Benzyl benzoate (120-51-4)	
Partition coefficient n-octanol/water (Log Pow)	3.97 (at 25 °C)
Bioaccumulative potential	Not established.

Ethyl maltol (4940-11-8)	
Partition coefficient n-octanol/water (Log Pow)	2.9 (at 25 °C)

Isoamyl phenylacetate (do not sell) (102-19-2)	
Partition coefficient n-octanol/water (Log Pow)	4.08 (at 25 °C)

Ethyl vanillin (121-32-4)	
Partition coefficient n-octanol/water (Log Pow)	1.61 (at 25 °C)

Furfural (98-01-1)	
Partition coefficient n-octanol/water (Log Pow)	0.67

Isovaleraldehyde (590-86-3)	
Partition coefficient n-octanol/water (Log Pow)	1.5 (at 25 °C (at pH 7))

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

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

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

HP Code

- : HP3 - "Flammable:"
- flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C;
  - flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;
  - flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction;
  - flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa;
  - water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities;
  - other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.
- HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.
- HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

### SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
<b>14.2. UN proper shipping name</b>				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl benzoate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl benzoate)	Environmentally hazardous substance, liquid, n.o.s. (Benzyl benzoate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl benzoate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl benzoate)
<b>Transport document description</b>				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl benzoate), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl benzoate), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Benzyl benzoate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl benzoate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl benzoate), 9, III
<b>14.3. Transport hazard class(es)</b>				
9	9	9	9	9
<b>14.4. Packing group</b>				
III	III	III	III	III
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				


# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: M6
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13
Hazard identification number (Kemler No.)	: 90
Orange plates	: 
Tunnel restriction code (ADR)	: -
EAC code	: •3Z

#### Transport by sea

Special provisions (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A

#### Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197, A215
ERG code (IATA)	: 9L

#### Inland waterway transport

Classification code (ADN)	: M6
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

#### Rail transport

Classification code (RID)	: M6
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# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Special packing provisions (RID)	: PP1
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1, TP29
Tank codes for RID tanks (RID)	: LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 90

### 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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(a)	Furfural ; Isovaleraldehyde ; acetyl propionyl	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	Dark Chocolate #EU27891F ; Benzyl benzoate ; Furfural ; Isovaleraldehyde ; acetyl propionyl	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Dark Chocolate #EU27891F ; Benzyl benzoate ; Isoamyl phenylacetate (do not sell) ; Furfural ; Isovaleraldehyde	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	Furfural ; Isovaleraldehyde ; acetyl propionyl	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

### 15.1.2. National regulations

#### France

Occupational diseases	
Code	Description
RG 74	Occupational disorders caused by furfural and furfuryl alcohol

#### Germany

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).  
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

#### Netherlands

ABM category : A(1) - highly toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment  
SZW-lijst van kankerverwekkende stoffen : None of the components are listed  
SZW-lijst van mutagene stoffen : None of the components are listed  
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed  
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed  
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

#### Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed  
Danish National Regulations : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Carc. 2	Carcinogenicity, Category 2
EUH208	Contains Isovaleraldehyde, Acetyl Propionyl. May produce an allergic reaction.



# Dark Chocolate #EU27891F

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.