SAFETY DATA SHEET (SDS)

Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) 2020/878 and GHS.

Aldehyde C-7 Natural (Heptanal)

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

1.1 Product Identifiers

Parameter	Details
Product Name:	Aldehyde C-7 Natural (Heptanal)
Product Number:	W254002
CAS Number:	111-71-7
REACH Number:	A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration.

1.2 Relevant Identified Uses

Laboratory chemicals, Manufacture of substances.

1.3 Details of the Supplier

Aromology Trading LLC
G05 Al Ghazal Building
Nadd Al Hamar
Dubai, United Arab Emirates

Website: www.aromology.com
Email: info@aromology.com
Telephone: +971 505197601

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Hazard Classification	Category	Hazard Statement
Flammable liquids	Category 3	H226: Flammable liquid and vapour
Skin irritation	Category 2	H315: Causes skin irritation
Long-term (chronic) aquatic	Category 3	H412: Harmful to aquatic life with long lasting

hazard		effects

2.2 Label Elements

Labelling according to Regulation (EC) No. 1272/2008.

Pictogram: Flame and Exclamation Mark

Signal Word: Warning

Hazard Statements

H226 — Flammable liquid and vapour.
H315 — Causes skin irritation.
H412 — Harmful to aquatic life with long lasting effects.

Precautionary Statements

P210 — Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 — Keep container tightly closed.
P240 — Ground and bond container and receiving equipment.
P241 — Use explosion-proof electrical/ventilating/lighting equipment.
P273 — Avoid release to the environment.
P303 + P361 + P353 — IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Supplemental Hazard Statements: None.

Reduced Labelling (≤125 ml)

Signal Word: Warning.

H412 — Harmful to aquatic life with long lasting effects.

Precautionary Statements: None.

Supplemental Hazard Statements: None.

2.3 Other Hazards

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.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Parameter	Details
Chemical Name	n-Heptanal
Synonyms	Heptaldehyde, Enanthaldehyde, Oenanthaldehyde, 1-Heptanal, Aldehyde C7
Molecular Formula	C7H14O
Molecular Weight	114.19 g/mol
CAS Number	111-71-7
EC Number	203-898-4

Component	CAS Number	Classification	Concentration
n-Heptanal	111-71-7	Flam. Liq. 3; Skin Irrit. 2; Aquatic Chronic 3; H226, H315, H412	≤100%

SECTION 4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice
Show this safety data sheet to the doctor in attendance.

Inhalation
After inhalation: Fresh air.

Skin Contact
Take off immediately all contaminated clothing. Rinse skin with water/shower.

Eye Contact
Rinse out with plenty of water. Remove contact lenses.

Ingestion
Make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most Important Symptoms and Effects
The most important known symptoms and effects are described in the labelling (Section 2.2) and/or Section 11.

4.3 Immediate Medical Attention and Special Treatment
No data available.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media:

Carbon dioxide (CO2)
Foam
Dry powder

Unsuitable extinguishing media:

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special Hazards

Carbon oxides
Combustible
Vapours are heavier than air and may spread along floors.
Forms explosive mixtures with air at elevated temperatures.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for Firefighters

Stay in danger area only with self-contained breathing apparatus.
Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further Information

Remove container from danger zone and cool with water.
Prevent fire extinguishing water from contaminating surface water or the groundwater system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Do not breathe vapours or aerosols.
Avoid substance contact.
Ensure adequate ventilation.
Keep away from heat and sources of ignition.
Evacuate the danger area, observe emergency procedures and consult an expert.
For personal protection, see Section 8.

6.2 Environmental Precautions

Do not let product enter drains.
Risk of explosion.

6.3 Methods and Materials for Containment and Cleaning Up

Cover drains.
Collect, bind and pump off spills.
Observe possible material restrictions (Sections 7 and 10).
Take up with liquid-absorbent material, e.g. Chemizorb®.
Dispose of properly.
Clean up affected area.

6.4 Reference to Other Sections

For disposal, see Section 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Keep away from open flames, hot surfaces and sources of ignition.
Take precautionary measures against static discharge.
Immediately change contaminated clothing.
Apply preventive skin protection.
Wash hands and face after working with the substance.

7.2 Conditions for Safe Storage

Keep container tightly closed in a dry and well-ventilated place.
Keep away from heat and sources of ignition.
Handle and store under inert gas.

Storage Class (TRGS 510): 3 — Flammable liquids.

7.3 Specific End Uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Ingredients with workplace control parameters: No values specified in the original SDS.

