

SAFETY DATA SHEET (SDS)

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

Date: 07.09.2026 | Version: 4 | EN

sód [PL]

CAS 7440-23-5

Na EC 231-132-9

MOLAR MASS
22.99

HAZARD CLASSIFICATION (GHS / CLP)



Danger

H260 H314 EUH014

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	sód [PL]
1.1 IUPAC name	—
1.1 CAS number	7440-23-5
1.1 EC number	231-132-9
1.1 PubChem CID	5360545
1.1 InChIKey	KEAYESYHFKHZAL-UHFFFAOYSA-N
1.1 SMILES	[Na]
1.1 Molecular formula	Na ^[7]
1.1 Molar mass	22.9897693 g/mol ^[7]
1.1 Exact mass	22.9898 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 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.
SUPPLIER DETAILS — NOT FOR DISTRIBUTION MolGod.org prepares documentation and is not the supplier of this substance.

1.4 Emergency telephone number

Emergency telephone 112 (EU-wide emergency number)

2. Hazards identification

GHS:



PPE:



Danger

Hazard statements (H) [3][4][9]

H260	In contact with water releases flammable gases which may ignite spontaneously
H314	Causes severe skin burns and eye damage
EUH014	Reacts violently with water.

Precautionary statements (P) [3][4][9]

P223	Do not allow contact with water
P260	Do not breathe dust/fume/gas/mist/vapours/spray
P264	Wash thoroughly after handling
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301+P330+P331	IF SWALLOWED: Rinse mouth; Do NOT induce vomiting
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing; Rinse skin with water or shower
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes; Remove contact lenses, if present and easy to do. Continue rinsing
P310	Immediately call a POISON CENTER or doctor/physician
P321	Specific treatment
P363	Wash contaminated clothing before reuse
P405	Store locked up
P501	Dispose of contents/container to an approved waste collection point

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	7440-23-5
EC number	231-132-9
Molecular formula	Na
Concentration	≥99% (typical reagent-grade purity — to be confirmed by the supplier's specification)
Clp index no	011-001-00-0

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][12]}

Skin contact

Remove contaminated clothing. Rinse skin with soap and water (min. 15 minutes). Call a physician immediately. ^{[1][2][12]}

Eye contact

Rinse eyes with running water (min. 15 minutes). Remove contact lenses if possible. If irritation persists — consult an ophthalmologist. ^{[1][2][12]}

Ingestion

Do NOT induce vomiting (unless directed by a physician). Rinse mouth with water. Never give anything by mouth to an unconscious person. Emergency number: 112 (EU-wide). Contact the poison centre designated in your country (CLP Art. 45). ^{[1][2][12]}

Symptoms and effects

skin redness and irritation. ^{[3][9]}

Notes for physician

Requires verification

**Emergency numbers: Emergency: 112 (EU-wide).
Poison centre: as designated in the country of
placing on the market (CLP Art. 45).**

5. Firefighting measures

Suitable extinguishing media	Selection of extinguishing media requires verification by a competent person (substance water-reactive). Do NOT use water or CO ₂ without confirmation. ^{[1][2][12]}
Unsuitable extinguishing media	Water and CO ₂ may intensify the fire (substance water-reactive, H ₂ 60/EUH014) — do not use without verification. ^{[1][2][12]}
Specific hazards	No data on decomposition products. ^[13]
Advice for firefighters	Use self-contained breathing apparatus (SCBA). Full protective suit. ^{[1][2][12]}
Auto-ignition temperature	121.1°C ^[7]

6. Accidental release measures

Personal precautions	Use personal protective equipment (see Section 8). Avoid breathing dust. ^{[1][2][12]}
Environmental precautions	Prevent entry into sewers, groundwater and surface water. ^{[1][2][12]}
Methods for containment and cleaning up	Collect mechanically into suitable containers. Absorption: sand, vermiculite, diatomaceous earth. Do not sweep dry (dust formation). ^{[1][2][12]}
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] [12]
Storage temperature	Store at room temperature (15-25°C) or as indicated on the label. [1] [2] [12]
Humidity	Store in a dry place (<60% RH). [1] [2] [12]
Light	Protect from direct sunlight. [1] [2] [12]
Incompatible materials	Strong oxidizers, strong acids, strong bases. [13]

