1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name	:	PINO ACETALD TOCO
Registration number	:	01-2120739476-45-0000
IFF Code	:	00164940
SDS Number	:	R00000226279

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

Use of the Substance/Mixture	:	Ingredient used in Flavour and/or Fragrance preparations

1.3 Details of the supplier of the safety data sheet

Company	:	IFF Benicarló, S.L. Avda. Felipe Klein 2 12580 BENICARLÓ Spain
Telephone	:	+34964470212
Telefax	:	+34964473411
E-mail address	:	sds@iff.com
Responsible/issuing person		

1.4 Emergency telephone number

Refer to section 16 for country specific emergency contact number.

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Acute aquatic toxicity, Category 1	H400: Very toxic to aquatic life.
Chronic aquatic toxicity, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements	:		
		H302	Harmful if swallowed.
		H315	Causes skin irritation.
		H317	May cause an allergic skin reaction.
		H319	Causes serious eye irritation.
		H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements	:		
		Prevention:	
		P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
		P273	Avoid release to the environment.
		P280	Wear protective gloves/ eye protection/ face protection.
		Response:	
		P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
		P337 + P313	If eye irritation persists: Get medical advice/ attention.
		P362 + P364	Take off contaminated clothing and wash it before reuse.

Hazardous components which must be listed on the label:

- 33885-51-7 6,6-dimethylbicyclo[3.1.1]hept-2-ene-2-propionaldehyde
- 10191-41-0 TOCOPHEROL

2.3 Other hazards

None reasonably foreseeable.

3. Composition/information on ingredients

3.1 Substances

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Chemical name of the substance : 6,6-dimethylbicyclo[3.1.1]hept-2-ene-2-propionaldehyde
Chemical characterization : alicyclic aldehydes
Molecular formula : C12H18O
Molecular weight : 178,10 g/mol
CAS-No. : 33885-51-7
EINECS-No. : 251-717-2
REACH No. : 01-2120739476-45-0000

Hazardous components

Chemical name	CAS-No. EC-No.	GHS Classification	Concentration [%]
6,6-dimethylbicyclo[3.1.1]hept-2-ene-2-propionaldehyde	33885-51-7 251-717-2	Acute Tox.4; H302 Eye Irrit.2; H319 Aquatic Chronic1; H410 Aquatic Acute1; H400 Skin Irrit.2; H315 Skin Sens.1B; H317	90 - 100
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol	10191-41-0 233-466-0	Skin Sens.1B; H317	0,1 - 1

For the full text of the H-Statements mentioned in this Section, see Section 16.

3.2 Mixtures

Not applicable, product is a substance.

4. First aid measures

4.1 Description of first aid measures

General advice : Take Hazard and Precautionary phrases (section 2) into account.

If inhaled : Remove from exposure site to fresh air and keep at rest. If victim is unconscious, remove foreign bodies from the mouth. If victim has stopped breathing, give artificial respiration. Obtain medical advice.

In case of skin contact : Remove contaminated clothes. Wash thoroughly with water (and soap). Contact physician if symptoms persist.

In case of eye contact : Flush immediately with water for at least 15 minutes. Contact physician if symptoms persist.

If swallowed : Rinse mouth with water and obtain medical advice.

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4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

Risks : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Carbondioxide, dry chemical, foam.

Unsuitable extinguishing media : Do not use a direct waterjet on burning material.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Water may be ineffective.

5.3 Advice for firefighters

Further information : Standard procedure for chemical fires.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Avoid inhalation and contact with skin and eyes. A self-contained breathing apparatus is recommended in case of a major spill.

6.2 Environmental precautions

Environmental precautions : Keep away from drains, surface- and groundwater and soil.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Clean up spillage promptly. Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Gross spillages should be contained by use of sand or inert powder and disposed of according to the local regulations.

6.4 Reference to other sections

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Prevent spreading over a wide area (e.g. by containment or oil barriers).

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid excessive inhalation of concentrated vapors. Follow good manufacturing practices for housekeeping and personal hygiene. Wash any exposed skin immediately after any chemical contact, before breaks and meals, and at the end of each work period. Contaminated clothing and shoes should be thoroughly cleaned before re-use.

