

# SAFETY DATA SHEET (SDS)

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

Date: 19.07.2026 | Version: 1 | EN

## sodium (2R,3S,4R,5R)-2,3,4,5,6-pentahydroxyhexanoate

sodium (2R,3S,4R,5R)-2,3,4,5,6-pentahydroxyhexanoate

CAS 527-07-1

$C_6H_{11}NaO_7$



MOLAR MASS  
218.14

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

|                       |                                                                   |
|-----------------------|-------------------------------------------------------------------|
| 1.1 Substance name    | —                                                                 |
| 1.1 IUPAC name        | sodium (2R,3S,4R,5R)-2,3,4,5,6-pentahydroxyhexanoate              |
| 1.1 CAS number        | 527-07-1                                                          |
| 1.1 EC number         | No data                                                           |
| 1.1 PubChem CID       | 23672301                                                          |
| 1.1 InChIKey          | UPMFZISCCZSDND-JJKGCMISA-M                                        |
| 1.1 SMILES            | <chem>C([C@H]([C@H]([C@@H]([C@H](C(=O)[O-])O)O)O)O)O.[Na+]</chem> |
| 1.1 Molecular formula | $C_6H_{11}NaO_7$ <sup>[7]</sup>                                   |
| 1.1 Molar mass        | 218.14 g/mol <sup>[7]</sup>                                       |
| 1.1 Exact mass        | —                                                                 |

#### 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

|              |                                               |
|--------------|-----------------------------------------------|
| Name         | ADVANCED CHEMISTRY R&D SOLUTIONS              |
| Address      | ul. Juliana Przybosia 8, 21-400 Łuków, Poland |
| Tax ID (NIP) |                                               |
| Tel.         |                                               |
| E-mail       |                                               |
| Website      |                                               |

#### 1.4 Emergency telephone number

|                     |                  |
|---------------------|------------------|
| Emergency telephone | +48 42 631 47 24 |
|---------------------|------------------|

Toxicological Information Centre (CIT), Łódź — available 24/7

### 2. Hazards identification

### 3. Composition/information on ingredients

|                   |                                                                                       |
|-------------------|---------------------------------------------------------------------------------------|
| Substance type    | pure substance                                                                        |
| CAS Number        | 527-07-1                                                                              |
| Molecular formula | $C_6H_{11}NaO_7$                                                                      |
| Concentration     | ≥99% (typical reagent-grade purity — to be confirmed by the supplier's specification) |

### 4. First aid measures



#### Inhalation

Move the affected person to fresh air. Keep at rest. If not breathing: artificial respiration (qualified personnel only). <sup>[1][2]</sup>

#### Skin contact

Remove contaminated clothing. Rinse skin with soap and water (min. 15 minutes). <sup>[1][2]</sup>

#### Eye contact

Rinse eyes with running water (min. 15 minutes). Remove contact lenses if possible. If irritation persists — consult an ophthalmologist. <sup>[1][2]</sup>

#### 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. <sup>[1][2]</sup>

#### Symptoms and effects

No specific symptoms described in the literature. <sup>[1][2]</sup>

#### Notes for physician

Symptomatic treatment. No specific antidote. <sup>[1][2]</sup>

**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 <sub>2</sub> , dry powder, foam. <sup>[1][2]</sup> |
| Unsuitable extinguishing media | No specific restrictions. <sup>[1][2]</sup>                                                      |
| Specific hazards               | Thermal decomposition products: CO, CO <sub>2</sub> .                                            |
| Advice for firefighters        | Use self-contained breathing apparatus (SCBA). Full protective suit. <sup>[1][2]</sup>           |

### 6. Accidental release measures

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

## 8. Exposure controls/personal protection

### 8.1 Control parameters

|                           |                                                                                                                                                    |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OEL — NDS (Poland)</b> | 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. |
| <b>OEL (EU)</b>           | 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.     |
| <b>DNEL</b>               | No data available.                                                                                                                                 |
| <b>PNEC</b>               | No data available.                                                                                                                                 |

