

Safety Data Sheet

#18702050 · 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
Esculin Sesquihydrate	66778-17-4	C ₁₅ H ₁₆ O ₉ · 1.5H ₂ O	10	17 Aug 2026

SECTION 1

Identification

Product name	Esculin Sesquihydrate
CAS number	66778-17-4
Chemical formula	C ₁₅ H ₁₆ O ₉ · 1.5H ₂ O
Molecular weight	367.31
SMILES	<chem>C1=CC(=O)OC2=CC(=C(C=C21)OC3C(C(C(C(O3)CO)O)O)O)O</chem>
EC / EINECS number	686-183-3
Recommended use & restrictions	For research and development. Laboratory chemicals. Manufacture of substances. Not suitable for human or veterinary purposes.
Emergency telephone	0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

NONE

CODE	PRECAUTIONARY STATEMENT
P280	Wear protective gloves/protective clothing/eye protection/face protection
Other hazards (e.g. PBT / vPvB, not classified)	Combustible solid. Accumulation/enrichment of fine dust may create a dust-explosion hazard. Not assessed as PBT or vPvB. No endocrine-disrupting components identified at or above 0.1%.

SECTION 3

Composition / information on ingredients

Purity / concentration	c. 100% Esculin Sesquihydrate (CAS: 66778-17-4)
Impurities / stabilising additives	None

SECTION 4

First-aid measures

Inhalation	Move to fresh air. Keep comfortable for breathing. Seek medical attention if unwell or symptoms occur.
Skin contact	Remove contaminated clothing and rinse skin thoroughly with water. Seek medical attention if irritation, rash or symptoms occur.
Eye contact	Rinse cautiously with plenty of water for several minutes. Remove contact lenses if easy to do. Seek medical attention if irritation persists.
Ingestion	Rinse mouth and drink water. Seek medical advice/attention if unwell or symptoms occur.
Symptoms / effects & medical attention	No known or reasonably foreseeable symptoms have been established.

SECTION 5

Fire-fighting measures

Suitable extinguishing media	Water spray, foam, alcohol-resistant foam, carbon dioxide, dry chemical or dry powder/ABC powder.
Unsuitable extinguishing media	No information available
Special hazards	Combustible solid. Fine dust enrichment may create a dust-explosion hazard. Thermal decomposition/combustion may produce carbon monoxide and carbon dioxide.
Advice for firefighters	Wear self-contained breathing apparatus and full protective equipment. Do not breathe fumes. Fight fire from a safe distance.

SECTION 6

Accidental release measures

Personal precautions & PPE	Avoid dust formation. Ensure adequate ventilation. Wear suitable PPE. Keep non-involved personnel away from the spill area.
Environmental precautions	Prevent entry into drains, surface water and groundwater. Avoid uncontrolled release to the environment.
Containment & clean-up methods	Cover/protect drains. Collect mechanically using methods that minimise dust. Place material in suitable, closed containers for disposal.

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

Storage temperature	Ambient
Precautions for safe handling	Avoid dust formation and contact with skin, eyes and clothing. Use local exhaust/general ventilation. Keep away from food, drink and animal feed. Wash hands and face thoroughly after handling.
Conditions for safe storage (incompatibilities)	Keep container tightly closed. Store in a cool, dry, shaded and well-ventilated place. Keep away from heat and strong oxidising agents.

SECTION 8

Exposure controls / personal protection

Occupational exposure limits (OEL / WEL)	No substance-specific UK workplace exposure limit identified.
DNEC/PNEC data	<i>No data available</i>
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	Chemical-resistant gloves. Nitrile rubber is suitable.
Respiratory protection	Dust mask (FFP2/FFP3) 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.

SECTION 9

Physical & chemical properties

Density (g/mL)	1 g/mL DERIVED FROM: LITERATURE
Flash point	<i>Not applicable</i>
Acidity	Neutral DERIVED FROM: LITERATURE
Appearance / physical state	Powder DERIVED FROM: LITERATURE
Colour	White to white-yellow DERIVED FROM: LITERATURE
Odour	Odourless DERIVED FROM: LITERATURE
Melting / freezing point	206-210 °C DERIVED FROM: LITERATURE
Boiling point	<i>No data available</i>
Solubility (water)	74 g/L at 95 °C DERIVED FROM: LITERATURE
pH	<i>No data available</i>
Vapour pressure	<i>No data available</i>
Partition coefficient (log Pow)	-1.71 DERIVED FROM: LITERATURE
Auto-ignition / decomposition temp	376 °C (anhydrous basis) DERIVED FROM: LITERATURE

SECTION 10

Stability & reactivity

Chemical stability / reactivity	Stable under normal ambient temperature, storage and handling conditions.
Conditions to avoid	Heat, excessive dust formation and conditions promoting dust accumulation.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Carbon monoxide and carbon dioxide may be formed during fire or thermal decomposition.

SECTION 11

Toxicological information

Acute toxicity (LD50 / LC50)	Oral LD50 >2,000 mg/kg (rat)
Skin corrosion / irritation	<i>No data available</i>
Eye corrosion / irritation	<i>No data available</i>
Respiratory / skin sensitisation	<i>No data available</i>
Carcinogenicity	Not listed
Mutagenicity	<i>No data available</i>
Reproductive toxicity	<i>No data available</i>
STOT (single / repeated exposure)	<i>No data available</i>
Aspiration hazard	<i>Not applicable</i>
Endocrine disruptors	No endocrine-disrupting components identified at or above 0.1%.

SECTION 12

Ecological information

Aquatic toxicity	48 h EC50 >100 mg/L (aquatic invertebrates); 72 h ErC50 >100 mg/L (algae) Ref: External SDS
Persistence & degradability	Theoretical oxygen demand: 1.263 mg/mg. Theoretical carbon dioxide: 1.797 mg/mg. Ref: External SDS
Bioaccumulative potential	Does not significantly accumulate in organisms. log Pow = -1.71. Ref: External SDS
Mobility in soil	<i>No data available</i>
PBT / vPvB assessment	Not considered PBT or vPvB according to the reviewed supplier SDSs.

SECTION 13

Disposal considerations

Waste treatment / disposal methods	Dispose of product and contaminated packaging in accordance with local and national regulations through a licensed chemical waste disposal contractor.
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SECTION 14

Transport information

UN number	Not applicable
Proper shipping name	Not applicable
Class	Not applicable
Packing group	Not applicable
Transport category	Not applicable
Tunnel code	Not applicable
Packing instruction (ADR)	Not applicable
Packing instruction (IMDG)	Not applicable
Environmental hazards	Not applicable
Special precautions for user	Not applicable

SECTION 15

Regulatory information

REACH code	Y110
UFI code	Not applicable
ECHA notification	None identified
Chemical safety assessment carried out?	No

SECTION 16

Other information

Revision notes / other information	Last updated: 08 July 2022 - Revision date: 14 August 2026; According to REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577.
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