

Material Safety Data Sheet

Material Name: Sodium Benzoate

ID: C1-167

*** Section 1 - Chemical Product and Company Identification ***

Part Number: BP/USP/DAB

Chemical Name: Sodium Benzoate

Product Use: For Commercial Use

Synonyms: Benzoic acid, sodium salt; Benzoate of soda; and Benzoate de sodium.

Supplier Information

Chem One Ltd.

8017 Pinemont Drive, Suite 100

Houston, Texas 77040-6519

Phone #: (713) 896-9966

Fax #: (713) 896-7540

Emergency #: (800)424-9300 or (703) 527-3887

General Comments: FOR COMMERCIAL USE ONLY; NOT TO BE USED AS A PESTICIDE.

NOTE: Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

*** Section 2 - Composition / Information on Ingredients ***

CAS #	Component	Percent
532-32-1	Sodium Benzoate	>99

Component Related Regulatory Information

No information available.

Component Information/Information on Non-Hazardous Components

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

*** Section 3 - Hazards Identification ***

Emergency Overview

An odorless, white solid which comes in granule or powder forms. May cause temporary irritation of the eyes, skin and respiratory tract. Dusts of this product can form an explosive mixture with air. When heated to decomposition, it emits toxic fumes of sodium oxide. Use methods suitable for surrounding fire. Firefighters should wear full protective equipment when fighting a fire involving this product.

Hazard Statements

CAUTION! MAY CAUSE IRRITATION TO THE RESPIRATORY TRACT, EYES, AND SKIN. MAY CAUSE ALLERGIC REACTION WHEN INGESTED. PROLONGED SKIN CONTACT MAY CAUSE IRRITATION. Avoid contact with eyes and skin. Avoid breathing dusts. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation.

Potential Health Effects: Eyes

Dusts and mists may cause mild to moderate irritation of the eyes.

Potential Health Effects: Skin

Dusts or solutions of this product may cause mild, temporary irritation to the skin.

Potential Health Effects: Ingestion

Ingestion may produce symptoms of irritation including gastric pain, nausea, diarrhea, and vomiting. Ingestion of large amounts may cause metabolic acidosis. Chronic Ingestion of large daily doses (12 g/day) over 5 days has caused mouth and throat pain, stomach pain (burning sensation) and loss of appetite. Repeated ingestion of benzoates can cause a food allergy. Sensitized people can experience symptoms of hives (reddening, patchiness, swelling and itching of skin) or bronchial asthma (wheezing, difficult breathing, sneezing and runny nose). There are no reports of allergic sensitization to sodium benzoate through occupational exposures.

Potential Health Effects: Inhalation

Dusts and mists from solutions may cause mild irritation of the upper respiratory tract. Symptoms may include nasal discharge, sneezing and coughing.

HMIS Ratings: Health Hazard: 1 Fire Hazard: 1 Physical Hazard: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 4 - First Aid Measures ***

First Aid: Eyes

Immediately flush eyes with plenty of water for 15 minutes. If irritation persists, seek medical advice immediately.

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*** Section 4 - First Aid Measures (Continued) ***

First Aid: Skin

If irritation occurs, wash gently and thoroughly with water and non-abrasive soap. If irritation persists, seek medical advice. Wash contaminated clothing before reuse.

First Aid: Ingestion

Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Immediately give large amounts of water. If vomiting occurs naturally, rinse mouth and repeat administration of water. Obtain medical advice immediately. Never give anything by mouth to a victim who is unconscious or having convulsions.

First Aid: Inhalation

Remove source of contamination or move victim to fresh air. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Get immediate medical attention.

First Aid: Notes to Physician

Provide general supportive measures. Contact the nearest Poison Control Center for all serious exposures.