### 8.2 Personal protective equipment (PPE)



## 9. Physical and chemical properties

| Property (item 9.1)                    | Value                                | Source |
|----------------------------------------|--------------------------------------|--------|
| <b>Physical state</b>                  | Solid                                |        |
| <b>Colour</b>                          | No data available.                   |        |
| <b>Odour</b>                           | No data available.                   |        |
| <b>pH (1% aqueous solution)</b>        | No data available.                   |        |
| <b>Melting point</b>                   | 172.5°C <sup>[7]</sup>               |        |
| <b>Boiling point</b>                   | No data available.                   |        |
| <b>Flash point</b>                     | Not applicable (REACH 9.1(h))        |        |
| <b>Flammability</b>                    | No data available.                   |        |
| <b>Lower and upper explosion limit</b> | Not applicable (REACH 9.1(g))        |        |
| <b>Density (20°C)</b>                  | 1.8 g/cm <sup>3</sup> <sup>[7]</sup> |        |
| <b>Vapour pressure</b>                 | No data available.                   |        |
| <b>Relative vapour density</b>         | Not applicable (REACH 9.1(q))        |        |
| <b>Kinematic viscosity</b>             | Not applicable (REACH 9.1(l))        |        |
| <b>Decomposition temperature</b>       | Not applicable                       |        |
| <b>Water solubility (20°C)</b>         | 590 g/L, 25°C <sup>[7]</sup>         |        |
| <b>Particle characteristics</b>        | No data available.                   |        |
| <b>log Kow (XLogP3)</b>                | No data available.                   |        |
| <b>TPSA</b>                            | 141 Å <sup>2</sup> <sup>[7]</sup>    |        |

| Property (item 9.1)      | Value                                                          | Source |
|--------------------------|----------------------------------------------------------------|--------|
| <b>HBD / HBA</b>         | No data available. / No data available.                        |        |
| <b>Rotatable bonds</b>   | No data available.                                             |        |
| <b>Molar mass</b>        | 218.14 g/mol <sup>[7]</sup>                                    |        |
| <b>Molecular formula</b> | C <sub>6</sub> H <sub>11</sub> NaO <sub>7</sub> <sup>[7]</sup> |        |

## 10. Stability and reactivity

|                               |                                                       |
|-------------------------------|-------------------------------------------------------|
| <b>Reactivity</b>             | Stable under normal storage and handling conditions.  |
| <b>Chemical stability</b>     | Thermally stable under recommended conditions.        |
| <b>Hazardous reactions</b>    | No hazardous reactions known under normal conditions. |
| <b>Conditions to avoid</b>    | High temperatures, direct sunlight, moisture.         |
| <b>Incompatible materials</b> | Strong oxidizers.                                     |
| <b>Decomposition products</b> | Thermal decomposition products:CO, CO2.               |

## 11. Toxicological information

|                                              |                                                                                                                                                   |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LD50 (oral)</b>                           | No data available.                                                                                                                                |
| <b>LD50 (dermal)</b>                         | No data available.                                                                                                                                |
| <b>LC50 (inhalation)</b>                     | No data available.                                                                                                                                |
| <b>Skin irritation</b>                       | No data available.                                                                                                                                |
| <b>Eye irritation</b>                        | No data available.                                                                                                                                |
| <b>Sensitisation</b>                         | No data available.                                                                                                                                |
| <b>Mutagenicity</b>                          | No data available.                                                                                                                                |
| <b>Carcinogenicity</b>                       | No data available.                                                                                                                                |
| <b>IARC classification (carcinogenicity)</b> | No individual IARC monograph for this CAS — this is not confirmation of the absence of carcinogenicity (cf. CLP/GHS classification in section 2). |
| <b>Reproductive toxicity</b>                 | No data available.                                                                                                                                |
| <b>STOT — single exposure</b>                | No data available.                                                                                                                                |
| <b>STOT — repeated exposure</b>              | No data available.                                                                                                                                |
| <b>Aspiration hazard</b>                     | No data available.                                                                                                                                |

## 12. Ecological information

|                                        |                                       |
|----------------------------------------|---------------------------------------|
| <b>Aquatic toxicity</b>                | No data available.                    |
| <b>Persistence / biodegradability</b>  | No data available.                    |
| <b>Bioaccumulative potential</b>       | No data available.                    |
| <b>Mobility in soil</b>                | No data available.                    |
| <b>PBT/vPvB assessment</b>             | Insufficient data to assess PBT/vPvB. |
| <b>Endocrine disrupting properties</b> | No information.                       |

## 13. Disposal considerations

|                         |                                                                                                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Disposal method</b>  | Hand over for disposal to licensed contractors in accordance with national and local regulations. Do not discharge into sewers.                                 |
| <b>Waste code (EWC)</b> | 16 05 06* — Laboratory and analytical chemicals (e.g. chemical reagents) containing hazardous substances. Verification of the EWC code required. <sup>[8]</sup> |
| <b>Packaging</b>        | Cleaned packaging may be recycled. Contaminated packaging must be treated as hazardous waste.                                                                   |

## 14. Transport information

|                             |                                                                                                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>UN number</b>            | VERIFICATION REQUIRED — no verified UN assignment.                                                                                              |
| <b>Environmental hazard</b> | Not classified as environmentally hazardous for transport (no H400/H410/H411 in CLP Annex VI; no marine pollutant mark required) <sup>[3]</sup> |
| <b>Special precautions</b>  | Handle as dangerous goods according to the assigned class (ADR/IMDG/IATA); apply the precautions appropriate to that class.                     |
| <b>CN/HS code</b>           | CN/HS code: verification required in the Eurostat Combined Nomenclature.                                                                        |
| <b>Notes</b>                | Transport classification not verified. Do not assume the absence of restrictions — check ADR/IMDG/IATA before shipping.                         |

