

SAFETY DATA SHEET (SDS)

in accordance with Regulation (EC) No 1907/2006 (REACH), Annex II — Regulation (EU) 2020/878

Date: 02.09.2026 | Version: 3 | EN

naftalen

naphthalene

CAS 91-20-3

C₁₀H₈

EC 202-049-5

MOLAR MASS
128.17LOGP
3.3TPSA
0 Å²T. WRZ.
217.2269°C

HAZARD CLASSIFICATION (GHS / CLP)



Warning

H351 H302 H400 H410

Hazard class scope limited to the harmonised classification (CLP Annex VI); classes outside the harmonised entry may require supplier self-classification (CLP Art. 4(3)) — verify with the supplier safety data sheet.

1. Identification of the substance/mixture and of the company/undertaking

1.1 Substance name	naftalen
1.1 IUPAC name	naphthalene
1.1 CAS number	91-20-3
1.1 EC number	202-049-5
1.1 PubChem CID	931
1.1 InChIKey	UFWIBTONFRDIAS-UHFFFAOYSA-N
1.1 SMILES	C1=CC=C2C=CC=CC2=C1
1.1 Molecular formula	C ₁₀ H ₈ ^[7]
1.1 Molar mass	128.17 g/mol ^[7]
1.1 Exact mass	128.0626 Da ^[7]

1.2 Uses

For laboratory and research purposes. Not for use in the production of food, medicines or cosmetics without appropriate authorisation.

1.3 Details of the supplier

REFERENCE COPY — NO
SUPPLIER DETAILS — NOT FOR
DISTRIBUTION

Supplier details are not included in this reference copy. The supplier placing the substance on the market must complete this section and remains responsible for the sheet under REACH. MolGod.org prepares documentation and is not the supplier of this substance.

1.4 Emergency telephone number

Emergency telephone

+48 42 631 47 24

The number above is the Polish poison centre (CIT, Lodz, 24/7). It is NOT the poison centre designated for your country. Under Article 45 of Regulation (EC) No 1272/2008 the competent body is the centre designated in the country of placing on the market — consult it before use.

2. Hazards identification



Warning

Hazard statements (H) ^{[3][4][10]}

H351	Suspected of causing cancer
H302	Harmful if swallowed
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Precautionary statements (P) ^{[3][4][10]}

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P264	Wash thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P308+P313	IF exposed or concerned: Get medical advice/attention
P330	Rinse mouth
P391	Collect spillage
P405	Store locked up
P501	Dispose of contents/container to an approved waste collection point

NOTE: CMR substance — employment of pregnant and breastfeeding women in work harmful to health is prohibited (Polish Labour Code Art. 176 § 1; Council of Ministers Regulation of 3 April 2017, Journal of Laws 2017 item 796). ^{[15][16]}

Hazard class scope limited to the harmonised classification (CLP Annex VI); classes outside the harmonised entry may require supplier self-classification (CLP Art. 4(3)) — verify with the supplier safety data sheet.

3. Composition/information on ingredients

Substance type	pure substance
CAS Number	91-20-3
EC number	202-049-5
Molecular formula	C ₁₀ H ₈
Concentration	≥99% (typical reagent-grade purity — to be confirmed by the supplier's specification)
Clp index no	601-052-00-2

4. First aid measures



Inhalation

Move the affected person to fresh air. Keep at rest. If not breathing: artificial respiration (qualified personnel only). ^{[1][2][13]}

Skin contact

Remove contaminated clothing. Rinse skin with soap and water (min. 15 minutes). ^{[1][2][13]}

Eye contact

Rinse eyes with running water (min. 15 minutes). Remove contact lenses if possible. If irritation persists — consult an ophthalmologist. ^{[1][2][13]}

Ingestion

Do NOT induce vomiting (unless directed by a physician). Rinse mouth with water. Never give anything by mouth to an unconscious person. Poison Centre Łódź: +48 42 631 47 24 (24/7). Emergency number: 112. ^{[1][2][13]}

Symptoms and effects

nausea, vomiting, diarrhoea. ^{[3][10]}

Notes for physician

Requires verification

Emergency numbers: CIT Łódź: +48 42 631 47 24 (24/7) | Emergency: 112

5. Firefighting measures

Suitable extinguishing media	Adapt extinguishing media to surroundings. CO ₂ , dry powder, foam.
Unsuitable extinguishing media	No specific restrictions.
Specific hazards	Thermal decomposition products: CO, CO ₂ . ^[14]
Advice for firefighters	Use self-contained breathing apparatus (SCBA). Full protective suit.
Flash Point	78.9°C ^[7]
Auto-ignition temperature	526.1°C ^[7]

