



## ALDEHYDE C-16

CAS#: 77-83-8

FEMA#: 2444

### PRODUCT IDENTIFICATION

PRODUCT NAME	ALDEHYDE C-16
BATCH NUMBER	4414106
BEST BEFORE END	NOVEMBER 2022
MOLECULAR FORM	C12 H14 O3 206.24
MOLECULAR WT	
MELTING POINT (C)	260 deg C
BOILING POINT (C)	268 deg F
FLASH POINT (F)	

PHYSICAL SPECIFICATIONS	RANGE	RESULTS
APPEARANCE	COLORLESS TO PALE YELLOW LIQUID	CONFORMS
ODOUR	STRONG FRUITY STRAWBERRY-LIKE	CONFORMS
SPECIFIC GRAVITY (25c)	1.0860 to 1.0960	1.0908
REFRACTIVE INDEX (20c)	1.5040 to 1.5130	1.5052
SOLUBILITY	SOLUBLE IN MOST FIXED OILS, PROPYLENE GLYCOL INSOLUBLE IN GLYCERINE	

ANALYTICAL SPECIFICATIONS	RANGE	RESULTS
PURITY (BY GC)	98.0% MIN (SUM OF CIS/TRANS ISOMERS)	98.53%

OTHER SPECIFICATIONS	RANGE	RESULTS
SOLUBILITY IN ALCOHOL	1ML IN 3ML 70% ALC	
ACID VALUE	2.0 MAX	CONFORMS

### 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

### ALDEHYDE C-16

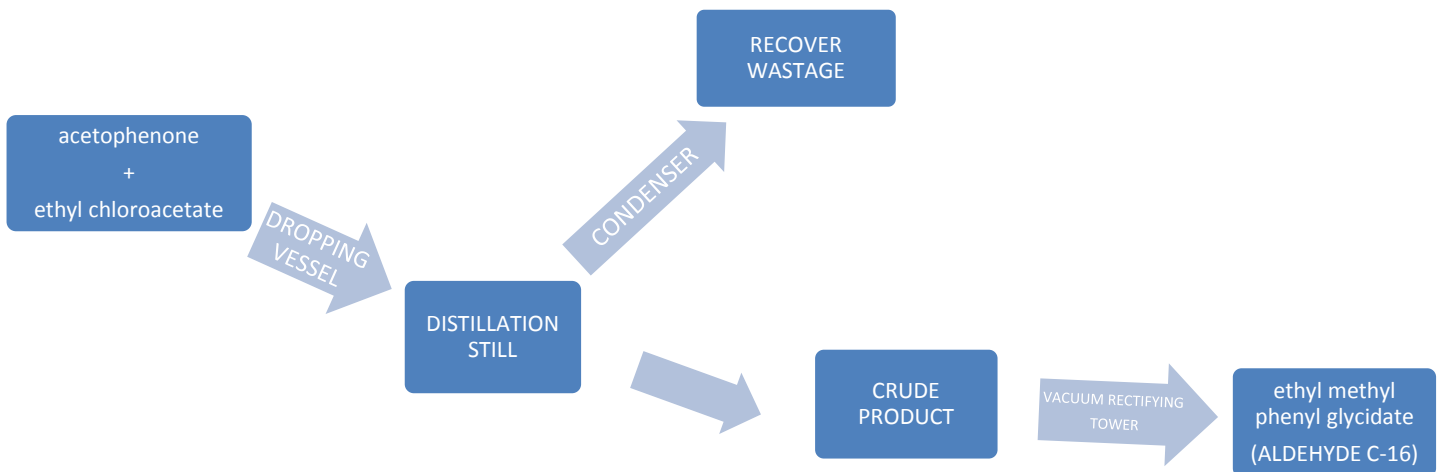
Contains the following fragrance allergens as detailed in the 7th Amendment to the EU Cosmetic Directive 76/768/EEC:

	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	-
6	Benzyl benzoate	120-51-4	-
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	-

(All absent)

PROCESS FLOW CHART

ALDEHYDE C-16



MADAR Corporation Ltd hereby certifies that the products has no added antioxidants, dilutents, colorants or preservatives.



## **GMO CERTIFICATE**

### **ALDEHYDE C-16**

to the best of our 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. It requires no special labelling or traceability with regards to GMO as outlined in Regulation (EC) No 1830/2003.