8.2 Exposure Controls

Eye/Face Protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Safety glasses.

Skin Protection — Full Contact

Parameter	Details
Material	Butyl-rubber
Minimum Layer Thickness	0.7 mm
Breakthrough Time	480 minutes
Material Tested	Butoject® (KCL 898)

Skin Protection — Splash Contact

Parameter	Details
Material	Nitrile rubber
Minimum Layer Thickness	0.4 mm
Breakthrough Time	60 minutes
Material Tested	Camatril® (KCL 730 / Aldrich Z677442, Size M)

These glove recommendations apply to the product and designated use stated in the original SDS. When dissolving or mixing with other substances or using under different conditions, contact the supplier of CE-approved gloves.

Body Protection

Flame-retardant antistatic protective clothing.

Respiratory Protection

Recommended filter type: Filter A (according to DIN 3181) for vapours of organic compounds.

Maintenance, cleaning and testing of respiratory protective devices must follow the manufacturer's instructions and be documented.

Environmental Exposure Controls

Do not let product enter drains.
Risk of explosion.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic Physical and Chemical Properties

Property	Value

Physical State	Liquid
Colour	Light yellow
Odour	No data available
Melting Point / Freezing Point	-43 °C — lit.
Initial Boiling Point	153 °C — lit.
Flammability (solid, gas)	No data available
Upper Explosion Limit	5.2% (V)
Lower Explosion Limit	1.1% (V)
Flash Point	35 °C — Closed cup
Autoignition Temperature	205 °C at 990 hPa
Decomposition Temperature	No data available
pH	No data available
Kinematic Viscosity	No data available
Dynamic Viscosity	No data available
Water Solubility	Slightly soluble
Partition Coefficient (n-Octanol/Water)	log Pow: 2.8 at 20 °C
Vapour Pressure	6.6 hPa at 25 °C; 5.0 hPa at 20 °C
Density	0.817 g/cm³ at 25 °C — lit.
Relative Density	No data available
Relative Vapour Density	No data available
Particle Characteristics	No data available
Explosive Properties	No data available
Oxidising Properties	No data available

9.2 Other Safety Information
No data available.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
Vapour/air mixtures are explosive at intense warming.

10.2 Chemical Stability
The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of Hazardous Reactions
Violent reactions possible with:
Strong oxidising agents
Strong bases
Strong reducing agents

10.4 Conditions to Avoid
Heating.

10.5 Incompatible Materials
No data available.

10.6 Hazardous Decomposition Products
In the event of fire, see Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Acute Toxicity

Test	Species	Result
Oral LD50	Rat	>5,000 mg/kg
Dermal LD50	Rabbit	>5,000 mg/kg
Inhalation	—	No data available

Oral toxicity test: OECD Test Guideline 401.

Skin Corrosion/Irritation

Skin — Rabbit.
Result: Skin irritation.
OECD Test Guideline 404.

Serious Eye Damage/Eye Irritation
No data available.

Respiratory or Skin Sensitisation

Maximisation Test — Guinea pig.
Result: Not a skin sensitiser.
OECD Test Guideline 406.

Germ Cell Mutagenicity

Test	Test System	Result
Reverse mutation assay	Salmonella typhimurium	Negative
In vitro mammalian cell gene mutation test	Mouse lymphoma cells	Negative
Chromosome aberration test in vitro	Human lymphocytes	Negative

Tests were conducted with and without metabolic activation.

The mammalian cell gene mutation test used OECD Test Guideline 476.
The chromosome aberration test used OECD Test Guideline 473.

Carcinogenicity
No data available.

Reproductive Toxicity
Developmental Toxicity — Rabbit.

Specific Target Organ Toxicity — Single Exposure
No data available.

Specific Target Organ Toxicity — Repeated Exposure
No data available.

Aspiration Hazard
No data available.

11.2 Additional Information

Endocrine Disrupting Properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated Dose Toxicity: Rat — Oral.

RTECS: MI6900000

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Test	Organism	Result	Duration
Fish LC50	*Oncorhynchus mykiss* (Rainbow trout)	12 mg/L	96 hours
Aquatic Invertebrates EC50	*Daphnia magna*	4.13 mg/L	48 hours
Algae EC50	*Pseudokirchneriella subcapitata*	2.9 mg/L	72 hours
Bacteria EC50	*Pseudomonas putida*	580 mg/L	3 hours
Chronic Aquatic Invertebrates NOEC	*Daphnia magna*	>0.819 mg/L	21 days

Test methods:

Fish: OECD 203
Daphnia acute: OECD 202
Algae: OECD 201
Bacteria: OECD 209
Daphnia chronic: OECD 211

12.2 Persistence and Degradability

Biodegradability: 63–74%.
Result: Readily biodegradable.
OECD Test Guideline 301D.

