

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 4

Revision: 03.05.2018

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Nonenylsuccinic anhydride
- **Article number:** 30812
- **CAS Number:**  
28928-97-4
- **EC number:**  
249-317-8
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SERVA Electrophoresis GmbH  
Carl-Benz-Str. 7  
D-69115 Heidelberg  
Tel.: +49 6221 13840-0  
FAX: +49 6221 13840-10  
msds.info@serva.de
- **Information department:** Product Safety department Tel.: +49 6221 13840-35
- **1.4 Emergency telephone number:**  
Medical Emergency Information in case of poisoning:  
Poison Information Center Mainz - Phone: +49 (0) 6131 19240  
(advisory service in German or English language)



### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.  
 Eye Irrit. 2 H319 Causes serious eye irritation.  
 STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Hazard statements**  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.
- **Precautionary statements**

P261	Avoid breathing mist/vapours/spray.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
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.

(Contd. on page 2)

# Safety data sheet

## according to 1907/2006/EC, Article 31

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Version number 4

Revision: 03.05.2018

**Trade name: Nonenylsuccinic anhydride**

(Contd. of page 1)

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.

### SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description:**  
28928-97-4 Dihydro-3-(nonenyl)furan-2,5-dione
- **Identification number(s):**
- **EC number:** 249-317-8
- **Description:**
- **Empirical formula:**  $C_{13}H_{20}O_3$
- **MW:** 224.3

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation** Supply fresh air and to be sure call for a doctor.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**  
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.
- **After swallowing** Wash out mouth. Seek medical advice if discomfort occurs.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**  
 $CO_2$ , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be formed, but not limited to:  
Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation  
Avoid contact with the eyes and skin.
- **6.2 Environmental precautions:**  
No special measures required.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling

(Contd. on page 3)

# Safety data sheet

## according to 1907/2006/EC, Article 31

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Version number 4

Revision: 03.05.2018

**Trade name: Nonenylsuccinic anhydride**

(Contd. of page 2)

See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Avoid contact with eyes and skin.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed and store in dry conditions.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
Keep away from foodstuffs, beverages and feed.  
Store protective clothing separately.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
Short term filter device:  
Filter P2.
- **Protection of hands:**  
Protective gloves.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**  
Natural rubber, NR  
Nitrile rubber, NBR
- **Eye protection:** Safety glasses

(Contd. on page 4)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 4

Revision: 03.05.2018

Trade name: Nonenylsuccinic anhydride

(Contd. of page 3)

· **Body protection:** Protective work clothing.**SECTION 9: Physical and chemical properties**· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

Form:	Viscous
Colour:	Light yellow
Odour:	uncharacteristic

· **Change in condition**

Melting point/freezing point:	undetermined
Initial boiling point and boiling range:	325 °C

Flash point:	147 °C
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Explosive properties:	Product does not present an explosion hazard.
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Density at 20 °C:	1.03 g/cm <sup>3</sup>
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· **Solubility in / Miscibility with**

Water:	Not miscible or difficult to mix
9.2 Other information	No further relevant information available.

**SECTION 10: Stability and reactivity**· **10.1 Reactivity** No further relevant informations available· **10.2 Chemical stability**· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.· **10.3 Possibility of hazardous reactions**

Reacts with strong acids, strong alcalis and strong oxidizing agents.

Reacts with alkaline metals

Reacts with amines.

· **10.4 Conditions to avoid** No further relevant information available.· **10.5 Incompatible materials:** No further relevant information available.· **10.6 Hazardous decomposition products:** In case of fire: See Section 5**SECTION 11: Toxicological information**· **11.1 Information on toxicological effects**· **Acute toxicity** Based on available data, the classification criteria are not met.· **Primary irritant effect:**· **Skin corrosion/irritation**

Causes skin irritation.

· **Serious eye damage/irritation**

Causes serious eye irritation.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.· **Acute effects (acute toxicity, irritation and corrosivity)** Respiratory irritation is possible.· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.· **Carcinogenicity** Based on available data, the classification criteria are not met.· **Reproductive toxicity** Based on available data, the classification criteria are not met.· **STOT-single exposure**

May cause respiratory irritation.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

(Contd. on page 5)

# Safety data sheet

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Version number 4

Revision: 03.05.2018

**Trade name: Nonenylsuccinic anhydride**

(Contd. of page 4)

· **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
 Do not allow product to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
 Disposal must be made according to official regulations.
- **Uncleaned packagings:**
- **Recommendation:**  
 Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

### SECTION 14: Transport information

- |  |  |
|--|--|
| · <b>14.1 UN-Number</b>  |  |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void   |
| · <b>14.2 UN proper shipping name</b>  |  |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void   |
| · <b>14.3 Transport hazard class(es)</b>   |  |
| · <b>ADR, IMDG, IATA</b>   |  |
| · <b>Class</b>   | Void   |
| · <b>Label</b>   | -  |
| · <b>ADN/R Class:</b>  | Void   |
| · <b>14.4 Packing group</b>  |  |
| · <b>ADR, IMDG, IATA</b>   | Void   |
| · <b>14.5 Environmental hazards:</b>   |  |
| · <b>Marine pollutant:</b>   | No   |
| · <b>14.6 Special precautions for user</b>                                       | Not applicable.                                      |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                                       | Not dangerous according to the above specifications. |

(Contd. on page 6)

GB

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(Contd. of page 5)

· **UN "Model Regulation":** Void

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organisation
  - PBT: persistent, bioaccumulative, toxic substance (REACH)
  - vPvB: very persistent, very bioaccumulative substance (REACH)
  - REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
  - CLP: Regulation on classification, labelling and packaging of substances and mixtures
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- **\* Data compared to the previous version altered.**

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