Date of issue: 15/08/2019



## IFRA CERTIFICATE

### ALDEHYDE C-16

MADAR Corporation Ltd 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	Not restricted
Class 2	Not restricted
Class 3A	Not restricted
Class 3B	Not restricted
Class 3C	Not restricted
Class 3D	Not restricted
Class 4A	Not restricted
Class 4B	Not restricted
Class 4C	Not restricted
Class 4D	Not restricted
Class 5	Not restricted
Class 6	Not restricted
Class 7A	Not restricted
Class 7B	Not restricted
Class 8A	Not restricted
Class 8B	Not restricted
Class 9A	Not restricted
Class 9B	Not restricted
Class 9C	Not restricted
Class 10A	Not restricted
Class 10B	Not restricted
Class 11	Not restricted

The above values were calculated based on the following IFRA restricted materials: <none contained>

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.

<b>IFRA category includes</b>	<b>IFRA category</b>
Toys (****)	Class 1A
Insect Repellent intended to be applied on the skin Lip Products of all types (solid and liquid lipsticks, balms, clear or coloured etc...)(****)	Class 1B
Deodorant and Antiperspirant products of all types (spray, stick, roll-on, under-arm and body etc...)	Class 2
Hydroalcoholic products applied to recently shaved skin (EdT range)	Class 3A
Hydroalcoholic products applied to recently shaved skin (fine fragrance range)	Class 3B
Eye Products of all types (eye shadow, mascara, eyeliner, eye make-up, etc...) Men's Facial Creams, Balms, Wipes, Refreshing Tissues	Class 3C
Tampons	Class 3D
Hydroalcoholic Products applied to unshaved skin (EdT range) Ingredients of Perfume Kits, Scent Strips for Hydroalcoholic Products, "scratch and sniff", other paper products	Class 4A
Hydroalcoholic Products applied to unshaved skin, Fine Fragrance range	Class 4B
Hair Styling Aids Sprays of all types (pumps, aerosol sprays, etc...). Hair Deodorant Body Creams, Oils, Lotions of all types (including baby creams, lotions, oils) Fragrance Compounds for Cosmetic Kits, Foot Care Products	Class 4C
Fragrancing Creams of all types	Class 4D
Women's Facial Creams/Facial Make-up/Facial Wipes. Facial Masks, Hand Cream	Class 5A
Mouthwash, Toothpaste (****)	Class 6
Intimate Wipes, Baby Wipes	Class 7
Make-up Removers of all types (not including face cleansers) Hair Styling Aids Non-Spray of all types (mousse, gels, leave-in conditioners etc...) Nail Care, all Powders & Talcs (including baby powders and talcs)	Class 8
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	Class 9A
Feminine pads/Liners	Class 9B
Aerosols (including air fresheners sprays but not including deodorant/antiperspirants, hair styling aids spray)	Class 9C
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	Class 10A
Diapers	Class 10B
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.	Class 11A
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	Class 11B

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



## **CERTIFICATE OF ORIGIN**

MADAR Corporation Ltd hereby certifies that:

**ALDEHYDE C-16**

Originates from and is produced in China.

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

**Product name** ALDEHYDE C-16

**Issue date** 19-May-2016

**Revision date** 14-Dec-2018

**Version** 1

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

### 1.1. Product Identifier

<i>Product name</i>	ALDEHYDE C-16
<b>REACH registration number</b>	01-2119967770-28-XXXX
<b>EC No.</b>	201-061-8
<b>CAS No</b>	77-83-8
<b>Chemical Name</b>	Ethyl 2,3-epoxy-3-phenylbutyrate
<b>Synonyms</b>	Strawberry aldehyde / Ethyl methyl phenyl glycidate
<b>Pure substance/mixture</b>	Substance
Contains Aldehyde C-16	
<b>Formula</b>	C <sub>12</sub> H <sub>14</sub> O <sub>3</sub>
<b>Molecular weight</b>	206.24

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

<b>Sold to the general public?</b>	No
<b>Recommended Use</b>	Industry Use
<b>Uses advised against</b>	No information available

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

#### Supplier

MADAR Corporation Ltd  
19-20 Sandleheath Industrial Estate  
Fordingbridge  
Hampshire  
SP6 1PA

Tel: (+44) 1425 655555

For further information, please contact

**E-mail address** technical@madarcorporation.co.uk

### 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*

<b>Skin sensitization</b>	Category 1B - (H317)
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Chronic aquatic toxicity	Category 2 - (H411)
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**2.2. Label Elements****Product identifier**

Contains Aldehyde C-16

**Signal word**

Warning

**Hazard statements**

H317 - May cause an allergic skin reaction

H411 - Toxic to aquatic life with long lasting effects

**Precautionary Statements**

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

P264 - Wash hands thoroughly after handling

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P273 - Avoid release to the environment

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

**2.3. Other Hazards****SECTION 3: Composition/information on ingredients****3.1 Substances****Chemical nature**

Cyclic ether.

