SAFETY DATA SHEET

Purox S grains pure grade sodium benzoate (contains 99.9% of sodium benzoate)

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

Product name	:	Purox S grains pure grade sodium benzoate (contains 99.9% of sodium benzoate)
Chemical product name	:	sodium benzoate
Synonyms	:	Sodium benzoate; Sodium benzoic acid; Benzoate of sodium; Benzoic acid sodium salt
Chemical formula	:	C7-H5-O2.Na
Supplier	:	DSM Special Products B.V. P.O. Box 5489 6130 PL Sittard The Netherlands
Emergency telephone number	:	**The Netherlands: +31 (0)181 249285**
e-mail address of person responsible for this SDS	:	Info.Worldwise@dsm.com
Recommended use	:	This substance is used in the chemical-, pharmaceutical-, cosmetic-, and the nutrient industry.

2. Hazards identification

The substance is not classified as dangerous according to Directive 67/548/EEC and its amendments.

Classification	:	Not classified.
Human health hazards	:	Dust may cause mechanical irritation.
Environmental hazards	:	Based on the available data of this product no hazardous properties are known.
Physical/chemical hazards	:	Possibility of explosion exists under dusty conditions.

3. Composition/information on ingredients

Substance/preparation : Substance

Chemical name	CAS no.	%	EC no. *	Classification
sodium benzoate See section 16 for the full text of the R-phrases declared above	532-32-1	100	208-534-8	Not classified.

*** EC no. means EINECS or ELINCS number.**

4. First-aid measures

Effects and symptoms

Inhalation	:	Over-exposure by inhalation may cause respiratory irritation. (coughing)
Ingestion	:	There is no known acute effect after over-exposure to this product.
Skin contact	:	There is no known acute effect after over-exposure to this product.
Eye contact	:	Slight irritant. (redness)

First-aid measures

General	:	Move exposed person to fresh air.
Inhalation	:	If inhaled, remove to fresh air. Obtain medical attention if symptoms occur.
Ingestion	:	If swallowed, rinse mouth with water (only if the person is conscious). Obtain medical attention if symptoms occur.
Skin contact	:	Rinse with plenty of running water. Remove contaminated clothing and shoes. Obtain medical attention if symptoms occur.
Eye contact	:	Rinse with plenty of running water. Obtain medical attention if symptoms occur.
First aid facilities	:	No special recommendations.

5. Fire-fighting measures

Extinguishing media

Small fire

Suitable	:	Use dry chemical or CO_2.

Large fire

Suitable	:	Use water, foam or dry chemical powder.
Unusual fire/explosion hazards	:	Fine dust clouds may form explosive mixtures with air.
Hazardous thermal decomposition products	:	In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, sodium oxide.
Special fire-fighting procedures	:	No special measures required.
Protection of fire-fighters	:	Wear suitable protective clothing. Self-contained breathing apparatus.

6. Accidental release measures

Personal precautions : Avoid creating dusty conditions and prevent wind dispersal. Use suitable protective equipment (section 8). Keep away from sources of ignition. Take precautionary measures against static discharges. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Environmental precautions : No special measures required.

Clean-up Methods

Small spill and leak : Vacuum or sweep up material and place in a designated, labelled waste container. Clean up affected area with a large amount of water.

Large spill and leak : Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

7. Handling and storage

Handling : Use with adequate ventilation. Local exhaust ventilation should be provided. Avoid creating dusty conditions and prevent wind dispersal. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Take measures against static discharge. Keep away from sources of ignition.

Storage : Store in a dry, cool and well-ventilated area (due to limited adsorption properties).
The product has been produced and packaged in accordance with strict quality practices. Maintain this quality level by storing this product away from other chemicals.

Remarks : Electrostatic charging can occur during unloading or processing of this material. If necessary take precautionary measures against static discharges.
The product should be handled with the care usual when dealing with chemicals.

Packaging materials

Suitable : Polyethylene or Big bags (polypropylene).

Note: See section 10 for stability and reactivity

8. Exposure controls/personal protection

Engineering measures : Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Hygiene measures : When using do not eat, drink or smoke. Wash hands after handling compounds and before eating, smoking and using the lavatory and at the end of the day.

Personal protective equipment - Production scale

Respiratory system : Wear dust protection mask P2.

Skin and body : Working clothes.

Eyes : Safety glasses with side shields.

Hands : Wear suitable gloves.

Recommended material(s) : > 8 hours (breakthrough time): Nitril rubber, butyl rubber, neoprene, Viton, PVC. Replace damaged gloves.

