

## SAFETY DATA SHEET

# Density Reference Standard, DEN15-08, DEN20-07, DEN25-06, DEN15-09, DEN20-08, DEN25-07, DEN15-08-500ML, DEN20-07-500ML, DEN25-06-500ML, DEN15-09-500ML, DEN20-08-500ML, DEN25-07-500ML,

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

#### 1.1. Product identifier

##### Trade name

Density Reference Standard, DEN15-08, DEN20-07, DEN25-06, DEN15-09, DEN20-08, DEN25-07, DEN15-08-500ML, DEN20-07-500ML, DEN25-06-500ML, DEN15-09-500ML, DEN20-08-500ML, DEN25-07-500ML,

##### Product no.

DEN15-08, DEN20-07, DEN25-06, DEN15-09, DEN20-08, DEN25-07, DEN15-08-500ML, DEN20-07-500ML, DEN25-06-500ML, DEN15-09-500ML, DEN20-08-500ML, DEN25-07-500ML,

##### ▼ Unique formula identifier (UFI)

V000-V0NQ-F00S-D6XW

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

##### Relevant identified uses of the substance or mixture

Laboratory use  
Restricted to professional and industrial use.

##### Uses advised against

None known.

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

##### Company and address

###### **ARO Scientific Ltd**

Unit 1 Bridgeway Business Park,  
Ditton Road  
WA8 0QE Widnes  
England  
+44 (0)151 424 2828

##### Contact person

Technical Help

##### E-mail

technical@aroscientific.com

##### Revision

08/01/2026

##### SDS Version

2.0

##### Date of previous version

07/01/2026 (1.0)

#### 1.4. Emergency telephone number

Healthcare professionals: Dial 0344 892 0111 to reach The National Poisons Information Service (NPIS) (24 hour service)

General public:

England - Dial 111 to reach NHS 111 (24 hour service)

Scotland - Dial 111 to reach NHS 24 (24 hour service)

Wales - Dial 111 or 0845 4647 to reach NHS Direct (24 hour service)  
See section 4 "First aid measures".

## SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

### 2.1. Classification of the substance or mixture

Flam. Liq. 3; H226, Flammable liquid and vapour.  
Eye Irrit. 2; H319, Causes serious eye irritation.

### 2.2. Label elements

#### ▼ Hazard pictogram(s)



#### ▼ Signal word

Warning

#### ▼ Hazard statement(s)

Flammable liquid and vapour. (H226)  
Causes serious eye irritation. (H319)

#### Precautionary statement(s)

##### General

Not applicable.

##### ▼ Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)  
Keep container tightly closed. (P233)  
Wear eye protection/face protection. (P280)

##### ▼ Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing. (P305+P351+P338)  
In case of fire: Use water mist/carbon dioxide/alcohol-resistant foam to extinguish. (P370+P378)  
If eye irritation persists: Get medical advice/attention. (P337+P313)

##### ▼ Storage

Store in a well-ventilated place. Keep cool. (P403+P235)

##### ▼ Disposal

Dispose of contents/container in accordance with local regulation.  
(P501)

##### ▼ Hazardous substances

ethanol;ethyl alcohol

##### ▼ Additional labelling

UFI: V000-V0NQ-F00S-D6XW

### 2.3. Other hazards

#### Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.  
This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable. This product is a mixture.

### 3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
ethanol;ethyl alcohol	CAS No.: 64-17-5 EC No.: 200-578-6 UK-REACH: Index No.: 603-002-00-5	10-40%	Flam. Liq. 2, H225 Eye Irrit. 2, H319 (SCL: 50.00 %)	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

### Other information

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## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

#### ▼ Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

#### Skin contact

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

#### ▼ Eye contact

If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

#### ▼ Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

#### ▼ Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

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

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

### 4.3. ▼ Indication of any immediate medical attention and special treatment needed

If eye irritation persists: Get medical advice/attention.

### Information to medics

Bring this safety data sheet or the label from this product.

## SECTION 5: Firefighting measures

### 5.1. ▼ Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

### 5.2. ▼ Special hazards arising from the substance or mixture

Flammable liquid and vapour.

In use may form flammable/explosive vapour-air mixture.

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / CO<sub>2</sub>)

### 5.3. ▼ Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Hazchem Code: ●2YE

## SECTION 6: Accidental release measures

### 6.1. ▼ Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

### 6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: Handling and storage

### 7.1. ▼ Precautions for safe handling

Ground and bond container and receiving equipment.

Use explosion-proof electrical/lighting/ventilating equipment.

Use non-sparking tools.

Take action to prevent static discharges.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

### 7.2. ▼ Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Take action to prevent static discharges.

Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

#### Recommended storage material

Always store in containers of the same material as the original container.

#### Storage conditions

No specific requirements.

#### Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

ethanol;ethyl alcohol

Long term exposure limit (8 hours) (ppm): 1000

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 1920

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.  
EH40/2005 Workplace exposure limits (Fourth Edition 2020).

### DNEL

ethanol;ethyl alcohol

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	206 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	343 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	114 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	380 mg/m <sup>3</sup>
Short term – Local effects - General population	Inhalation	950 mg/m <sup>3</sup>
Short term – Local effects - Workers	Inhalation	1900 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	87 mg/kg bw/day

### PNEC

ethanol;ethyl alcohol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		0.96 mg/L
Freshwater sediment		3.6 mg/kg
Intermittent release (freshwater)		2.75 mg/L
Marine water		0.79 mg/L
Marine water sediment		2.9 mg/kg
Predators		0.38 g/kg
Sewage treatment plant		580 mg/L
Soil		0.63 mg/kg

### 8.2. ▼ Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

#### General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

#### Exposure scenarios

There are no exposure scenarios implemented for this product.

#### Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

#### Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

#### ▼ Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

#### Measures to avoid environmental exposure

No specific requirements.

#### Individual protection measures, such as personal protective equipment

##### Generally

Use only UKCA marked protective equipment.

##### Respiratory Equipment

No specific requirements.

##### Skin protection

No specific requirements.

##### Hand protection

No specific requirements.

##### Eye protection

Type	Standards
Safety glasses	EN ISO 16321-1



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Physical state

Liquid

#### Colour

No data available.

#### Odour / Odour threshold

No data available.

#### pH

No data available.

#### Density (g/cm<sup>3</sup>)

No data available.

#### Kinematic viscosity

No data available.

#### Particle characteristics

Does not apply to liquids.

#### Phase changes

##### Melting point/Freezing point (°C)

No data available.

##### Softening point/range (°C)

Does not apply to liquids.

##### Boiling point (°C)

No data available.

##### Vapour pressure

No data available.

##### Relative vapour density

No data available.

##### Decomposition temperature (°C)

No data available.

#### Data on fire and explosion hazards

#### Flash point (°C)

No data available.

#### ▼ Flammability (°C)

The material is ignitable.

#### Auto-ignition temperature (°C)

No data available.

#### Lower and upper explosion limit (% v/v)

No data available.

#### Solubility

##### Solubility in water

No data available.

##### n-octanol/water coefficient (LogKow)

No data available.

##### Solubility in fat (g/L)

No data available.

#### 9.2. Other information

##### Oxidizing properties

No data available.

##### Other physical and chemical parameters

No data available.

## SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No data available.

#### 10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

#### 10.3. Possibility of hazardous reactions

None known.

#### 10.4. ▼ Conditions to avoid

Avoid static electricity.

#### 10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

##### Acute toxicity

Based on available data for the mixture, the classification criteria are not met.

##### Skin corrosion/irritation

Based on available data for the mixture, the classification criteria are not met.

##### ▼ Serious eye damage/irritation

Causes serious eye irritation.

##### Respiratory sensitisation

Based on available data for the mixture, the classification criteria are not met.

##### Skin sensitisation

Based on available data for the mixture, the classification criteria are not met.

##### Germ cell mutagenicity

Based on available data for the mixture, the classification criteria are not met.

#### Carcinogenicity

Based on available data for the mixture, the classification criteria are not met.

#### Reproductive toxicity

Based on available data for the mixture, the classification criteria are not met.

#### STOT-single exposure

Based on available data for the mixture, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data for the mixture, the classification criteria are not met.

#### Aspiration hazard

Based on available data for the mixture, the classification criteria are not met.

#### ▼ Symptoms related to the physical, chemical and toxicological characteristics

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

#### 11.2. Information on other hazards

##### Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

##### Other information

None known.

## SECTION 12: Ecological information

#### 12.1. Toxicity

Based on available data for the mixture, the classification criteria are not met.

#### 12.2. Persistence and degradability

Based on available data for the mixture, the classification criteria are not met.

#### 12.3. Bioaccumulative potential

Based on available data for the mixture, the classification criteria are not met.

#### 12.4. Mobility in soil

No data available.

#### 12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

#### 12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

#### 12.7. Other adverse effects

None known.

## SECTION 13: Disposal considerations

#### ▼ Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 3 - Flammable

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

#### EWC code

Not applicable.

#### Specific labelling

#### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other informatio n:
ADR/ADN/RID	UN1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	Limited quantities: 1 L Tunnel restriction code: (D/E) See below for additional information.
IMDG	UN1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	Limited quantities: 1 L EmS: F-E S-D See below for additional information.
IATA	UN1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	See below for additional information.

\* Packing group

\*\* Environmental hazards

### ▼ Additional information

This product is within scope of the regulations of transport of dangerous goods.

ADR/ADN/RID / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

Hazchem Code: ●2YE

### 14.6. Special precautions for user

Not applicable.

### 14.7. Maritime transport in bulk according to IMO instruments

No data available.

## SECTION 15: Regulatory information

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

#### Restrictions for application

Industrial use only.

#### Demands for specific education

No specific requirements.

#### ▼ Control of Major Accident Hazards (COMAH) - Categories / dangerous substances

P5c - FLAMMABLE LIQUIDS, Qualifying quantity (lower-tier): 5.000 tonnes / (upper-tier): 50.000 tonnes

#### UK-REACH, Annex XVII

ethanol;ethyl alcohol is subject to UK-REACH restrictions (entry 40).

#### Additional information

Not applicable.

#### ▼ Sources

The Health and Safety at Work etc. Act 1974 Regulations 2013.

Control of Major Accident Hazards (COMAH) Regulations 2015.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

#### 15.2. Chemical safety assessment

No

### SECTION 16: Other information

#### Full text of H-phrases as mentioned in section 3

H225, Highly flammable liquid and vapour.

H319, Causes serious eye irritation.

#### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EuPCS = European Product Categorisation System

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

GWP = Global warming potential

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

#### ▼ Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

The classification of the mixture in regard to physical hazards has been based on experimental data.

[The safety data sheet is validated by](#)

Technical Help

#### Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en