

ROLL FILM

Develop (20°C/68°F)
Stop
Fix

8 minutes
30 seconds
5-10 minutes in a fixer
such as Formulary Fixer
24 (catalog no. 03-0010)
(do not use rapid fix)
30 seconds
2 minutes (Use Formulary
Hypo Clear 03-0165)
5 minutes in running
water

Agitate roll film for the first minute and for 15 seconds every 30 seconds thereafter.

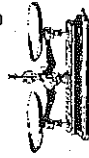
SHEET FILM

Presoak in water
Develop (20°C/68°F)
Stop
Fix

2 minutes
7 minutes
30 seconds
5-10 minutes in a fixer
such as Formulary Fixer
24 (catalog no. 03-0010)
(do not use rapid fix)
30 seconds
2 minutes (Use Formulary
Hypo Clear 03-0165)
5 minutes in running
water

Develop in a tray with constant but gentle agitation.

Consult local sewer and water authorities regarding disposal of darkroom chemicals.



F PHOTOGRAPHERS'
FORMULARY INC.

PO Box 950 • Condon MT 59826 • 406-754-2891 • FAX 406-754-2896
E-MAIL: formulary@montana.com

PHOTOGRAPHERS'
FORMULARY

JOHN WIMBERLEY DEVELOPER NUMBER 2, VERSION D
(WD2D)

WD2D is a modern pyrogallol-metol film developer formulated by John Wimberley. His article on this formula has been published in the October 1977 issue of PETERSEN'S PHOTOGRAPHIC.

Wimberley's WD2D is unusual in two respects. First, unlike most pyrogallol developers which lose about one f-stop, WD2D produces full film speed. Second, contrast control is achieved by varying the proportions of the two stock solutions used to make the working solution. Almost all other film developers control contrast by varying development time or by using split development (compensating developers)

CHEMICAL SAFETY

All chemicals are dangerous and must be treated with respect. Please read the warnings on each package.

There are two chemicals in Wimberley's WD2D that need special attention: Metol and Pyrogallol.

METOL: Some individuals become sensitized (develop allergic symptoms or rashes) when using metol. If this should occur, discontinue use and consult a physician.

PYROGALLOL is a phenol and thus has the potential to cause chemical skin burns. To be on the safe side, use rubber gloves and clean your work area and equipment with lots of water. (Soap and water is best.) If pyrogallol (solid or in solution) should come into contact with your skin, wash the area with water followed by soap and water. Brief skin contact produces a dark stain which is not a chemical burn. Prolonged skin contact does produce a chemical burn which closely resembles a heat burn.

PYROGALLOL is also a poison. Do not inhale its dust.

IF FOR ANY REASON YOU DO NOT WISH TO ASSUME ALL RISKS IN USING THESE CHEMICALS, PLEASE RETURN THEM FOR A FULL REFUND.

MIXING THE STOCK SOLUTIONS

You will need two storage bottles, glass or plastic, each with a capacity of 1/2 liter (or 1 lt.). You will also need a 10 ml, 25 ml, and a 100 ml graduated cylinder to prepare the 1% benzotriazole solution, to mix the Stock Solution B, and to mix the working solution.

(4)

SECTION -VIII, STABILITY AND REACTIVITY

- INCOMPATIBILITIES
ACIDS
ACIDS CHLORIDES
ACID ANHYDRIDES
OXIDIZING AGENTS
SENSITIVE TO LIGHT

- HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

THERMAL DECOMPOSITION MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, AND NITROGEN OXIDES.
SULFUR OXIDES.