Advice on personal protection is applicable for high exposure levels. Select proper personal protection based on a risk assessment of the actual exposure situation.

9. Physical and chemical properties

Physical state	Solid. [granules or solid, hygroscopic]
Colour	White.
Odour	Odourless.
pH	9 (Concentration 10%)
Boiling point	465 °C
Melting point	410 to 430 °C
Flash point	Not available.
Lower explosion limit	Not available.
Upper explosion limit	Not available.
Auto-ignition temperature	540 °C
Density (g/cm^3)	1.44 g/cm^3
Bulk density	>600 kg/m^3
Solubility in water	66 g/100 ml (20°C)
Solubility	Easily soluble in the following materials: cold water. Partially soluble in the following materials: methanol.
Molecular weight	144.11 g/mole
Minimum ignition energy	See remarks.
Dust explosion class	See remarks.
Remarks	Minimum ignition energy sodium benzoate (granules): 10000 mJ. Minimum ignition energy sodium benzoate (particle size <63 µm) = 30-100 mJ (25°C); Dust explosion class 1. In case of potential hazardous local circumstances, DSM advises the customer to take proper measures on the hardware/procedures to eliminate the risk of explosions. More detailed information on the physical and chemical properties can be requested from the supplier.

10. Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).

Conditions to avoid : Exposure to sources of heat, sources of ignition, open flame.

Materials to avoid : Oxidizing substances, acids, iron salts, moisture.

Hazardous decomposition products : In case of fire: see section 5.

11. Toxicological information

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Eye contact : No known significant effects or critical hazards.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
sodium benzoate	LD50 Oral LD50 Oral LD50 Oral	Rabbit Rat Mouse	2 g/kg 4070 mg/kg 1600 mg/kg	- - -

Potential chronic health effects

Chronic effects : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Chronic toxicity : No specific data.

Carcinogenicity : No specific data.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
sodium benzoate	Ames test	In vitro; Bacteria	Negative

Teratogenicity : No specific data.

Reproductive toxicity

Conclusion/Summary : NOAEL oral rat (4-generation study): >750 mg/kg/day.

Remarks : The substance is generally recognized as safe (GRAS) with an acceptable daily intake (ADI) of 5 mg / kg.
Mildly irritating to the eyes.
Non-irritant to skin. No indications for carcinogenicity. No indications for reproduction toxicity.

12. Ecological information

Environmental effects : Readily biodegradable This product shows a low bioaccumulation potential.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
sodium benzoate	Mortality Mortality	Acute LC50 >100 mg/L Acute LC50 >100 mg/L	Daphnia Fish	96 hours 96 hours

Persistence/degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
sodium benzoate	-	-	Readily

Product/ingredient name	$LogP_{ow}$	BCF	Potential
sodium benzoate	-2.27	-	low

Other adverse effects : No known significant effects or critical hazards.

12. Ecological information

AOX : The product does not contain organically bound halogens which could lead to an AOX (Adsorbable Organically bound Halogens) value in waste water.

Mobility : For data on physical state and solubility see section 9.

13. Disposal considerations

Methods of disposal (waste of residues; contaminated packaging) : Waste must be disposed of in accordance with national and local environmental regulations. Controlled biodegradation in waste water treatment is possible.

14. Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
ADR/RID Class	Not regulated.	-	-	-		-
ADNR Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

EU regulations

Risk phrases : According to EU Directives 67/548/EEC and 1999/45/EC this product does not require labelling.

Remarks : TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory. Listed on MITI inventory (Japan). Listed on the Australian Inventory of Chemical Substances (AICS). Canadian Environmental Protection Act (CEPA): This product is on the Domestic Substances List (DSL) and is acceptable for use under the provisions of CEPA.

16. Other information

Information : Safety, Health & Environment Department.
Telephone no.: +31 (0)181 249285

Internal code : WW15359

History

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Notice to reader

The information contained in the Safety Data Sheet is based on our data available on the date of publication. The information is intended to aid the user in controlling the handling risks; it is not to be construed as a warranty or specification of the product quality. The information may not be or may not altogether be applicable to combinations of the product with other substances or to particular applications.
The user is responsible for ensuring that appropriate precautions are taken and for satisfying themselves that the data are suitable and suffcient for the product's intended purpose. In case of any unclarity we advise consulting the supplier or an expert.

Training advice : Before handling this substance/preparation, the personnel involved should be instructed by means of this safety data sheet.

Sources of key data : Literature data and/or investigation reports are available through the manufacturer.

Alterations compared to the previous version : Alterations compared to the previous version are marked with a little (blue) triangle.