8. Exposure controls/personal protection

8.1 Control parameters

OEL — NDS (Poland)	No NDS (OEL) value in the available working list — verify in the current MRPiPS regulation before use; do not assume the absence of a limit value.
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) [\[5\]](#)[\[6\]](#)[\[14\]](#)

 Chemical-resistant protective gloves EN ISO 374-1:2016+A1:2018 fluoroelastomer FKM (Viton), min. 0.4 mm — NOT nitrile (breakthrough within minutes)	 Closed safety spectacles or goggles EN ISO 16321-1:2022 / EN 166:2001	 Face shield (splash risk) EN ISO 16321-1:2022	 Chemical-resistant protective clothing EN 13034:2005+A1:2009 (typ 6) / EN 14126:2003 (bio)	 Closed safety footwear with toe protection EN ISO 20345:2022 (S2/S3)
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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)	No data available.	
Melting point	97.79°C [8] [7]	
Boiling point	882.4096°C [8] [7]	
Flash point	Not applicable (REACH 9.1(h))	
Flammability	No data available.	
Lower and upper explosion limit	Not applicable (REACH 9.1(g))	
Density (20°C)	0.9705 g/cm ³ [7]	
Vapour pressure	0.16 kPa (1.2 mmHg) (experimental data) [7]	

Property (item 9.1)	Value	Source
Relative vapour density	Not applicable (REACH 9.1(q))	
Dynamic viscosity	0.68 mPa·s ^[7]	
Kinematic viscosity	Not applicable (REACH 9.1(l))	
Auto-ignition temperature	121.1°C (experimental data) ^[7]	
Decomposition temperature	Not applicable	
Rozpuszcz. w wodzie	No data available.	
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.	
log Kow (XLogP3)	Not applicable (REACH 9.1(n))	
Molar mass	22.9897693 g/mol ^[7]	
Molecular formula	Na ^[7]	

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	Reactive according to classification (H260, EUH014) — see hazardous reactions. ^[13]
Chemical stability	Thermally stable under recommended conditions.
Hazardous reactions	The substance carries a reactivity classification (H260, EUH014) — hazardous reactions possible (water-reactive). Requires verification by a competent person; do not assume the absence of reactions. ^[13]
Conditions to avoid	High temperatures, direct sunlight, moisture.
Incompatible materials	Strong oxidizers, strong acids, strong bases.
Decomposition products	No data on decomposition products.

11. Toxicological information

LD50 (oral)	No data available.
LD50 (dermal)	No data available.
LC50 (inhalation)	No data available.
Skin irritation	Category 1 (H314) — corrosive; sub-category (1A/1B/1C) per CLP Annex VI entry. ^{[3][9]}
Eye irritation	Serious eye damage — covered by the corrosive classification (H314; CLP Annex I 3.3.2.1). ^{[3][9]}
Sensitisation	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^{[3][9]}
Mutagenicity	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^{[3][9]}
Carcinogenicity	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^{[3][9]}
IARC classification (carcinogenicity)	No individual IARC monograph for this CAS — this is not confirmation of the absence of carcinogenicity (cf. CLP/GHS classification in section 2).
Reproductive toxicity	Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^{[3][9]}

STOT — single exposure

Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^{[3][9]}

STOT — repeated exposure

Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^{[3][9]}

Aspiration hazard

Not classified for this hazard (outside the scope of the harmonised classification in CLP Annex VI; verify supplier self-classification) ^{[3][9]}

12. Ecological information

Aquatic toxicity No data available.

Persistence / biodegradability No data available.

Bioaccumulative potential No data available.

Mobility in soil No data available.

PBT/vPvB assessment Insufficient data to assess PBT/vPvB.

Endocrine disrupting properties No information.

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. ^[11]

Packaging Cleaned packaging may be recycled. Contaminated packaging must be treated as hazardous waste.

14. Transport information

Class 8 — Corrosive substances

UN number UN 1428 ^[10]

Proper shipping name Sodium (metal) ^[10]

Transport hazard class 4.3 ^[10]

Packing Group I ^[10]

Environmental hazard Not classified as environmentally hazardous for transport (no H400/H410/H411 in CLP Annex VI; no marine pollutant mark required) ^[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 per ADR / UN Model Regulations (UN number, class and packing group above). Verify the ADR/IMDG/IATA edition in force on the date of shipment. ^[10]

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]

16. Other information

Substance type: element

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 07.09.2026 were omitted as future (not yet applicable).