*** Section 5 - Fire Fighting Measures ***

Flash Point: Not applicable

Method Used: Not applicable

Upper Flammable Limit (UFL): Not applicable

Lower Flammable Limit (LFL): Not applicable

Auto Ignition: Not available

Flammability Classification: Not applicable

Rate of Burning: Not applicable

General Fire Hazards

Presents only a slight danger as a fire hazard under normal conditions. Minimize risk of explosion by controlling dusts. Sodium Benzoate dust can form explosive mixtures with air. Minimum ignition temperature: (dust cloud) 560 deg C (1040 deg F); (dust layer) 680 deg C (1256 deg F)

Hazardous Combustion Products

Carbon dioxide and carbon monoxide. When heated to decomposition, sodium benzoate emits toxic fumes of sodium oxide.

Extinguishing Media

Use methods for the surrounding fire including water spray, dry chemical, carbon dioxide, or foam.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self contained breathing apparatus.

NFPA Ratings: Health: 1 Fire: 1 Reactivity: 0 Other:

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Containment Procedures

Stop the flow of material, if this can be done without risk. Contain the discharged material. If sweeping of a contaminated area is necessary use a dust suppressant agent, which does not react with product. Spilled material that becomes wet will be very slippery.

Clean-Up Procedures

Wear appropriate protective equipment and clothing during clean-up. Shovel the material into waste container. Thoroughly wash the area after a spill or leak clean-up. Prevent spill rinsate from contamination of storm drains, sewers, soil or groundwater. Use copious amounts of water to decontaminate spill areas after clean-up to prevent creating slip hazard.

Evacuation Procedures

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering. Keep materials which burn away from spilled material. In case of large spills, follow all facility emergency response procedures.

Special Procedures

Remove soiled clothing and launder before reuse. Avoid all skin contact with the spilled material. Have emergency equipment readily available.

*** Section 7 - Handling and Storage ***

Handling Procedures

All employees who handle this material should be trained to handle it safely. Do not breathe dust. Avoid all contact with skin and eyes. Use this product only with adequate ventilation. Wash thoroughly after handling. Avoid accumulation of dusts, which can lead to a serious hazard of dust explosion. Do not reuse empty containers.

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*** Section 7 - Handling and Storage (Continued) ***

Storage Procedures

Keep container tightly closed when not in use. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Storage areas should be made of fire-resistant materials. Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Use corrosion-resistant structural materials, lighting, and ventilation systems in the storage area. Floors should be sealed to prevent absorption of this material. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Have appropriate extinguishing equipment in the storage area (i.e., sprinkler system, portable fire extinguishers). Good housekeeping is very important to prevent accumulations of dust. Dry sweeping is not recommended. Pre-wet the material or use an explosion-proof vacuum equipped with high efficiency filter(s) and take great care against slip hazard. Use only conductive equipment for handling this material (e.g. metal conveyors and piping) and keep all components grounded. Ground clips must contact bare metal. Do not transfer in storage area unless it is segregated by fire-resistant construction. Empty containers may contain residual particulates; therefore, empty containers should be handled with care. Never store food, feed, or drinking water in containers which held this product. Keep this material away from food, drink and animal feed. Do not store this material in open or unlabeled containers. Limit quantity of material stored. Wipe down area of use periodically to avoid the accumulation of dusts. Keep away from strong acids and alkalis, and ferric salts.

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines

A: General Product Information

No exposure guidelines have been established.

B: Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

The exposure limits given are for Particulates Not Otherwise Classified (PNOC).

OSHA: 15 mg/m³ TWA (Total dust)
5 mg/m³ TWA (Respirable fraction)

DFG MAKs 4 mg/m³ TWA (Inhalable fraction)
1.5 mg/m³ TWA (Respirable fraction)

Engineering Controls

Use engineering methods to control hazardous conditions. This includes exhaust ventilation directly to the outside and using a corrosion-resistant ventilation system separate from other exhaust ventilation systems.

PERSONAL PROTECTIVE EQUIPMENT

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132). Please reference applicable regulations and standards for relevant details.

Personal Protective Equipment: Eyes/Face

Wear safety glasses with side shields (or goggles) and a face shield, if this material is made into solution. If necessary, refer to U.S. OSHA 29 CFR 1910.133.

Personal Protective Equipment: Skin

Wear impervious gloves, boots and coveralls to avoid skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138.

