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1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

- Identification product: **BENZOIC ACID**
Chemical name : **BENZOIC ACID**
CAS No.: 65-85-0
EINECS No: 200-618-2
Pre-registration No.: 05-2115953609-33-0000
- Use of the substance / preparation :
 - intermediary in chemical industry ;
 - in pharmaceutical industry ;
 - in rubber industry;
 - large quantity are used in paints industry and in alkyd resins manufacturing ;
 - in food preservation.
- Company identification : **S.C. SINTEZA S.A.**
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- Responsible: reach@sinteza.ro

2. HAZARD IDENTIFICATION

- 2.1. Classification of the substance
Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
Eye damage cat.1, H318
STOT SE 3, H335
Classification according to Directive 67/548/EEC
Xn, R22
Additional information:
Full text of R- and H-phrases : see section 16
- 2.2. Label elements
Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]
Product identifier: **BENZOIC ACID**
Substance : **BENZOIC ACID**
Hazard pictograms:



Signal word: **Danger**

Hazard statements: H318 - Causes serious eye damage
H335 - May cause respiratory irritation

Precautionary statements:

P261 - Avoid breathing dust.

P271 - Use only outdoors or in a well-ventilated area

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P310 - Immediately call a POISON CENTER or doctor/physician.

P312 - Call a POISON CENTER or doctor/physician if you feel unwell.

P304+P340 - IF INHALED: Remove to fresh air and keep at rest in a position 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.

2.3. Other hazards

Benzoic acid is not a flammable substance, but is combustible involved in a fire burns. Possibility of explosion exists under dust conditions.

Flash point : 121 °C

Auto-ignition temperature: 574 °C

Explosion limits: lower – 0,95 % volume (200 °C)

upper – 8.2 % volume (200 °C)

3. COMPOSITION / INFORMATION ON INGREDIENTS HAZARD IDENTIFICATION

Chemical name : BENZOIC ACID

Molecular formula : C₇H₆O₂

Product chemical family : Organic monoacids

<u>Ingredients</u>	<u>Composition (% weight)</u>	<u>CAS No.</u>	<u>EC Index</u>
Benzoic Acid	min. 99,8 %	65 – 85 - 0	200-618-2

4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation : Remove person to fresh air and keep at rest in warm place. Consult a doctor according to symptoms.

Eye Contact : Wash immediately with plenty of water for at least 15 minutes. Consult a doctor.

Skin contact : Remove contaminated clothing. Immediately wash with plenty of water and non-abrasive soap. If skin irritation occurs (redness, etc), consult a doctor.

Ingestion : Rinse mouth with plenty of water. Do not induce vomiting. Call a doctor immediately.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation: Causes irritation of the mucous membrane and upper respiratory tract. May cause sensitizing reactions.

Eyes contact : Irritant effect on the eyes.

Skin contact: The product is irritating to skin. The substance can be absorbed through the skin.

Ingestion: Avoid ingestion of large quantities. It may cause gastrointestinal irritation with nausea, vomiting and diarrhea.

4.3. First aid facilities

Ensure that eyewash stations and safety showers are close to the workstation location.

5. FIRE – FIGHTING MEASURES

5.1. Extinguishing measures suitable :

- for small fires : dry chemical, carbon dioxide, water spray or regular foam.

- for large fires : water spray, fog or regular foam.

Extinguishing measures not suitable:

- do not use water jet. It disperses the fire.

5.2. Specific hazards :

Causes irritation of the mucous membrane and upper respiratory tract .

Fine dust clouds form explosive mixtures with air.

Thermal decomposition products :

In case of fire may produce hazardous decomposition product such as carbon monoxide, carbon dioxide.

5.3. Protective equipment for fire - fighters :

Wear proper protective equipment and self-contained breathing apparatus with full face – operated in positive mode.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions

Use suitable personal protection (see. chapter 8).

Keep away from sources of ignition.

Avoid creating dusty conditions and prevent wind dispersal.

6.2. Environmental precautions

Do not allow to enter natural waters or soil.

Neutralizing is possible, using Na_2CO_3 (sodium carbonate) but only by a specialist.

6.3. Methods for cleaning up

Collect the solid product use appropriate tools to when disposing. Avoid the formation of dust.

Collect product in suitable containers. The containers containing spilled material should be labelled properly. Recycle the spilled material.

Clean up affected area. Provide adequate ventilation. Prevent forming of dust clouds. Finely dispersed particles are sensitive to dust explosion.

7. HANDLING AND STORAGE

7.1. Handling

Ensure a general ventilation during handling the product. Use suitable protective equipment. Avoid contact with eyes, skin and clothing.

Avoid the formation of dust. Caution note - danger of dust explosion.

Keep away from sources of ignition.

7.2. Storage

Store in a cool, dry, well ventilated place.

Keep it in original and tightly packaging.

Keep away from heat, flame, oxidizing and reducing agents, strong bases.

7.3. Packaging materials : PE bags, repacked into multi-layers paper bags, a big packaging such as PP big-bags with PE in-liner.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Product exposure limits :

It isn't on the occupational exposure limits listed for chemical substances.

Avoid exposure first by technical and / or organizational measures.

