MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	**BENZOIC ACID, REAGENT (ACS)**
Catalog #	673
Version #	02
Revision date	02-Aug-2011
CAS #	65-85-0
Manufacturer information	GFS Chemicals, Inc. P.O. Box 245 Powell, OH 43065 US www.gfschemicals.com Fax 740-881-5989 Phone 740-881-5501 Toll Free 800-858-9682 Emergency Assistance Chemtrec 800-424-9300

2. Hazards Identification

Emergency overview	CAUTION Harmful if swallowed. Irritating to skin. Irritating to eyes.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Ingestion. Skin contact. Eye contact. Inhalation.
Eyes	Causes eye irritation.
Skin	Irritating to skin.
Inhalation	Dusts of this product may cause irritation of the nose, throat, and respiratory tract.
Ingestion	Harmful if swallowed. Do not ingest.
Potential environmental effects	Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
BENZOIC ACID	65-85-0	90 - 100

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists after washing.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Ingestion	Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties	Not flammable by OSHA criteria. Not combustible by OSHA criteria. Will burn if involved in a fire.
Extinguishing media	
Suitable extinguishing media	Foam. Dry powder. Carbon dioxide (CO2). Water.
Protection of firefighters	
Protective equipment and precautions for firefighters	Move containers from fire area if you can do so without risk.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Should not be released into the environment. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and Storage

Handling	DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Avoid contact with skin. Avoid contact with eyes. Wear personal protective equipment. Do not use in areas without adequate ventilation. Wash thoroughly after handling. Avoid release to the environment.
Storage	Keep away from heat, sparks and open flame. Keep container tightly closed. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Engineering controls	Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Hand protection	Wear protective gloves.
Eye / face protection	Avoid contact with eyes. Chemical goggles are recommended.
Skin protection	Avoid contact with the skin. Wear suitable protective clothing. Wear protective gloves.
General hygeine considerations	Avoid contact with eyes. Avoid contact with skin. Wash hands after handling and before eating. Handle in accordance with good industrial hygiene and safety practice.
General	Avoid contact with skin. Avoid contact with eyes. Eye wash fountains are required. Emergency showers are required.

9. Physical & Chemical Properties

Appearance	Crystalline. or Flakes.
Color	White.
Odor	Characteristic.
Odor threshold	Not available.
Physical state	Solid.
Form	Solid.
pH	2.8 (saturated solution @ 25C)
Melting point	251.6 °F (122.4 °C) estimated
Freezing point	Not available.
Boiling point	480.2 °F (249.2 °C) 101.325 kPa
Flash point	250 °F (121.1 °C) estimated Closed Cup
Evaporation rate	Not available.

Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	0.0001 kPa at 25°C
Vapor density	4.21
Specific gravity	1.2659
Relative density	1.2658 g/cm3 estimated
Solubility (water)	3.4 g/l @ 25C
Partition coefficient (n-octanol/water)	1.87
Auto-ignition temperature	1058 °F (570 °C) estimated
Decomposition temperature	Not available.
VOC	0 % estimated
Percent volatile	0 % estimated
Molecular weight	122.1300 g/mol
Molecular formula	C7-H6-O2

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include oxides of carbon.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects

Acute Dermal: LD 50

BENZOIC ACID	65-85-0	Rabbit 5000 mg/kg

Acute Inhalation: LC 50

BENZOIC ACID	65-85-0	Rat 0.026 mg/l 1 h

Acute Oral: LD 50

BENZOIC ACID	65-85-0	Mouse 1940 mg/kg
BENZOIC ACID	65-85-0	Dog 2000 mg/kg
BENZOIC ACID	65-85-0	Cat 2000 mg/kg
BENZOIC ACID	65-85-0	Rat 1700 mg/kg

Acute Toxicity other routes: LD 50

BENZOIC ACID	65-85-0	Mouse 1460 mg/kg Intraperitoneal

Toxicology data for the preparation

Acute LD50: > 5000 mg/kg, Rabbit, Dermal
Acute LD50: 1460 mg/kg, Mouse, Other
Acute LC50: > 0.03 mg/l, Rat, Inhalation
Acute LD50: 2000 mg/kg, Cat, Oral
Acute LD50: 2000 mg/kg, Dog, Oral
Acute LD50: 1940 mg/kg, Mouse, Oral
Acute LD50: 1700 mg/kg, Rat, Oral

Local effects	Harmful if swallowed. Irritating to eyes. Irritating to skin.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

12. Ecological Information

Ecotoxicity	Components of this product are hazardous to aquatic life.
Environmental effects	Harmful to aquatic organisms.
Persistence and degradability	Not available.

Partition coefficient 1.87

13. Disposal Considerations

Disposal instructions Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

14. Transport Information

DOT

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

CERCLA (Superfund) reportable quantity

BENZOIC ACID, REAGENT (ACS): 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

BENZOIC ACID	65-85-0	Listed.

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings Health: 2
Flammability: 1
Physical hazard: 0

NFPA ratings	Health: 1 Flammability: 1 Instability: 0
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
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This data sheet contains changes from the previous version in section(s):	This document has undergone significant changes and should be reviewed in its entirety.