Personal Protective Equipment: Respiratory

No specific guidelines are available. If airborne concentrations are above the applicable exposure limits, use NIOSH-approved respiratory protection. An approved dust and mist air-purifying respirator may be adequate. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

Personal Protective Equipment: General

Have an eyewash fountain and safety shower available in the work area. Use good hygiene practices when handling this material including changing and laundering work clothing after use. Wash hands thoroughly after handling material. Do not eat, drink, or smoke in work areas.

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*** Section 9 - Physical & Chemical Properties ***

Physical Properties: Additional Information

The data provided in this section are to be used for product safety handling purposes. Please refer to Product Data Sheets, Certificates of Conformity or Certificates of Analysis for chemical and physical data for determinations of quality and for formulation purposes.

Appearance:	White	Odor:	Odorless
Physical State:	Solid	pH:	8
Vapor Pressure:	Zero	Vapor Density:	Not applicable
Boiling Point:	Not applicable	Melting Point:	Not available
Solubility (H₂O):	55g/100 ml water	Specific Gravity:	Not available
Freezing Point:	Not applicable	Particle Size:	Not available
Softening Point:	Not applicable	Bulk Density:	Not available
Molecular Weight:	144.11	Chemical Formula	C ₆ H ₅ COONa

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

Stable.

Chemical Stability: Conditions to Avoid

Contact with strong acids and alkalis, and ferric salts.

Incompatibility

Strong acids - may react and produce benzoic acid. Alkalies. Ferric salts.

Hazardous Decomposition

Carbon dioxide and carbon monoxide. When heated to decomposition, sodium benzoate emits toxic fumes of sodium oxide.

Hazardous Polymerization

Will not occur.

*** Section 11 - Toxicological Information ***

Acute and Chronic Toxicity

A: General Product Information

Dusts and mists may cause mild to moderate irritation of the eyes. Dusts or solutions of this product may cause mild, temporary irritation to the skin. Ingestion may produce symptoms of irritation including gastric pain, nausea, diarrhea, and vomiting. Ingestion of large amounts may cause metabolic acidosis, hypokalemia, and hypocalcemia. Ingestion of small amounts is not expected to cause toxicity. Rare cases of food allergy have been reported due to repeated ingestion of sodium Benzoate. Symptoms include hives, or bronchial asthma (wheezing and difficulty breathing). No cases of allergic sensitization are known due to occupational exposure. Dusts and mists from solutions may cause mild irritation of the upper respiratory tract. Symptoms may include nasal discharge, sneezing and coughing. Sodium Benzoate is metabolized completely and will not accumulate in the body.

B: Component Analysis - LD₅₀/LC₅₀

Sodium Benzoate (532-32-1)

LD₅₀ (Oral-Rat) 4070 mg/kg; LD₅₀ (Oral-Mouse) 1600 mg/kg; Behavioral: changes in motor activity (specific assay); Lungs, Thorax, or Respiration: dyspnea; LD₅₀ (Oral-Dog) 2 gm/kg; LD₅₀ (Oral-Rabbit) 2 gm/kg; LD₅₀ (Subcutaneous-Rat) 2 gm/kg; LD₅₀ (Subcutaneous-Rabbit) 2 gm/kg; LD₅₀ (Intravenous-Rat) 1714 mg/kg; Behavioral: tremor, convulsions or effect on seizure threshold; LD₅₀ (Intravenous-Mouse) 1440 mg/kg; LD₅₀ (Intramuscular-Mouse) 2306 mg/kg

C: Component Analysis - TDLo/LDLo

TDLo (Oral-Rat) 27,370 mg/kg/10 days-continuous: Liver: changes in liver weight; Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Biochemical: Metabolism (Intermediary): other proteins; TDLo (Oral-Rat) 84 gm/kg/28 days-continuous: Behavioral: convulsions or effect on seizure threshold; Kidney, Ureter, Bladder: other changes; Related to Chronic Data: death; TDLo (Oral-Rat) 137 gm/kg/13 weeks-continuous: Behavioral: convulsions or effect on seizure threshold; Nutritional and Gross Metabolic: weight loss or decreased weight gain; Related to Chronic Data: death; TDLo (Oral-Rat) 44 gm/kg: female 1-22 day(s) after conception: Reproductive: Specific Developmental Abnormalities: homeostasis, eye/ear, musculoskeletal system; TDLo (Oral-Rat) 44 gm/kg: female 1-22 day(s) after conception: Reproductive: Effects on Newborn: viability index (e.g., # alive at day 4 per # born alive);