## 15. Regulatory information

|                          |                                                                                                                                                                             |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SVHC status</b>       | SVHC status not verified against the available dataset — check the current ECHA Candidate List; do not assume absence. <sup>[1]</sup>                                       |
| <b>REACH Annex XIV</b>   | Not verified against the ECHA Authorisation List — check REACH Annex XIV. <sup>[1]</sup>                                                                                    |
| <b>REACH Annex XVII</b>  | 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. <sup>[1]</sup> |
| <b>Verification date</b> | 2026-07-19                                                                                                                                                                  |

## 16. Other information

Legal status of the harmonised classification: CLP — Regulation (EC) No 1272/2008, Annex VI (current ECHA harmonised inventory, as at the issue date of this sheet). Entries entering into force after 19.07.2026 were omitted as future (not yet applicable).

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

### Abbreviations

|              |                                                                                            |
|--------------|--------------------------------------------------------------------------------------------|
| <b>ADR</b>   | European Agreement concerning the International Carriage of Dangerous Goods by Road        |
| <b>ATE</b>   | Acute Toxicity Estimate                                                                    |
| <b>CAS</b>   | Chemical Abstracts Service                                                                 |
| <b>CLP</b>   | Classification, Labelling and Packaging (Reg. (EC) 1272/2008)                              |
| <b>CMR</b>   | Carcinogenic, Mutagenic, toxic to Reproduction                                             |
| <b>DNEL</b>  | Derived No-Effect Level                                                                    |
| <b>EC</b>    | European Community number                                                                  |
| <b>EPI</b>   | Personal protective equipment                                                              |
| <b>GHS</b>   | Globally Harmonized System                                                                 |
| <b>IATA</b>  | International Air Transport Association                                                    |
| <b>IMDG</b>  | International Maritime Dangerous Goods Code                                                |
| <b>SDS</b>   | Safety Data Sheet                                                                          |
| <b>LC50</b>  | Lethal Concentration, 50%                                                                  |
| <b>LD50</b>  | Lethal Dose, 50%                                                                           |
| <b>NDS</b>   | Maximum admissible concentration (workplace, PL)                                           |
| <b>NDSch</b> | Short-term exposure limit (PL)                                                             |
| <b>OEL</b>   | Occupational Exposure Limit                                                                |
| <b>PBT</b>   | Persistent, Bioaccumulative and Toxic                                                      |
| <b>PNEC</b>  | Predicted No-Effect Concentration                                                          |
| <b>REACH</b> | Registration, Evaluation, Authorisation and Restriction of Chemicals (Reg. (EC) 1907/2006) |

|             |                                          |
|-------------|------------------------------------------|
| <b>STOT</b> | Specific Target Organ Toxicity           |
| <b>SVHC</b> | Substance of Very High Concern           |
| <b>TPSA</b> | Topological Polar Surface Area           |
| <b>vPvB</b> | very Persistent and very Bioaccumulative |

### Version history

|                        |                                                                                        |
|------------------------|----------------------------------------------------------------------------------------|
| <b>v1 (19.07.2026)</b> | Prepared on the basis of the 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: 2026-07-19.
- [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: 2026-07-19.
- [3] EP and Council. Reg.(EC) 1272/2008 (CLP) + ATP 23. OJ EU L 353/2008. URL: <https://eur-lex.europa.eu/eli/reg/2008/1272/oj> Accessed: 2026-07-19.
- [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: 2026-07-19.
- [5] ISO. ISO 7010:2019 — Graphical symbols. Safety signs. URL: <https://www.iso.org/standard/72424.html> Accessed: 2026-07-19.
- [6] ISO. ISO 3864-1:2011 — Safety colours and safety signs. URL: <https://www.iso.org/standard/51021.html> Accessed: 2026-07-19.
- [7] PubChem. National Center for Biotechnology Information (NIH/NLM), chemical compound database. URL: <https://pubchem.ncbi.nlm.nih.gov/compound/23672301> Accessed: 2026-07-19.
- [8] 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> Accessed: 2026-07-19.
- [9] 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: 2026-07-19.

### External links

NIST: <https://webbook.nist.gov/cgi/cbook.cgi?ID=527-07-1>  
 ChEMBL: [https://www.ebi.ac.uk/chembl/compound\\_report\\_card/CHEMBL1200919](https://www.ebi.ac.uk/chembl/compound_report_card/CHEMBL1200919)

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**Generator:** Document compiled automatically on the basis of the ECHA harmonised classification (Annex VI to CLP) and public physicochemical databases.

**Author:** [www.MolGod.org](http://www.MolGod.org) — platform for automated safety data sheets (SDS).

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