If appropriate, procedures used during the handling of this material should also be used when cleaning equipment or removing residual chemicals from tanks or other containers, especially when steam or hot water is used, as this may increase vapor concentrations in the workplace air. Where chemicals are openly handled, access should be restricted to properly trained employees.
Keep all heated processes at the lowest necessary temperature in order to minimize emissions of volatile chemicals into the air.

Advice on protection against fire and explosion : Keep away from ignition sources and naked flame.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a cool, dry, ventilated area away from heat sources. Keep containers upright and tightly closed when not in use.

7.3 Specific end use(s)

Specific use(s) : No information available.

8. Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Where appropriate, use closed systems to transfer and process this material.
If appropriate, isolate mixing rooms and other areas where this material is used or openly handled. Maintain these areas under negative air pressure relative to the rest of the plant.

Personal protective equipment

Respiratory protection	:	Use local exhaust ventilation around open tanks and other open sources of potential exposures in order to avoid excessive inhalation, including places where this material is openly weighed or measured. In addition, use general dilution ventilation of the work area to eliminate or reduce possible worker exposures. No respiratory protection is required during normal operations in a workplace where engineering controls such as adequate ventilation, etc. are sufficient. If engineering controls and safe work practices are not sufficient, an approved, properly fitted respirator with organic vapor cartridges or canisters and particulate filters should be used: a)while engineering controls and appropriate safe work practices and/or procedures are being implemented; or b)during short term maintenance procedures when engineering controls are not in normal operation or are not sufficient; or c)if normal operational workplace vapor concentration in the air is increased due to heat ; d)during emergencies; or e)if engineering controls and operational practices are not sufficient to reduce airborne concentrations below an established occupational exposure limit.
Hand protection	:	Avoid skin contact. Use chemically resistant gloves.
Eye protection	:	Use tight-fitting goggles, face shield or safety glasses with side shields if eye contact might occur.
Hygiene measures	:	To the extent deemed appropriate, implement pre-placement and regularly scheduled ascertainment of symptoms and spirometry testing of lung function for workers who are regularly exposed to this material. To the extent deemed appropriate, use an experienced air sampling expert to identify and measure volatile chemicals that could be present in the workplace air to determine potential exposures and to ensure the continuing effectiveness of engineering controls and operational practices to minimize exposure.

Environmental exposure controls

General advice : Keep away from drains, surface- and groundwater and soil.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	colorless to pale yellow
Odour	:	conforms to standard
Odour Threshold	:	not determined
Flash point	:	89 °C
Lower explosion limit	:	not determined
Upper explosion limit	:	not determined
Flammability (solid, gas)	:	not determined
Oxidizing properties	:	not determined
Auto-ignition temperature	:	not determined
pH	:	not determined
Melting point	:	not determined
Boiling point	:	not determined
Vapour pressure	:	0,04 hPa Calculated
Density	:	not determined
Water solubility	:	not determined
Partition coefficient: n-octanol/water	:	log Pow: 3,530
Solubility in other solvents	:	not determined
Viscosity, dynamic	:	not determined
Viscosity, kinematic	:	not determined
Relative vapour density	:	not determined
Evaporation rate	:	not determined

9.2 Other information

Refractive index	:	not determined
Relative density	:	0,9550 - 0,9650

10. Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under normal conditions.

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10.3 Possibility of hazardous reactions

Hazardous reactions : Note: Presents no significant reactivity hazard, by itself or in contact with water. Avoid contact with strong acids, alkali or oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : Direct sources of heat.

10.5 Incompatible materials

Materials to avoid : Avoid contact with strong acids, alkali or oxidizing agents.

10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon monoxide and unidentified organic compounds may be formed during combustion.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity : LD50: 632 mg/kg
Species: Rat
Remarks: RIFM

Skin corrosion/irritation

Skin irritation : No information available.
Skin irritation : Species: human
Result: No skin irritation
Method: closed patch test

Serious eye damage/eye irritation

No information available.
Eye irritation : Species: Rabbit
Result: Mild eye irritation
Test substance: 2.7% in ethanol

Respiratory or skin sensitisation

No information available.