6. Accidental release measures

Personal precautions	Use personal protective equipment (see Section 8). Avoid breathing dust. ^{[1][2][13]}
Environmental precautions	Prevent entry into sewers, groundwater and surface water. ^{[1][2][13]}
Methods for containment and cleaning up	Collect mechanically into suitable containers. Absorption: sand, vermiculite, diatomaceous earth. Do not sweep dry (dust formation). ^{[1][2][13]}
Related sections	8; 13

7. Handling and storage

Precautions	Work in a fume hood or with adequate ventilation. No eating, drinking or smoking in the work area. ^{[1][2][13]}
Storage temperature	Store at room temperature (15-25°C) or as indicated on the label. ^{[1][2][13]}

Humidity	Store in a dry place (<60% RH). ^{[1][2][13]}
Light	Protect from direct sunlight. ^{[1][2][13]}
Incompatible materials	Strong oxidizers. ^[14]

8. Exposure controls/personal protection

8.1 Control parameters

OEL — NDS (Poland)	NDS = 20 mg/m ³ (TWA) · NDSC _h = 50 mg/m ³ (STEL) — Rozp. MRIPS Dz.U. 2024 poz.1017 ^[25]
OEL (EU)	The EU OEL value has not been verified against the available dataset — check the IOELV/BOELV directives; do not assume the absence of a value.
DNEL	No data available.
PNEC	No data available.

8.2 Personal protective equipment (PPE) ^{[5][6][17]}



Chemical-resistant protective gloves
EN ISO 374-1:2016+A1:2018
nitrile (min. 0.11 mm)



Closed safety spectacles or goggles
EN ISO 16321-1:2022 / EN 166:2001



Closed safety footwear with toe protection
EN ISO 20345:2022 (S2/S3)

9. Physical and chemical properties

Property (item 9.1)	Value	Source
Physical state	Solid	
Colour	No data available.	
Odour	No data available.	
pH (1% aqueous solution)	Not applicable	
Melting point	80.2°C ^{[8] [7][22]} ✓94%	nist+consensus, cache, pubchem_exp
Boiling point	217.2269°C ^{[8] [7][22]} ✓94%	nist+consensus, cache, pubchem_exp
Flash point	78.9°C (experimental data) ^[7]	pubchem_exp
Flammability	No data available.	
Lower and upper explosion limit	Not applicable (REACH 9.1(g))	
Density (20°C)	1.15 g/cm ³ ^[7] ✓86%	cache+consensus, pubchem_exp
Vapour pressure	0.007 kPa (0.05 mmHg, 20°C) (experimental data) ^[7]	pubchem_exp
Relative vapour density	Not applicable (REACH 9.1(q))	
Dynamic viscosity	0.754 mPa·s ^[7]	
Kinematic viscosity	Not applicable (REACH 9.1(l))	
Refractive index n _D ²⁰	1.58212 (experimental data) ^[7]	
Auto-ignition temperature	526.1°C (experimental data) ^[7]	

Property (item 9.1)	Value	Source
Decomposition temperature	Not applicable	
Rozpuszcz. w wodzie	0.031 g/L, 25°C ^[7] ^[23]	
Particle characteristics	The particle size distribution has not been determined for this commercial form – required under Annex II 9.1(r); to be completed from the supplier's specification.	
Partition coefficient n-octanol/water (log value)	3.3 ^[9] ^[24]	
Molar mass	128.17 g/mol ^[7] ✓86%	pubchem, cache
Molecular formula	C ₁₀ H ₈ ^[7] ✓86%	pubchem, cache
Lipinski rule (R05)	PASS	

Where a property above reads "No data available", no measured value was found in the public sources consulted for this substance. The property has not been determined by MolGod.org and no value is inferred. "Not applicable" means the property has no meaning for this substance in the form supplied.

10. Stability and reactivity

Reactivity	Stable under normal storage and handling conditions.
Chemical stability	Thermally stable under recommended conditions.
Hazardous reactions	No hazardous reactions known under normal conditions.
Conditions to avoid	High temperatures, direct sunlight, moisture.
Incompatible materials	Strong oxidizers.
Decomposition products	Thermal decomposition products:CO, CO ₂ .