SECTION -IX, TOXICOLOGICAL INFORMATION

ACUTE EFFECTS

- HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.
- CAUSES EYE AND SKIN IRRITATION.
- MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
- PROLONGED OR REPEATED EXPOSURE MAY CAUSE ALLERGIC REACTIONS IN CERTAIN SENSITIVE INDIVIDUALS.
- TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

SECTION -X, OTHER INFORMATION

The information submitted is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processor from the responsibility of carrying out their own tests and experiments, neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

(3)

SECTION – V, ACCIDENTAL RELEASE MEASURES

- WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
- SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
- VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION – VI, SAFE HANDLING / PERSONAL PROTECTION

- WEAR APPROPRIATE RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES.
- SAFETY SHOWER AND EYE BATH.
- USE ONLY IN A CHEMICAL FUME HOOD.
- DO NOT BREATHE DUST.
- AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
- AVOID PROLONGED OR REPEATED EXPOSURE.
- WASH THOROUGHLY AFTER HANDLING.
- TOXIC.
- IRRITANT.
- POSSIBLE SENSITIZER.
- KEEP TIGHTLY CLOSED.
- PROTECT FROM LIGHT.

SECTION – VII, PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR : WHITE CRYSTALS, ODORLESS
PHYSICAL PROPERTIES
MELTING POINT : 260⁰ C (DEC)
AUTOIGNITION TEMPERATURE : 531⁰ C

Continue on page....4

(2)

SECTION – III, FIRST-AID MEASURES

- IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.
- IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER.
- IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
- IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.
- WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION – IV, FIRE FIGHTING MEASURES

- EXTINGUISHING MEDIA
WATER SPRAY.
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.
- SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
- UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

Continue on page....3

10-0770

MATERIAL SAFETY DATA SHEET (M. S. D. S.)

SECTION – I, CHEMICAL IDENTIFICATION

NAME OF PRODUCT : METOL (p-METHYL AMINOPHENOL SULPHATE)
CHEMICAL FORMULA : $\text{HOC}_6\text{H}_4\text{NHCH}_3 \frac{1}{2} \text{H}_2\text{SO}_4$
CAS NO. : 55-55-0

SECTION – II, HAZARDS IDENTIFICATION

- TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
- IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
- IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
- IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
- WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

Continue on page....2

MATERIAL SAFETY DATA SHEET

SODIUM CARBONATE MONOHYDRATE

1. Product Identification

Synonyms: Carbonic acid, disodium salt monohydrate; disodium carbonate monohydrate; Soda ash

CAS No.: 5968-11-6 (Anhydrous) 5968-11-6 (Monohydrate)

Molecular Weight: 124.00

Chemical Formula: Na₂CO₃·H₂O

Product Codes: CANTON LABORATORIES : 47040, 67160, 57042

2. Composition/Information on Ingredients

Ingredient Hazardous	CAS No	Percent	
Sodium Carbonate	5968-11-6	99.5-100.5%	No

3. Hazards Identification

Emergency Overview

DANGER! MAY CAUSE EYE BURNS. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT.

Health Rating: 1 - Slight

Flammability Rating: 0 - None

Reactivity Rating: 1 - Slight

Contact Rating: 2 - Moderate

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

Storage Color Code: Orange (General Storage)

Potential Health Effects

Inhalation:

Inhalation of dust may cause irritation to the respiratory tract. Symptoms from excessive inhalation of dust may include coughing and difficult breathing. Excessive contact is known to cause damage to the nasal septum.

Ingestion:

Sodium carbonate is only slightly toxic, but large doses may be corrosive to the

gastro-intestinal tract where symptoms may include severe abdominal pain, vomiting, diarrhea, collapse and death.

Skin Contact:

Excessive contact may cause irritation with blistering and redness. Solutions may cause severe irritation or burns.

Eye Contact:

Contact may be corrosive to eyes and cause conjunctival edema and corneal destruction. Risk of serious injury increases if eyes are kept tightly closed. Other symptoms may appear from absorption of sodium carbonate into the bloodstream via the eyes.

Chronic Exposure:

Prolonged or repeated skin exposure may cause sensitization.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician:

Consider endoscopy in all suspected cases of sodium carbonate poisoning. Perform blood analysis to determine if dehydration, acidosis, or other electrolyte imbalances occurred.

5. Fire Fighting Measures

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered an explosion hazard, but sodium carbonate may explode when applied to red-hot aluminum.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

Use protective clothing and breathing equipment appropriate for the surrounding fire.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White crystalline powder.

Odor:

Odorless.