12.3 Bioaccumulative Potential
No data available.

12.4 Mobility in Soil
No data available.

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 Endocrine Disrupting Properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other Adverse Effects

No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

No data available.

SECTION 14. TRANSPORT INFORMATION

14.1 UN Number

Transport Mode	UN Number
ADR/RID	3056

IMDG	3056
IATA	3056

14.2 UN Proper Shipping Name

Transport Mode	Proper Shipping Name
ADR/RID	n-HEPTALDEHYDE
IMDG	n-HEPTALDEHYDE
IATA	n-Heptaldehyde

14.3 Transport Hazard Class

ADR/RID: 3
IMDG: 3
IATA: 3

14.4 Packaging Group

ADR/RID: III
IMDG: III
IATA: III

14.5 Environmental Hazards

Transport Mode	Environmental Hazard
ADR/RID	Yes
IMDG Marine Pollutant	Yes
IATA	No

14.6 Special Precautions for User

Tunnel restriction code: (D/E).

Further information: No data available.

14.7 Maritime Transport in Bulk According to IMO Instruments

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National Legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Classification: P5c — FLAMMABLE LIQUIDS.

15.2 Chemical Safety Assessment

For this product, a chemical safety assessment was not carried out.

SECTION 16. OTHER INFORMATION

Full Text of Hazard Statements

H226 — Flammable liquid and vapour.
H315 — Causes skin irritation.
H412 — Harmful to aquatic life with long lasting effects.

Abbreviations

ADN — European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR — Agreement concerning the International Carriage of Dangerous Goods by Road
AIIC — Australian Inventory of Industrial Chemicals
ASTM — American Society for Testing and Materials
bw — Body weight
CMR — Carcinogen, Mutagen or Reproductive Toxicant
DIN — German Institute for Standardisation
DSL — Domestic Substances List (Canada)
ECx — Concentration associated with x% response
ELx — Loading rate associated with x% response
EmS — Emergency Schedule
ENCS — Existing and New Chemical Substances (Japan)
ErCx — Concentration associated with x% growth rate response
GHS — Globally Harmonised System
GLP — Good Laboratory Practice
IARC — International Agency for Research on Cancer
IATA — International Air Transport Association
IBC Code — International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
IC50 — Half maximal inhibitory concentration
ICAO — International Civil Aviation Organization
IECSC — Inventory of Existing Chemical Substances in China
IMDG — International Maritime Dangerous Goods

IMO — International Maritime Organisation
ISHL — Industrial Safety and Health Law (Japan)
ISO — International Organisation for Standardisation
KECI — Korea Existing Chemicals Inventory
LC50 — Lethal Concentration to 50% of a test population
LD50 — Lethal Dose to 50% of a test population
MARPOL — International Convention for the Prevention of Pollution from Ships
n.o.s. — Not Otherwise Specified
NO(A)EC — No Observed (Adverse) Effect Concentration
NO(A)EL — No Observed (Adverse) Effect Level
NOELR — No Observable Effect Loading Rate
NZIoC — New Zealand Inventory of Chemicals
OECD — Organisation for Economic Co-operation and Development
OPPTS — Office of Chemical Safety and Pollution Prevention
PBT — Persistent, Bioaccumulative and Toxic substance
PICCS — Philippines Inventory of Chemicals and Chemical Substances
(Q)SAR — (Quantitative) Structure Activity Relationship
REACH — Registration, Evaluation, Authorisation and Restriction of Chemicals
RID — Regulations concerning the International Carriage of Dangerous Goods by Rail
SADT — Self-Accelerating Decomposition Temperature
SDS — Safety Data Sheet
TCSI — Taiwan Chemical Substance Inventory
TECI — Thailand Existing Chemicals Inventory
TSCA — Toxic Substances Control Act (United States)
UN — United Nations
UNRTDG — United Nations Recommendations on the Transport of Dangerous Goods
vPvB — Very Persistent and Very Bioaccumulative

Original Supplier Disclaimer

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Aromology shall not be held liable for any damage resulting from handling or from contact with the above product. See aromology.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Authorised by:
Fozia Khot
Director