11. Toxicological information

LD50 (oral)	LD50 490 mg/kg (rat, oral) ^[7]
LD50 (dermal)	LD50 >20 g/kg (rabbit) ^[7]
LC50 (inhalation)	No data available.
Skin irritation	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^[3] ^[10]
Eye irritation	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^[3] ^[10]
Sensitisation	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^[3] ^[10]
Mutagenicity	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^[3] ^[10]
Carcinogenicity	Category 2 (harmonised classification, Annex VI to CLP).
IARC classification (carcinogenicity)	IARC Group 2B — possibly carcinogenic to humans. [local snapshot — not verified against the current IARC list] ^[20]
Reproductive toxicity	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^[3] ^[10]
STOT — single exposure	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^[3] ^[10]
STOT — repeated exposure	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^[3] ^[10]
Aspiration hazard	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^[3] ^[10]

12. Ecological information

Aquatic toxicity	Harmonised classification (CLP Annex VI): H400 — Very toxic to aquatic life (Aquatic Acute 1); H410 — Very toxic to aquatic life with long lasting effects (Aquatic Chronic 1)(M-factor for acute/chronic cat. 1 — to be verified per Table 3 of Annex VI, if assigned.). LC ₅₀ (fish): 0.213 mg/L (Melanotaenia fluviatilis, 96 h). EC ₅₀ (Daphnia): 1.6 mg/L (Daphnia magna, 48 h). EC ₅₀ (algae): 10 mg/L (Raphidocelis subcapitata, 48 h) [21]
Persistence / biodegradability	No data available.
Bioaccumulative potential	log Kow = 3.3 [9]. Low bioaccumulation potential (log Kow < 4.5 — PBT/vPvB screening criterion per ECHA Guidance R.11). [18][19]
Mobility in soil	No data available.
PBT/vPvB assessment	Insufficient data to assess PBT/vPvB.
Endocrine disrupting properties	Zgłoszone efekty endokrynne u organizmów wodnych (dane ekotoksykologiczne, US EPA ECOTOX; nie stanowią regulacyjnej klasyfikacji ED wg 2018/605). [PL] [21]

13. Disposal considerations

Disposal method	Hand over for disposal to licensed contractors in accordance with national and local regulations. Do not discharge into sewers.
Waste code (EWC)	16 05 06* — Laboratory and analytical chemicals (np. chemical reagents) zawierające substancje niebezpieczne. EWC code verification required. [12]
Packaging	Cleaned packaging may be recycled. Contaminated packaging must be treated as hazardous waste.

14. Transport information

UN number	VERIFICATION REQUIRED — no verified UN assignment.
Environmental hazard	CLP classification (H400/H410) indicates aquatic environmental hazard — marine pollutant marking may be required; confirm per ADR 2.2.9 / IMDG criteria [3]
Special precautions	Handle as dangerous goods according to the assigned class (ADR/IMDG/IATA); apply the precautions appropriate to that class.
CN/HS code	CN/HS code: verification required in the Eurostat Combined Nomenclature.
Notes	Transport classification not verified. Do not assume the absence of restrictions — check ADR/IMDG/IATA before shipping.
Environmentally hazardous (mark: fish and tree)	Yes

15. Regulatory information

SVHC status	SVHC status not verified against the available dataset — check the current ECHA Candidate List; do not assume absence. [1]
REACH Annex XIV	Not verified against the ECHA Authorisation List — check REACH Annex XIV. [1]
REACH Annex XVII	Not confirmed in the available Annex XVII dataset — verify against the current ECHA list before placing on the market; do not assume absence of restriction. [1]
IARC classification (carcinogenicity)	IARC Group 2B — possibly carcinogenic to humans.

16. Other information

Legal status of classification: harmonised under CLP Annex VI — Reg. (EC) No 1272/2008 (as at the date of issue). Entries with an entry-into-force date after 27.08.2026 were omitted as future (not yet applicable).

Data aggregated automatically from public reference databases (PubChem, ECHA, NIST and others).