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*** Section 11 - Toxicological Information (Continued) ***

Acute and Chronic Toxicity (continued)

C: Component Analysis - TDLo/LDLo (continued)

TDLo (Oral-Mouse) 45 gm/kg/10 days-continuous: Liver: changes in liver weight; Kidney, Ureter, Bladder: changes in bladder weight; Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); TDLo (Intraperitoneal-Rat) 3 gm/kg: female 12-14 day(s) after conception: Reproductive: Effects on Embryo or Fetus: fetotoxicity (except death, e.g., stunted fetus); TDLo (Intraperitoneal-Rat) 300 mg/kg: female 12-14 day(s) after conception: Reproductive: Effects on Embryo or Fetus: fetal death; LDLo (Intraperitoneal-Guinea Pig) 1400 mg/kg; LDLo (Subcutaneous-Guinea-Pig) 1 gm/kg; LDLo (Subcutaneous-Frog) 100 mg/kg

Carcinogenicity

A: General Product Information

Information not available.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Epidemiology

Information not available.

Neurotoxicity

Information not available.

Mutagenicity

Sister Chromatid Exchange (Human-Lymphocyte) 10 mmol/L; Cytogenetic Analysis (Hamster-Lung) 1 gm/L; Cytogenetic Analysis (Hamster-Fibroblast) 2 gm/L/48 hours

Sodium Benzoate has given both positive (chromosome aberrations) and negative (sister chromatid exchanges) results in in-vitro tests using mammalian cells.

Teratogenicity

One rat study of exposure by injection reported embryotoxicity and malformation of the pups with no maternal effects. Since this is not a typical route of exposure for humans, the significance of this effect cannot be evaluated with respect to occupational exposure.

Other Toxicological Information

In a study where rats were fed 2% sodium benzoate in the diet (about 1g/kg/day) for 4 weeks, the rats had reduced body weight gain (males only). Levels of 5% in diet caused hyperexcitability, loss of bladder control, convulsions, and death in 1 to 2 weeks. In another rat study, dietary levels of 3.25 or 3.75% for 40 days caused severe depression of growth, kidney and liver effects and increased deaths.

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

No information available.

B: Ecotoxicity

No ecotoxicity data are available for this product's components.

Environmental Fate

No information available.

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

A: General Product Information

As shipped, product is not considered a hazardous waste by the EPA.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Review federal, provincial, and local government requirements prior to disposal. Disposal by controlled incineration or secure landfill may be acceptable.

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*** Section 14 - Transportation Information ***

NOTE: The shipping classification information in this section (Section 14) is meant as a guide to the overall classification of the product. However, transportation classifications may be subject to change with changes in package size. Consult shipper requirements under I.M.O., I.C.A.O. (I.A.T.A.) and 49 CFR to assure regulatory compliance.

US DOT Information

Shipping Name: Non-regulated

Hazard Class: Not Applicable

UN/NA #: Not Applicable

Packing Group: Not Applicable

Required Label(s): None

Additional Info:: When shipped as a single bulk package equal to 5000 pounds or more, this material is regulated as a U.S. DOT hazardous material as the following: RQ, Environmentally Hazardous Substance, Solid, n.o.s., (Sodium Benzoate), 9, UN 3077, III, Class 9.

International Air Transport Association (IATA)

For Shipments by Air transport: We classify this product as hazardous (Class 9) when shipped by air because 49 CFR 173.140 (a). "For the purposes of this subchapter, miscellaneous hazardous material (Class 9) means a material which presents a hazard during transportation, but which does not meet the definition of any other hazard class. This class includes: (a) Any material which has an anesthetic, noxious, or other similar property which could cause extreme annoyance or discomfort to a flight crew member so as to prevent the correct performance of assigned duties."