Sensitisation : Species: human
Result: Did not cause sensitisation on laboratory animals.
Test substance: 2.5% in ethanol

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

Target Organ Systemic Toxicant - Single exposure

No information available.

Target Organ Systemic Toxicant - Repeated exposure

No information available.

Aspiration hazard

No information available.

12. Ecological information

12.1 Toxicity

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No information available.

13. Disposal considerations

13.1 Waste treatment methods

Product : Dispose of according to local regulations. Avoid disposing into drainage systems and into the environment.

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Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

ADR

UN number	:	3082
Description of the goods	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PINO ACETALDEHYDE)
Labels	:	9
Packing group	:	III
Environmentally hazardous	:	yes

IATA

UN number	:	3082
Description of the goods	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PINO ACETALDEHYDE)
Labels	:	9
Packing group	:	III
Environmentally hazardous	:	yes

IMDG

UN number	:	3082
Description of the goods	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PINO ACETALDEHYDE)
Labels	:	9
Packing group	:	III
Marine pollutant	:	yes (PINO ACETALDEHYDE)

Special precautions for user : No special precautions required.

15. Regulatory information

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

Additional Info : Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

Water contaminating class (Germany)	:	WGK 2significantly water endangering

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

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16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

In December 2003, the National Institute for Occupational Safety and Health ("NIOSH") published an Alert on preventing lung disease in workers who use or make flavorings [NIOSH Publication Number 2004-110]. In August 2004, the United States Flavor and Extract Manufacturers Association (FEMA) issued a report entitled "Respiratory Safety in the Flavor Manufacturing Workplace".
Both of these reports provide recommendations for reducing employee exposure and for medical surveillance in the workplace. The recommendations in these reports are generally applicable to the use of any chemical in the workplace and you are strongly urged to review both of these reports.
The report published by FEMA also contains a list of "high priority" chemicals. If any of these chemicals are present in this product at a concentration >= 1.0% due to an intentional addition by IFF, the chemical(s) will be identified in this safety data sheet.

According to Regulation (EC) No. 1907/2006 the information in this safety data sheet is based on the properties of the material known to IFF at the time the data sheet was issued. The safety data sheet is intended to provide information for a health and safety assessment of the material and the circumstances, under which it is packaged, stored or applied in the workplace. For such a safety assessment International Flavors & Fragrances holds no responsibility. This document is not intended for quality assurance purposes.

Emergency telephone number

Austria	+43 1 406 43 43
Belgium	+32 70 245 245
Bulgaria	+359 2 9154 409 (N. I. Pirogov). poison_centre@mail.orbitel.bg
Croatia	(+385 1) 2348342
Czech Republic	+420 224 919 293 / +420 224 915 402
Denmark	+45 82 12 12 12
Estonia	16662 (National), International (+372) 626 93 90
Finland	+358 9 471977

France	+ 33 (0)1 45 42 59 59
Germany	+31 13 4642 211
Greece	+31 13 4642 211
Hungary	(+36-80) 201-199
Iceland	+354 543 2222
Ireland	+353 1 8092566 / +353 1 8379964
Italy	+39 06 68593726
Latvia	+371 67042473
Lithuania	+370 5 236 20 52 or +370 687 53378
Luxembourg	+352 8002 5500
Malta	+356 21224071
Netherlands	+31 30 2748888 (Only for the purpose of informing medical personnel in cases of acute intoxications).
Norway	+47 22 59 13 00
Poland	+31 13 4642 211
Portugal	808 250 143
Poland	+31 13 4642 211
Portugal	808 250 143
Romania	+31 13 4642 211
Slovakia	+31 13 4642 211
Slovenia	+31 13 4642 211
Spain	+34 91 562 04 20 (only for the purpose of informing medical personnel in cases of acute intoxications).
Sweden	+46 112
United Kingdom	+44 111 (England, Wales & Scotland)

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