

Safety Data Sheet

#90027998 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
2,5,7,10-Tetraoxaundecane	4431-83-8	C7H16O4	10	12 Oct 2026

SECTION 1

Identification

1.1 Product identifier

Product name 2,5,7,10-Tetraoxaundecane

CAS number 4431-83-8

EC / EINECS number 224-631-8

Chemical formula C7H16O4

Molecular weight 164.20

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

Research and development. Laboratory Chemicals. Manufacture of substances.
Not suitable for human consumption or veterinary purposes.

1.3 Details of the supplier of the safety data sheet

Molekula Limited
1 Millennium Way, Newton Aycliffe
Durham, DL5 6JW, United Kingdom
info@molekula.com · +44 (0) 3302 000333

1.4 Emergency telephone number

0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

2.1 Classification of the substance or mixture

Skin Irrit. 2; H315

Eye Irrit. 2; H319

STOT SE 3; H335

Repr. 2; H361f

2.2 Label elements



DANGER

CODE	HAZARD STATEMENT
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H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H361f	Suspected of damaging fertility.

CODE	PRECAUTIONARY STATEMENT
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P260	Do not breathe dust/fume/gas/mist/vapours/spray
P263	Avoid contact during pregnancy/while nursing
P280	Wear protective gloves/protective clothing/eye protection/face protection
P302+352	IF ON SKIN: Wash with soap and water
P304+341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention

2.3 Other hazards

Not classified as PBT or vPvB according to current EU criteria.

SECTION 3

Composition / information on ingredients

3.1 Substances

Name	2,5,7,10-Tetraoxaundecane
CAS number	4431-83-8
EC number	224-631-8
Concentration / purity	~100.0%
Classification according to Regulation (EC) No 1272/2008	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 Repr. 2; H361f
Hazard statements	H315, H319, H335, H361f
Acute toxicity estimate (ATE)	Not reported
Impurities / stabilising additives	<i>Not applicable</i>

SECTION 4

First-aid measures

4.1 Description of first aid measures

Inhalation	Move to fresh air, keep warm and at rest; get medical attention if discomfort continues.
Skin contact	Rinse with water; get medical attention if discomfort continues.
Eye contact	Remove contact lenses, open eyelids wide and rinse with water; get medical attention if discomfort continues.
Ingestion	Rinse mouth; get medical attention if discomfort continues.

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel. First aiders/ medical personnel need to protect themselves.

4.2 Most important symptoms and effects, both acute and delayed

Temporary irritation on inhalation; may cause discomfort if swallowed or on skin; may be slightly irritating to eyes.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically; no special treatment required.

SECTION 5

Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	Alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture

Containers can burst or explode when heated; combustion products include harmful gases, CO₂ and CO.
Carbon monoxide (CO)
Carbon dioxide (CO₂)

5.3 Advice for firefighters

Wear positive-pressure SCBA and protective clothing (EN469); cool containers with water spray and evacuate area.

SECTION 6

Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

No specific recommendations; for personal protection see Section 8.

6.2 Environmental precautions

Avoid discharge into drains or watercourses or onto the ground.

6.3 Methods and material for containment and cleaning up

Absorb spillage, flush area with plenty of water and dispose of in accordance with national regulations.

6.4 Reference to other sections

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

7.1 Precautions for safe handling

Keep container tightly sealed when not in use, avoid formation of mists, keep away from food and drink and wear protective clothing. Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs.

Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product. Remove contaminated clothing and launder thoroughly before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature	Ambient
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Conditions for safe storage (incompatibilities)	Store away from incompatible materials (strong oxidising agents); no specific requirements under normal conditions.
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7.3 Specific end use(s)

See Section 1.2.

SECTION 8

Exposure controls / personal protection

8.1 Control parameters

Occupational exposure limits (OEL / WEL)	None reported
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DNEC/PNEC data	DNEL/DMEL: Not reported PNEC: Not reported
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8.2 Exposure controls

Eye / face protection	Safety glasses Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.
Skin / hand protection	No specific hand protection recommended; for large spillages wear protective gloves.
Respiratory protection	Full-face respirator Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.
Other protection	Wash after use and before eating, smoking and using the toilet; do not eat, drink or smoke when using.
Environmental exposure controls	Not regarded as dangerous for the environment.

SECTION 9

Physical & chemical properties

9.1 Information on basic physical and chemical properties

Appearance / physical state	Liquid DERIVED FROM: LITERATURE
Colour	Clear, colourless DERIVED FROM: LITERATURE
Odour	Not known DERIVED FROM: LITERATURE
Melting / freezing point	No data available
Boiling point	No data available
Flammability	Not applicable
Lower and upper explosion limit	No data available
Flash point	Not applicable
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Acidity	Neutral DERIVED FROM: LITERATURE
Kinematic viscosity	1.532 mm ² /s @ 20°C DERIVED FROM: LITERATURE
Solubility	Soluble in water DERIVED FROM: LITERATURE
Partition coefficient n-octanol/water (log value)	No data available

Vapour pressure	0.75 mbar @ 40°C DERIVED FROM: LITERATURE
Density (g/mL)	0.995 g/mL DERIVED FROM: LITERATURE
Relative vapour density	0.954 DERIVED FROM: LITERATURE
Particle characteristics	No data available

9.2 Other information

No data available

SECTION 10

Stability & reactivity

10.1 Reactivity

No specific reactivity hazards stated; see other subsections.

10.2 Chemical stability

Stable at normal ambient temperatures and under prescribed storage conditions.

10.3 Possibility of hazardous reactions

No potentially hazardous reactions known.

10.4 Conditions to avoid

No known conditions likely to result in a hazardous situation.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

See section 5

SECTION 11

Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (LD50 / LC50)	Based on available data the classification criteria are not met (oral, dermal, inhalation).
Skin corrosion / irritation	Causes skin irritation
Eye corrosion / irritation	Causes serious eye irritation
Respiratory / skin sensitisation	Based on available data the classification criteria are not met for respiratory or skin sensitisation.
Carcinogenicity	Based on available data the classification criteria are not met; no ingredients listed by IARC.
Mutagenicity	Based on available data the classification criteria are not met.

Reproductive toxicity

Based on available data the classification criteria are not met.

STOT (single / repeated exposure)

Based on available data the classification criteria are not met for single or repeated exposure.

Aspiration hazard

Based on available data the classification criteria are not met.

11.2 Information on other hazards

Not considered an

SECTION 12**Ecological information****12.1 Toxicity**

Not regarded as dangerous for the environment; acute and chronic aquatic toxicity classification criteria not met.

12.2 Persistence and degradability

The degradability of the product is not known.

12.3 Bioaccumulative potential

No data available on bioaccumulation.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This substance 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

See Section 11.2.

12.7 Other adverse effects

No data available

SECTION 13**Disposal considerations****13.1 Waste treatment methods**

Dispose of in accordance with local/national regulations

SECTION 14**Transport information****14.1 UN number or ID number**

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Special precautions for user Not applicable

Transport category Not applicable

Tunnel code Not applicable

Packing instruction (ADR) Not applicable

Packing instruction (IMDG) 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

Substance-specific regulations (e.g. licences) Health and Safety at Work etc. Act 1974; CDG 2009; EH40/2005; REACH Regulation (EC) No 1907/2006; Regulation (EU) 2015/830; CLP Regulation (EC) No 1272/2008.

REACH code Y110

ECHA notification Not applicable

15.2 Chemical safety assessment

No

SECTION 16

Other information

Revision notes / other information This version (v10) was created on 12.10.2026 and replaces v1 (12.05.2021)- H315, H319, H335 and H361f have been added.

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.