UN: UN 3077

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Sodium Benzoate)

Hazard Class: 9

Packing Group: III

Passenger & Cargo Aircraft Packing Instruction: 911

Passenger & Cargo Aircraft Maximum Net Quantity: No Limit

Limited Quantity Packing Instruction (Passenger & Cargo Aircraft): Y911

Limited Quantity Maximum Net Quantity (Passenger & Cargo Aircraft): 30 kg

Special Provisions: A97

ERG Code: 9L

International Maritime Organization (I.M.O.) Classification

I.M.O. Classification: Sodium Benzoate is not regulated under the IMDG/IMO regulations.

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

None.

B: Component Analysis

Sodium Benzoate is not listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

SARA 302 (EHS TPQ) There are no specific Threshold Planning Quantities for Sodium Benzoate. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lbs. (4,540 kg) therefore applies, per 40 CFR 370.20.

C: Sara 311/312 Tier II Hazard Ratings:

Component	CAS #	Fire Hazard	Reactivity Hazard	Pressure Hazard	Immediate Health Hazard	Chronic Health Hazard
Sodium Benzoate	532-32-1	No	No	No	Yes	No

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*** Section 15 - Regulatory Information (Continued) ***

State Regulations

A: General Product Information

Other state regulations may apply.

B: Component Analysis - State

Component	CAS #	CA	FL	MA	MN	NJ	PA
Sodium Benzoate	532-32-1	No	No	No	No	No	No

Other Regulations

A: General Product Information

Not determined.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Sodium Benzoate	532-32-1	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

ANSI Labeling (Z129.1):

CAUTION! MAY CAUSE IRRITATION TO THE RESPIRATORY TRACT, EYES, AND SKIN. MAY CAUSE ALLERGIC REACTION WHEN INGESTED. PROLONGED SKIN CONTACT MAY CAUSE IRRITATION. Do not taste or swallow. Do not get on skin or in eyes. Avoid breathing dusts or particulates. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Keep from contact with clothing. Wear gloves, goggles, faceshields, suitable body protection, and NIOSH-approved respiratory protection, as appropriate. **FIRST-AID:** In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use water fog, dry chemical, CO₂, or "alcohol" foam. **IN CASE OF SPILL:** Absorb spill with inert material. Spills may be very slippery if wetted. Place residue in suitable container. Consult Material Safety Data Sheet for additional information.

*** Section 16 - Other Information ***

Other Information

Chem One Ltd. ("Chem One") shall not be responsible for the use of any information, product, method, or apparatus herein presented ("Information"), and you must make your own determination as to its suitability and completeness for your own use, for the protection of the environment, and for health and safety purposes. You assume the entire risk of relying on this Information. In no event shall Chem One be responsible for damages of any nature whatsoever resulting from the use of this product or products, or reliance upon this Information. By providing this Information, Chem One neither can nor intends to control the method or manner by which you use, handle, store, or transport Chem One products. If any materials are mentioned that are not Chem One products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed. Chem One makes no representations or warranties, either express or implied of merchantability, fitness for a particular purpose or of any other nature regarding this information, and nothing herein waives any of Chem One's conditions of sale. This information could include technical inaccuracies or typographical errors. Chem One may make improvements and/or changes in the product (s) and/or the program (s) described in this information at any time. If you have any questions, please contact us at Tel. 713-896-9966 or E-mail us at Safety@chemone.com.

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration

Contact: Sue Palmer-Koleman, PhD

Contact Phone: (713)-896-9966

Revision Log

08/28/00 4:01 PM SEP Changed company name, Sect 1 and 16, from Corporation to Ltd.
08/20/01 3:05 PM CLJ Add Shipments by Air information to Section 14, Changed contact to Sue, non-800 Chemtrec Num.
04/15/04 3:05 PM HDF General review and up-date of entire MSDS. Up-date of HMIS categories. Addition of new toxicity data to Section 11. Up-date of Section 8. Up-date of Section 14. Up-date of Section 15.
06/22/05 10:17AM SEP Update IATA Section 14

This is the end of MSDS # C1-167