Scientific citations (10)

Toxicology and carcinogenesis studies of naphthalene (cas no. 91-20-3) in F344/N rats (inhalation studies).. (2000).
Mubashshir M, Ovais M. Melanophore: A biosensor for water pollution analysis.. Biochimie (2026). DOI: 10.1016/j.biochi.2025.11.002
Pannu AK, Singla V. Naphthalene Toxicity in Clinical Practice.. Current drug metabolism (2020). DOI: 10.2174/1389200220666191122110036
Dou Y, Zhu Q, Du K. Recent Advances in Two-Photon AIEgens and Their Application in Biological Systems.. Chembiochem : a European journal of chemical biology (2021). DOI: 10.1002/cbic.202000709
SONG Xiaoran (宋笑然), SHI Yan (施艳). Improving the homogeneity management of clinical nursing teaching using the microteaching combined with bedside rounds (运用微格教学结合床边查房提升临床带教工作同质化管理水平). 中西医结合护理 (2026). DOI: 10.55111/j.issn2709-1961.20251212001

Full text of H statements

H351	Suspected of causing cancer
H302	Harmful if swallowed
H400	Very toxic to aquatic life
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Full text of P statements

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P202	Do not handle until all safety precautions have been read and understood
P264	Wash thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
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P330	Rinse mouth
P391	Collect spillage
P405	Store locked up
P501	Dispose of contents/container to an approved waste collection point

Abbreviations

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging (Reg. (EC) 1272/2008)
CMR	Carcinogenic, Mutagenic, toxic to Reproduction
DNEL	Derived No-Effect Level
EC	European Community number
EPI	Personal protective equipment
GHS	Globally Harmonized System
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods Code
SDS	Safety Data Sheet
LC50	Lethal Concentration, 50%

LD50	Lethal Dose, 50%
NDS	Maximum admissible concentration (workplace, PL)
NDSCh	Short-term exposure limit (PL)
OEL	Occupational Exposure Limit
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Reg. (EC) 1907/2006)
STOT	Specific Target Organ Toxicity
SVHC	Substance of Very High Concern
TPSA	Topological Polar Surface Area
vPvB	very Persistent and very Bioaccumulative

Version history

v3 (27.08.2026) Based on ECHA harmonised classification (Annex VI to CLP, ATP 23).

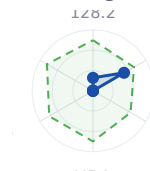
References

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- [2] European Commission. Reg.(EU) 2020/878 — amending Annex II REACH. OJ EU L 203/2020. From 01.01.2023. URL: <https://eur-lex.europa.eu/eli/reg/2020/878/oj> Accessed: 2026-08-27.
- [3] EP and Council. Reg.(EC) 1272/2008 (CLP) + ATP 23. OJ EU L 353/2008. (2026-07-07) URL: <https://eur-lex.europa.eu/eli/reg/2008/1272/oj> Accessed: 2026-08-27.
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- [5] ISO. ISO 7010:2019 — Graphical symbols. Safety signs. URL: <https://www.iso.org/standard/72424.html> Accessed: 2026-08-27.
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- [8] NIST. Chemistry WebBook, SRD 69. National Institute of Standards and Technology. URL: <https://webbook.nist.gov/cgi/cbook.cgi?ID=91-20-3>
- [9] Rumble, J.R., ed. CRC Handbook of Chemistry and Physics. 105th ed. Boca Raton: CRC Press, 2024. URL: <https://hbcpc.chemnetbase.com>
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- [11] ECHA. REACH Registration Dossier (registered substance, acute toxicity study record). Helsinki: European Chemicals Agency. URL: <https://echa.europa.eu/registration-dossier>
- [12] European Commission. Decision 2000/532/EC establishing a list of wastes (European Waste Catalogue). OJ EU L 226/3. URL: <https://eur-lex.europa.eu/eli/dec/2000/532/oj>
- [13] European Chemicals Agency (ECHA). Guidance on the Compilation of Safety Data Sheets. Version 4.0. Helsinki: European Chemicals Agency, 2020. URL: https://echa.europa.eu/documents/10162/2324906/sds_en.pdf
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External links

NIST: <https://webbook.nist.gov/cgi/cbook.cgi?ID=91-20-3>
 Wikidata: <https://www.wikidata.org/wiki/Q179724>
 ChEMBL: https://www.ebi.ac.uk/chembl/compound_report_card/CHEMBL16293

ADMET / Drug-likeness



NFPA 704 (supplementary information — NFPA/USA system; not a required element of an EU safety data sheet under REACH Annex II)



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Author: www.MolGod.org — platform for automated safety data sheets (SDS).

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