8.2. Exposure limits control

Technical measures : use general and local exhaust ventilation or respiratory protection.

Occupational exposure limits control

Respiratory protection: Breathing masks with fine - dust filters.

Eyes protection: Tight fitting protective goggles with side protection.

Skin protection: Wear appropriate protective clothing.

Hand protection: Use acid resistant protective gloves.

Hygienic measures: Do not eat, drink or smok while handling it. Wash the hands with soap and water befor meals and at the end of the work shift.

Environmental exposure control: Avoid release to the environment

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour	crystalline powder or flakes, white
Odour	slightly aromatic
Ph	3 - 3,5
Melting point	122 °C
Boiling point	249 °C
Flash point	121 °C (closed cup)
Lower explosion limit	0,95 % vol. (200 °C)
Upper explosion limit	8,2 % vol. (200 °C)
Vapour pressure	< 0,01 kPa at 20 °C
Density	1,32 ($\rho_{4} = 1$)
Solubility in water	0,29 g/100 ml
Solubility	methanol, ethyl ether, acetone
Partition coefficient: n-octanol/water:	1,9
Auto-ignition temperature	574 °C

10. STABILITY AND REACTIVITY

Stability : stable under normal handling and storage condition. (see chapter 7)

Conditions to avoid : heat, sources of ignition, flame. Prevent forming of dust clouds.

Materials to avoid : Strong oxidizing substances, reducing substances, strong bases.

Polymerisation : has not been reported

Hazardous decomposition products : - by sudden heat : it decomposes → phenol, benzene
- by slow heating : it sublimes without decomposition

11. TOXICOLOGICAL INFORMATION

11.1. Health acute effects

Eyes : irritating

Skin : no known significant effects or critical hazards.

Inhalation : no known significant effects or critical hazards.

Ingestion : no known significant effects or critical hazards.

11.2. Acute toxicity : dermal-LD50(rabbit) > 2000 mg/kg

oral - LD50(mouse) = 2250 mg/kg

oral - LD50(rat) = 2565 mg/kg

inhalation LC50(rat) > 12,2 mg/L 4 hours

11.3. Chronic toxicity : Not know significant effects or critical hazard

11.4. Carcinogenicity: Not carcinogenic.

11.5. Mutagenicity: Not mutagenic

11.6. Reproductive toxicity: 4-generation oral study in rats: NOAEL oral rat: > 750 mg/kg/day

11.7. Other information : Avoid any contact with human body.

12. ECOLOGICAL INFORMATION

Ecotoxicity : Product is slightly hazardous for water.

No ecological problems are to be expected when the product is handled and used with due care and attention.

Acute toxicity : fish: LC 50 > 100 mg/l 96 hours
Algae: LC 50 > 10 mg/l 72 hours
Daphnia: EC 50 > 100 mg/l 48 hours
Degradability : Readily biodegradable.
LogPow: 1,9
half-life (in water or soil): 1 - 10 days
Mobility: surface tension 0,03 N/m (130 °C)

13. DISPOSAL CONSIDERATION

Check the consequences of the national regulations on this product.

Method of disposal :

Disposal of the spilled product could be made by combustion in a disposal plant, according to the local legislation.

Controlled neutralisation is possible but only by a specialist in waste water installation.

Contaminated packaging :

The contaminated packaging must be disposed of in a safe way, in according to the local and national legislation.

14. TRANSPORT INFORMATION

Benzoic acid is not dangerous good according to all transport regulation.

Special precaution : Not applicable.

15. REGULATORY INFORMATION

This product is not listed as an Extremely Hazardous Substance.

EU Index: Not listed

This product has been reviewed and is classified and labeled as follows in full accord with EC Directive 67/548, Regulation (EC) 1907/2007 and Regulation (EC) No 1272/2008 [CLP/GHS] (see section 16).

16. OTHER INFORMATIONS

Please observe national and local legal requirements.

Full text of classification and R , S phrases (according to Directive 67/548/EEC)referred to in sections 2:

Xn – harmful

R 22 - Harmful if swallowed

R 36/37/38 – Irritating to eyes, respiratory system and skin.

S 24 - Avoid skin contact.

Full text of classification and H, P phrases (according to Regulation (EC) No 1272/2008 [CLP/GHS]) referred to in sections 2:

Eye damage cat.1, H318

Specific target organ toxicity — Single exposure, Hazard Category 3, STOT SE 3, H335

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

P261 - Avoid breathing dust.

P271 - Use only outdoors or in a well-ventilated area

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P310 - Immediately call a POISON CENTER or doctor/physician.

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P304+P340 - IF INHALED: Remove to fresh air and keep at rest in a position 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.

-Recommendations for staff training: The SSM training will process the risks posed by exposure to toxic products on humans and the environment as well as protective measures.

-Restrictions on use: None.

NOTE 1. - This information is based on our present state of knowledge and not meant to guarantee product quality properties.

2. - Alterations compared to the previous version : All the chapters are modified and completed in accordance with the requirements Regulation (EC) No 1272/2008 [CLP/GHS] and Reg. EC 1907/2006.

Sources of key data :

1. Literature data, EC and Romanian Legislation and documents (reports) are available from the manufacturer.

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