1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1. Identification of the substance/mixture

Trade name: **ACETAL (ACETALDEHYDE DIETHYL ACETAL)**
Substance name: 1,1-DIETHOXYETHANE
CAS Number: 105-57-7
CE Number: 203-310-6

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

Raw material for the manufacture of fragrances and/or flavourings.

1.3. Details of the supplier of the safety data sheet

Company: **Ernesto Ventós SA**
Address: Carretera Real, 120 B
08960 Sant Just Desvern – Barcelona – SPAIN
Telephone: (00 34) 934 706 210
Fax: (00 34) 934 733 010
E-mail: info@ventos.com

1.4. Emergency telephone number

NCEC (+44) 1865 407333 (24h)
NCEC (+34) 91 114 2520 (24h) (ES)
NCEC (+1) 202 464 2554 (24h) (USA, Canada)

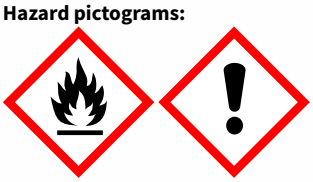
2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Flammable Liquids - Category 2 - H225
Acute Toxicity - Category 5 (oral) - H303
Skin Irritant - Category 2 - H315
Eye Irritant - Category 2A - H319

2.2. Label Elements

Hazard pictograms:



Signal Word:
Danger

Hazard statements:
H225 – Highly flammable liquid and vapour.
H303 – May be harmful if swallowed.
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.

Precautionary statements:
P210 – Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P233 – Keep container tightly closed.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352+P332+P313 – IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
P305+P351+P338+P337+P313 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
P403+P235 – Store in a well-ventilated place. Keep cool.

2.3. Other hazards

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Chemical name: 1,1-DIETHOXYETHANE
CAS number: 105-57-7
EC number: 203-310-6

Hazardous constituents:

Chemical Name	% (w/w)	CAS No. EC No.	Classification according to GHS
1,1-DIETHOXYETHANE	≥50	105-57-7 203-310-6	Flammable Liquids - Category 2 - H225 Acute Toxicity - Category 5 (oral) - H303 Skin Irritant - Category 2 - H315 Eye Irritant - Category 2A - H319
ACETALDEHYDE	≥0.1; <1	75-07-0 200-836-8	Flammable Liquids - Category 1 - H224 Acute Toxicity - Category 4 (oral) - H302 Acute Toxicity - Category 5 (dermal) - H313 Eye Irritant - Category 2A - H319 Germ cell mutagenicity - Category 2 - H341 Carcinogenicity - Category 1B - H350 Specific target organ toxicity following single exposure - Category 3 (irritation) - H335 Hazardous to the aquatic environment, short-term (acute) - Category 3 - H402

See the full text of the hazard statements in section 16.

3.2. Mixtures
Not applicable.

4. FIRST-AID MEASURES

4.1. Description of necessary first aid measures
Ingestion: Rinse mouth with water.
Obtain medical advice.
Keep at rest. Do not induce vomiting.
Eye contact: In case of contact with eyes, rinse immediately with plenty of water for at least 15 minutes and seek medical advice.
Inhalation: Remove person to fresh air and keep at rest.
Seek immediate medical advice.
Skin contact: Take off immediately all contaminated clothing.
Thoroughly wash affected skin with soap and water.
Seek medical attention if symptoms persist.

4.2. Most important symptoms and effects, both acute and delayed
No information available.

4.3. Indication of any immediate medical attention and special treatment needed
No information available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing Media
Water spray, carbon dioxide, dry chemical powder or appropriate foam.
For safety reasons do not use full water jet.

5.2. Special hazards arising from the substance or mixture
Known or Anticipated Hazardous Products of Combustion: Emits toxic fumes under fire conditions.

5.3. Advice for firefighters
High temperatures can lead to high pressures inside closed containers.
Avoid inhalation of vapors that are created. Use appropriate respiratory protection.
Do not allow spillage of fire to be poured into drains or watercourses.
Wear self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate surronding areas. Ensure adequate ventilation. Keep unnecessary and unprotected personnel from entering.
Do not breathe vapor/spray. Avoid contact with skin and eyes. Information regarding personal protective measures: see section 8.

6.2. Environmental precautions
To avoid possible contamination of the environment, do not discharge into any drains, surface waters or groundwaters.

6.3. Methods and materials for containment and cleaning up

Cover with an inert, inorganic, non-combustible absorbent material (e.g. dry-lime, sand, soda ash).
Place in covered containers using non-sparking tools and transport outdoors.
Avoid open flames or sources of ignition (e.g. pilot lights on gas hot water heater).
Ventilate area and wash spill site after material pickup is complete.

6.4. Reference to other sections

Information regarding exposure controls, personal protection and disposal considerations can be found in sections 8 and 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not store or handle this material near food or drinking water. Do not smoke.
Avoid contact with the eyes, skin and clothing. Wear protective clothing and use glasses.
Observe the rules of safety and hygiene at work.
Keep in the original container or an alternative made from a compatible material.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed and preferably full containers in a cool, dry and ventilated area, protected from light.
Keep away from sources of ignition (e.g. hot surfaces, sparks, flame and static discharges).
Keep away from incompatible materials (see section 10).