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

Scientific citations (9)

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- Alindogan A, Joseph R. Disorders of Sodium.. Endocrinology and metabolism clinics of North America (2026). DOI: 10.1016/j.ecl.2025.02.003
- Mark DG, Alavi M, Nugent JR et al.. Sodium Correction Rates and Associated Outcomes Among Patients With Severe Hyponatremia : A Retrospective Cohort Study.. Annals of internal medicine (2026). DOI: 10.7326/ANNALS-25-03676
- Hegyi B, Angsutararux P, Chakouri N et al.. Targeting Arrhythmogenic Late Sodium Current by FHF1(A)-Derivative FixR in Heart Failure Cardiomyocytes.. Circulation research (2026). DOI: 10.1161/CIRCRESAHA.126.328204
- Scranton K, John S, Angelini M et al.. The mechanism of action of digoxin requires the sodium-dependent inactivation of the sodium-calcium exchanger.. Science advances (2025). DOI: 10.1126/sciadv.ady9596

Full text of H statements

- H260** In contact with water releases flammable gases which may ignite spontaneously
- H314** Causes severe skin burns and eye damage
- EUH014** Reacts violently with water.

Full text of P statements

- P223** Do not allow contact with water
- P260** Do not breathe dust/fume/gas/mist/vapours/spray
- P264** Wash thoroughly after handling
- P280** Wear protective gloves/protective clothing/eye protection/face protection
- P301+P330+P331** IF SWALLOWED: Rinse mouth; Do NOT induce vomiting
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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

v4 (07.09.2026) Based on ECHA harmonised classification (Annex VI to CLP, ATP 23).

References

- [1] EP and Council. Reg.(EC) No 1907/2006 (REACH). Art.31, Annex II. OJ EU L 396/2006. URL: <https://eur-lex.europa.eu/eli/reg/2006/1907/oj> Accessed: 2026-09-07.
- [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: 2026-09-07.
- [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: 2026-09-07.
- [4] United Nations. GHS Rev.9. ST/SG/AC.10/30/Rev.9. New York and Geneva: United Nations, 2021. URL: <https://unece.org/transport/dangerous-goods/ghs-rev9-2021> Accessed: 2026-09-07.
- [5] ISO. ISO 7010:2019 — Graphical symbols. Safety signs. URL: <https://www.iso.org/standard/72424.html> Accessed: 2026-09-07.
- [6] ISO. ISO 3864-1:2011 — Safety colours and safety signs. URL: <https://www.iso.org/standard/51021.html> Accessed: 2026-09-07.
- [7] PubChem. National Center for Biotechnology Information (NIH/NLM), chemical compound database. URL: <https://pubchem.ncbi.nlm.nih.gov/compound/5360545>
- [8] NIST. Chemistry WebBook, SRD 69. National Institute of Standards and Technology. URL: <https://webbook.nist.gov/cgi/cbook.cgi?ID=7440-23-5>
- [9] ECHA. European Chemicals Agency — harmonised classification inventory (CLP Annex VI). URL: <https://echa.europa.eu>
- [10] UNECE. European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), 2025 edition (ECE/TRANS/352). Geneva: United Nations. URL: <https://unece.org/adr>
- [11] 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>
- [12] 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
- [13] Urban, P.G., ed. Bretherick's Handbook of Reactive Chemical Hazards. 8th ed. Oxford: Academic Press.
- [14] CEN. Personal protective equipment standards (EN ISO 374-1, EN 166, EN 149, EN 14387, EN ISO 20345). Brussels: European Committee for Standardization.
- [15] MRIPS Regulation of 12.06.2018 — NDS/NDN. Journal of Laws 2024 item 1017. URL: <https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20240001017> Accessed: 2026-09-07.

External links

NIST: <https://webbook.nist.gov/cgi/cbook.cgi?ID=7440-23-5>
 Wikidata: <https://www.wikidata.org/wiki/Q658>

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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