



## **MATERIAL SAFETY DATA SHEET (MSDS)**

According to UN GHS / REACH / CLP Regulations

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NATURAL PROPIONALDEHYDE

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### SECTION 1: IDENTIFICATION

Product Name: Natural Propionaldehyde

CAS Number: 123-38-6

Molecular Formula:  $C_3H_6O$

Molecular Weight: 58.08 g/mol

Product Type: Natural aroma chemical (aldehyde)

Recommended Use:

Fragrance, flavour, cosmetic, pharmaceutical, and air care applications

Restriction:

Not for personal use in this form or concentration

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Supplier:

AROMOLOGY

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### SECTION 2: HAZARD IDENTIFICATION

Classification (GHS)

- Flammable Liquid – Category 2
- Acute Toxicity (Oral) – Category 4



- Acute Toxicity (Dermal) – Category 5
- Skin Irritation – Category 2
- Eye Irritation – Category 2
- STOT SE 3 (Respiratory irritation)
- Aquatic Acute Toxicity – Category 3

Signal Word:

DANGER

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#### Hazard Statements

- H225 – Highly flammable liquid and vapour
  - H302 – Harmful if swallowed
  - H313 – May be harmful in contact with skin
  - H315 + H319 – Causes skin and eye irritation
  - H335 – May cause respiratory irritation
  - H402 – Harmful to aquatic life
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#### Precautionary Statements

- Keep away from heat, sparks, open flames
- Use explosion-proof equipment
- Avoid breathing vapours
- Wear protective gloves / eye protection
- IF ON SKIN: Wash with soap and water
- IF INHALED: Move to fresh air
- IF IN EYES: Rinse cautiously with water



- Store in a well-ventilated place
  - Keep container tightly closed
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### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance	CAS	Concentration
Propionaldehyde (Natural)	123-38-6	100%

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### SECTION 4: FIRST AID MEASURES

#### Inhalation:

Move to fresh air immediately. Seek medical attention

#### Skin Contact:

Wash with plenty of water and soap. Remove contaminated clothing

#### Eye Contact:

Rinse thoroughly with water and seek immediate medical attention

#### Ingestion:

Rinse mouth. Do not induce vomiting. Seek medical attention

✓ Based on SDS guidance

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### SECTION 5: FIRE-FIGHTING MEASURES

#### Extinguishing Media:

Water spray, foam, CO<sub>2</sub>, dry powder

#### Hazards:

Highly flammable. Vapours may form explosive mixtures with air

#### Protection:

Use self-contained breathing apparatus and full protective gear

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

- Remove ignition sources immediately
  - Ensure adequate ventilation
  - Avoid inhalation and contact
  - Absorb with inert material
  - Prevent environmental release
  - Dispose according to regulations
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## SECTION 7: HANDLING AND STORAGE

### Handling:

Use local exhaust ventilation

Avoid vapour inhalation

Avoid static discharge

Use explosion-proof equipment

### Storage:

Store in cool, well-ventilated area

Keep away from heat and ignition sources

Store locked and tightly closed

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## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### Engineering Controls:

Use explosion-proof ventilation

### PPE:

- Safety goggles
- Chemical-resistant gloves (butyl rubber recommended)
- Flame-retardant protective clothing



Respiratory Protection:  
Use if ventilation is insufficient

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Physical State	Liquid
Colour	Colourless
Odour	Pungent, aldehydic
Melting Point	~ -81 °C
Boiling Point	~48 °C
Flash Point	~ -30 °C
Density	~0.81 g/cm <sup>3</sup>
Vapour Pressure	~341 hPa
Explosion Limits	2.3 – 21 vol%
Log Kow	~0.59
Water Solubility	~306 g/L

✓ Based on supplier SDS

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## SECTION 10: STABILITY AND REACTIVITY

- Highly reactive due to volatility
- Avoid heat, sparks, and flames
- Vapours may form explosive mixtures
- Stable under controlled conditions



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## SECTION 11: TOXICOLOGICAL INFORMATION

- LD50 oral: ~1690 mg/kg
- LD50 dermal: ~2460 mg/kg

### Effects:

- Harmful if swallowed
- Skin and eye irritant
- May cause respiratory irritation

No carcinogenic or mutagenic classification identified

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## SECTION 12: ECOLOGICAL INFORMATION

- Harmful to aquatic life
- LC50 fish: ~14 mg/L
- EC50 daphnia: ~88.7 mg/L
- Readily biodegradable (91–97%)
- Low bioaccumulation potential

✓ Environmental data confirmed

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## SECTION 13: DISPOSAL CONSIDERATIONS

Dispose according to local regulations.

Do not release into drains, soil, or waterways



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## SECTION 14: TRANSPORT INFORMATION

Parameter	Value
UN Number	UN 1275
Proper Shipping Name	Propionaldehyde
Class	3
Packing Group	II

✓ Classified as flammable dangerous goods

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## SECTION 15: REGULATORY INFORMATION

- Not listed as SVHC under REACH
  - Not subject to authorisation
  - Compliant with CLP / GHS
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## SECTION 16: OTHER INFORMATION

This MSDS is adapted from supplier documentation (Axxence Aromatic GmbH). Information is provided for safe handling, storage, and use.