Solubility:

30 g/100 ml water @ 60C (140F)

Density:

2.25

pH:

Aqueous solutions are strongly alkaline.

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

400C (752F)

Melting Point:

851C (1564F) Loses water at ca. 100C.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Oxides of carbon and sodium oxide.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Fluorine, aluminum, phosphorous pentoxide, sulfuric acid, zinc, lithium, moisture, calcium hydroxide and 2,4,6-trinitrotoluene. Reacts violently with acids to form carbon dioxide.

Conditions to Avoid:

Moisture, heat, dusting and incompatibles.

11. Toxicological Information

For anhydrous sodium carbonate: Oral rat LD50: 4090 mg/kg; inhalation rat LC50: 2300 mg/m³/2H; irritation eye rabbit: 50 mg severe; investigated as a mutagen, reproductive effector.

-----\Cancer Lists\-----			
Ingredient Category	---NTP Carcinogen---		IARC
	Known	Anticipated	
Sodium Carbonate (5968-11-6)	No	No	None

12. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

13. Transport Information

Not regulated.

14. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----
 Ingredient TSCA EC Japan
 Australia

Sodium Carbonate (5968-11-6) Yes Yes Yes Yes

-----\Chemical Inventory Status - Part 2\-----
 Ingredient Korea DSL NDSL Phil.
 -----Canada-----

Sodium Carbonate (5968-11-6) Yes Yes No Yes

-----\Federal, State & International Regulations - Part 1\-----
 Ingredient -SARA 302- -----SARA 313-----
 Catg. RQ TPQ List Chemical

Sodium Carbonate (5968-11-6) No No No No

-----\Federal, State & International Regulations - Part 2\-----
 Ingredient CERCLA -RCRA- -TSCA-
 261.33 8(d)

Sodium Carbonate (5968-11-6) No No No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
 Reactivity: No (Pure / Solid)

Poison Schedule: S5

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

15. Other Information

NFPA Ratings: Health: 2 Flammability: 0 Reactivity: 0

Label Hazard Warning:

DANGER! MAY CAUSE EYE BURNS. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT.

Label Precautions:

Do not get in eyes.

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

Label First Aid:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If swallowed, DO NOT INDUCE VOMITING. Give large

quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In all cases, get medical attention.

Product Use:

Laboratory Reagent.

Prepared by: CANTON LABORATORIES

Phone Number: (+91) 265 643119/638001 (INDIA)

REPORT NUMBER: 703

UNIVAR USA INC.

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MSDS NO: P12108VS

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 03/22/02

VERSION: 009

PRODUCT: SODIUM BISULFATE, ANHYDROUS GLOBULAR, TECHNICAL

ORDER NO: 209212

PROD NO : 344820

PHOTOGRAPHERS FORMULARY
CALL IN ADVANCE TO MEET
7079 HWY 83 N,
BOX 89
CONDON ,MT 59826

UNIVAR USA INC.
6100 CARILLON POINT

, KIRKLAND

(425)889-3400
, WA 98033

----- EMERGENCY ASSISTANCE -----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC
(800)424-9300

PRODUCT IDENTIFICATION

PRODUCT NAME: SODIUM BISULFATE, ANHYDROUS GLOBULAR, TECHNICAL
MSDS#: P12108VS
DATE ISSUED: 03/05/02
SUPERSEDES: 03/01/01
ISSUED BY: 006548

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: Sodium bisulfate, anhydrous globular, technical
Product Code: SB901
Synonyms: Sodium acid sulfate, Nitre cake, Sodium hydrogen sulfate
Product Use: Cleaning compounds, pH adjustment

PRODUCT: SODIUM BISULFATE, ANHYDROUS GLOBULAR, TECHNICAL

ORDER NO: 209212

PROD NO : 344820

Manufacturer's Jones-Hamilton Co. 24-Hour Emergency Phone Numbers(U.S.A.):
 Name/Address: 8400 Enterprise Drive California: (510) 797-2471
 Newark, CA 94560 Ohio: (419) 666-9838
 -or- CHEMTREC: (800) 424-9300
 30354 Tracy Road
 Walbridge, OH 43465

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Formula: NaHSO4

Component	CAS#	% (by weight)	Exposure Limits
Sodium bisulfate	7681-33-1	91.5-94.7	None established
Sodium sulfate	7757-82-6	4.8-8.0	None established
Mixture	7732-18-5	0.1-0.8	None established

HA: This material is classified as an irritant under current OSHA regulations.