7.3. Specific end use(s)

No information available.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1. Control parameters

Components with occupational exposure limits:

Chemical Name	CAS No.	Norm.	8 hr.			15 min.		
				ppm	mg/m³		ppm	mg/m³
ACETALDEHYDE	75-07-0	DE (Deutschland)	AGW	50	91	AGW		
		ES (España)	VLA-ED			VLA-EC	25	46
		FR (France)	VME	100	180	VLCT		
		UK (United Kingdom)	Workplace exposure limit	20	37	Workplace exposure limit	50	92
		OSHA	PEL-TWA	200	360	PEL-STEL		
		Cal OSHA	PEL-TWA	25	45	PEL-STEL		

8.2. Exposure controls

Measures should be taken to prevent materials from being splashed into the body.
Provide adequate ventilation, according to the conditions of use. Use a mechanical exhaust if required.

8.3. Individual protection measures, such as personal protective equipment

Eye/Face protection: Chemical safety goggles are recommended. Wash contaminated goggles before reuse.
Hand Protection: Chemical-resistant gloves are recommended. Wash contaminated gloves before reuse.
Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved.
Respiratory Protection: In case of insufficient ventilation, use suitable respiratory equipment.
Environmental exposure controls: Emissions from ventilation or process equipment should be checked to ensure they comply with environmental protection legislation.
In some cases, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Colour:	Conforms to standard
Odour:	Conforms to standard
Odour theshold:	Not determined
pH:	Not determined
Melting point/freezing point:	-100

Boling point/boiling range (°C):	102 - 104
Flash point:	-21 °C
Evaporation rate:	Not determined
Flammability:	Not determined
Lower flammability/Explosive limit:	Not determined
Upper flammability/Explosive limit:	Not determined
Vapour pressure:	20 hPa (20°C)
Vapour Density:	4,8 (AIR = 1)
Density:	0,824—0,831 g/mL (20°C)
Relative density:	0,824—0,831 (20°C)
Water solubility:	SLIGHTLY SOLUBLE IN WATER
Solubility in other solvents:	SOLUBLE IN ETHANOL
Partition coefficient n-octanol/water:	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity, dynamic:	Not determined
Viscosity, kinematic:	Not determined
Explosive properties:	Not determined
Oxidising properties:	NONE EXPECTED

10. STABILITY AND REACTIVITY

10.1. Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability
The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions
No hazardous reactions if stored and handled as prescribed/indicated.

10.4. Conditions to Avoid
Conditions to Avoid: Excessive heat, flame or other ignition sources.

10.5. Incompatible materials
Avoid contact with strong acids and bases and oxidizing agents.

10.6. Hazardous decomposition products
During combustion may form carbon monoxide and unidentified organic compounds.

11. TOXICOLOGICAL INFORMATION

Acute toxicity	May be harmful if swallowed.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	Based on the data available, the criteria for classification are not met.
Germ cell mutagenicity	Based on the data available, the criteria for classification are not met.
Carcinogenicity	Based on the data available, the criteria for classification are not met.
Reproductive toxicity	Based on the data available, the criteria for classification are not met.
STOT-single exposure	Based on the data available, the criteria for classification are not met.
STOT-repeated exposure	Based on the data available, the criteria for classification are not met.
Aspiration hazard	Based on the data available, the criteria for classification are not met.

12. ECOLOGICAL INFORMATION

12.1. Toxicity
Assessment:
Based on the data available, the criteria for classification are not met.
Experimental/calculated data:
No information available.

12.2. Persistence and degradability
The product is not readily biodegradable

12.3. Bioaccumulative potential
No information available.

12.4. Soil mobility
No information available.

12.5. Other adverse effects
See also sections 6, 7, 13 and 15
Do not allow to get into waste water or waterways.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Dispose of in accordance with national and local environmental regulations.

14. TRANSPORT INFORMATION

	ADR/RID/ADN	IMDG	IATA-ICAO
14.1. UN Number	UN1088	UN1088	UN1088
14.2. UN Proper Shipping Name	ACETAL	ACETAL	ACETAL
14.3. Transport Hazard Class(es)	3	3	3
14.4. Packing Group	II	II	II
14.5. Environmental hazards	No	No	No
Additional information			

14.6 Special precautions for user
None known

14.7. Maritime transport in bulk according to IMO instruments
No information available

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
No information available

16. OTHER INFORMATION

Full text of the R-phrases, hazard statements and precautionary statements mentioned in section 3:
H224 – Extremely flammable liquid and vapour.
H225 – Highly flammable liquid and vapour.
H302 – Harmful if swallowed.
H303 – May be harmful if swallowed.
H313 – May ne harmful in contact with skin.
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H335 – May cause respiratory irritation.
H341 – Suspected of causing genetic defects.
H350 – May cause cancer.
H402 – Harmful to aquatic life.

The information included in this safety data sheet is based on the available data at the moment this document is issued. It is meant to be a description of safety requirements for our product and does not stand for a guarantee of its properties. The user is responsible for taking all necessary steps leading to compliance with local rules and legislation.