Chemical Name	EC No.	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Aldehyde C-16	Present	77-83-8	98% Min	Aquatic Acute 2 (H401) (EFFA) Skin Sensit. 1 (H317) (EFFA) Aquatic Chronic 2 (H411) (EFFA)	No data available
Acetophenone - indirect synthetic impurity	Present	98-86-2	0.01 - <0.1	Acute Tox. 4 (H302) Eye Irrit. 1 (H319) (EFFA) Acute Tox. 4 (H302) (EFFA) Eye Irrit. 2 (H319)	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**

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<b>Inhalation</b>	Remove to fresh air. Immediate medical attention is not required.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water. Wash contaminated clothing before reuse. If symptoms persist, call a physician.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Immediate medical attention is not required. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Drink 1 or 2 glasses of water. Clean mouth with water. Immediate medical attention is not required.

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

**Symptoms** Redness / rash on skin.

#### **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**

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

##### **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**

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

##### **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. 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. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

#### General hygiene considerations

Do not eat, drink or smoke when using this product. 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. Keep out of the reach of children.

### 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
Acetophenone - indirect synthetic impurity 98-86-2	-	-	-	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>	-
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
Acetophenone - indirect synthetic impurity 98-86-2	-	TWA: 10 ppm	-	TWA: 5 ppm TWA: 25 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 49 mg/m <sup>3</sup>
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Acetophenone - indirect synthetic impurity 98-86-2	-	-	STEL: 100 mg/m <sup>3</sup> TWA: 50 mg/m <sup>3</sup>	-	TWA: 10 ppm TWA: 49 mg/m <sup>3</sup> STEL: 30 ppm STEL: 147 mg/m <sup>3</sup>

#### Derived No Effect Level (DNEL)

#### Workers

dermal 0.7 mg/kg bw/day

Inhalation 2.45 mg/m<sup>3</sup>

#### Derived No Effect Level (DNEL)

#### General Population

oral 0.35 mg/kg bw/day

dermal 0.35 mg/kg bw/day

Inhalation 0.61 mg/m<sup>3</sup>

#### Predicted No Effect Concentration (PNEC)

Fresh Water	0.008 mg/L
Sea Water	8.4 µg/L
Sea sediment	0.021 mg/kg sediment dw
Soil	0.038 mg/kg soil dw
Impact on Sewage Treatment	10 mg/L

**8.2. Exposure controls**

<b>Engineering controls</b>	Showers Eyewash stations Ventilation systems Ensure adequate ventilation, especially in confined areas
<b>Personal Protective Equipment</b>	
<b>Eye/Face Protection</b>	Wear safety glasses with side shields (or goggles).
<b>Hand protection</b>	Wear protective nitrile rubber gloves.
<b>Skin and Body Protection</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Environmental exposure controls</b>	Prevent product from entering drains.

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

<b>Physical state</b>	Liquid	<b>Odor</b>	Characteristic Odor
<b>Appearance</b>	Clear	<b>Odor threshold</b>	Not applicable
<b>Color</b>	Colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>		
<b>Melting point / freezing point</b>	< -50 °C / -58 °F	
<b>Boiling point / boiling range</b>	302 °C / 576 °F	
<b>Flash Point</b>	131 °C / > 212 °F	
<b>Evaporation Rate</b>		
<b>Flammability (solid, gas)</b>		
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit:</b>		
<b>Lower flammability limit:</b>		
<b>Vapor pressure</b>	0.00023kPa	(20°C)
<b>Vapor Density</b>		
<b>Specific gravity</b>	1.086 - 1.096	(25°C)
<b>Water solubility</b>	0.96 g/L	(20°C)
<b>solubility(ies)</b>		
<b>Partition coefficient</b>		
<b>Autoignition Temperature</b>	350 - 360 °C / 662 - 680 °F	
<b>Decomposition temperature</b>		
<b>Kinematic viscosity</b>		
<b>Dynamic viscosity</b>	19.1 mm <sup>2</sup> /s	(20°C)
<b>Explosive properties</b>	Not an explosive	
<b>Oxidizing properties</b>	Not oxidising	

**9.2. Other information**

<b>Molecular weight</b>	206.24
<b>VOC content (%)</b>	0.04
<b>Density</b>	1.093 g/mL

**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

<b>Inhalation</b>	Avoid breathing vapors or mists.
<b>Eye Contact</b>	Avoid contact with eyes.
<b>Skin contact</b>	Avoid contact with skin. May cause an allergic skin reaction.
<b>Ingestion</b>	No known hazard by swallowing.

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

**ATEmix (oral)** >5,000.00 mg/kg

**ATEmix (dermal)** >2,000.00 mg/kg

#### Unknown acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Aldehyde C-16	= 5470 mg/kg ( Rat )		
Acetophenone - indirect synthetic impurity	= 815 mg/kg ( Rat ) = 900 mg/kg ( Rat )	= 1760 mg/kg ( Rabbit )	> 2.130 mg/L ( Rat ) 8 h

**Skin corrosion/irritation** Not expected to cause skin irritation.

**Serious eye damage/eye irritation** Not classified.

**Sensitization** May cause sensitization by skin contact.

<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classified.
<b>Reproductive toxicity</b>	This product does not contain any known or suspected reproductive hazards above the threshold value.
<b>STOT - single exposure</b>	Not classified.
<b>STOT - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not classified.

## SECTION 12: Ecological information

### 12.1. Toxicity

Toxic to aquatic life with long lasting effects

2.49 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Crustacea	Algae/aquatic plants	Fish
Aldehyde C-16	48 hr EC <sub>50</sub> - 52 mg/L (Daphnia magna)	96 hr EC <sub>50</sub> - 42 mg/L (Pseudokirchneriella subcapitata)	96h LC <sub>50</sub> = 4.2 mg/L - Rainbow Trout (Oncorhynchus mykiss)
Acetophenone - indirect synthetic impurity			162: 96 h Pimephales promelas mg/L LC50 flow-through 155: 96 h Pimephales promelas mg/L LC50 static

### 12.2. Persistence and degradability

Inherently biodegradable, fulfilling specific criteria.

### 12.3. Bioaccumulative potential

Low potential for bioaccumulation.

Chemical Name	Partition coefficient
Acetophenone - indirect synthetic impurity	1.7

### 12.4. Mobility in soil

#### Mobility in soil

log K<sub>oc</sub> 2.34 - 2.74

### 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

<b>Waste from Residues/Unused Products</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated packaging</b>	Do not reuse container.

## 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  
**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

## SECTION 15: Regulatory information

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

Chemical Name	French RG number	Title
Acetophenone - indirect synthetic impurity 98-86-2	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

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H401 - Toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

**Key literature references and sources for data**

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

**Issue date** 19-May-2016

**Revision date** 14-Dec-2018

**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**





CAS#:77-83-8

ALD HYDE C-16 RE CH REGISTERED

FEMA#: 2444

**PRODUCT IDENTIFICATION**

PRODUCT NAME	ALDEHYDE C-16 REACH REGISTERED
MOLECULAR FORM	C12H14O3
MOLECULAR WT	206.24
MELTING POINT (C)	
BOILING POINT (C)	260 deg C
FLASH POINT (F)	268 deg F
SHELF LIFE (DAYS)	730

PHYSICAL SPECIFICATIONS	RANGE	METHOD
APPEARANCE	COLORLESS TO PALE YELLOW LIQUID	VISUAL
ODOR	STRONG FRUITY STRAWBERRY-LIKE	ORGANOLEPTIC
SPECIFIC GRAVITY (25C)	1.0860 to 1.0960	FCC METHOD
REFRACTIVE INDEX (20C)	1.5040 to 1.5130	FCC METHOD
SOLUBILITY	SOLUBLE IN MOST FIXED OILS, PROPYLENE GLYCOL, INSOLUBLE IN GLYCERINE	FCC METHOD

ANALYTICAL SPECIFICATIONS	RANGE	METHOD
PURITY (BY GC)	98.0% MIN (SUM OF CIS/TRANS ISOMERS)	CHEM_20.M

OTHER SPECIFICATIONS	RANGE	METHOD
SOLUBILITY IN ALCOHOL	1ML IN 3ML 70% ALC	FCC METHOD
ACID VALUE	2.0 MAX	FCC METHOD

**STABILITY**

STABLE UNDER NORMAL CONDITIONS

**STORAGE**

STORE IN COOL DRY PLACE AWAY FROM HEAT AND SUNLIGHT

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**PRODUCT SPECIFICATION**

*Date Revised: 19/03/2018*



## **VEGAN / VEGETARIAN DECLARATION**

### **ALDEHYDE C-16**

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