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Off-white granular material, with the consistency of salt.
 Presents little or no hazard if spilled and no unusual hazard if involved in a fire. However, keep out of streams and ditches.

Potential Health Effects:

Eye: Causes mild to severe irritation. May cause burn if not flushed with water.

SKIN: Prolonged exposure may cause moderate irritation. May cause burn if not flushed with water.

INHALATION: Inhalation of dust may irritate or burn nose, throat and lungs.

INGESTION: Small amounts (tablespoonful) swallowed are not likely to cause injury; however, swallowing large amounts may irritate or burn digestive tract.

GENOTOXIC (CANCER) INFORMATION: Not known to cause cancer. Not listed as carcinogen by IARC, NTP or OSHA.

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UNIVAR USA INC.

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MSDS NO: P12108V5

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 08/22/02

VERSION: 009

PRODUCT: SODIUM BISULFATE, ANHYDROUS GLOBULAR, TECHNICAL

ORDER NO: 209212

PROD NO : 344820

TERATOLOGY (BIRTH DEFECT) INFORMATION: No data available.

REPRODUCTION INFORMATION: No data available.

POTENTIAL ENVIRONMENTAL EFFECTS: Material in dry form is not hazardous to the environment. However, readily dissolves in water to form a weak acid solution. Therefore, keep out of streams and ditches.

SECTION 4 FIRST AID MEASURES

NOTE TO PHYSICIAN: Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. May aggravate pre-existing respiratory conditions.

EYES: Immediately flush eyes with water for at least 15 minutes, lifting eyelids to thoroughly flush. If redness or irritation persists, get prompt medical attention.

SKIN: Immediately flush affected area with water for at least 15 minutes. If burn occurs, seek immediate medical attention.

INHALATION: Remove to fresh air. If irritation or discomfort persists, seek medical attention.

INGESTION: If large amounts are ingested (greater than tablespoonful), drink large quantities of milk or water. Follow with Milk of Magnesia, beaten eggs or vegetable oil. DO NOT induce vomiting. Contact Physician immediately.

SECTION 5 FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: Not applicable. Material will not burn.

FLAMMABLE LIMITS: Not applicable. Material is non-combustible.

EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire. Because material will readily dissolve in water to form a weak acid solution, avoid water contact with material if possible.

HAZARDOUS COMBUSTION PRODUCTS: At temperatures over 506 F (430 C), product will decompose generating oxides of sulfur.

PRODUCT: SODIUM BISULFATE, ANHYDROUS GLOBULAR, TECHNICAL

ORDER NO: 209212

PROD NO : 344820

FIRE FIGHTING INSTRUCTIONS: Product readily dissolves in water to form a weak acid solution. If using water, wear acid protective equipment. No gases or toxic fumes are emitted from this reaction. However, if elevated temperatures (> 806 F) are reached, self-contained breathing apparatus should be worn.

SECTION 6 ACCIDENTAL RELEASE MEASURES

WIND SPILL: Vacuum or shovel material and place in disposal container. Avoid excessive dust generation. Dilute residual material with ample supply of water and direct to sanitary sewer if Federal, State or Local regulations permit.

WATER SPILL: Readily dissolves in water to form a weak acid solution. If water is isolated or can be contained, neutralize with weak alkaline solution. Notify appropriate authorities if required by regulations.

SECTION 7 HANDLING AND STORAGE

HANDLING: Wear all recommended personal protective clothing when handling. Avoid contact with eyes. Wash thoroughly after handling. Minimize dust generation. Avoid breathing dust.

STORAGE: Material is hygroscopic and will readily absorb moisture. Keep containers tightly closed. DO NOT store where exposed to moist conditions. DO NOT store near strong alkalis.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to maintain airborne particulate below nuisance levels (>10 mg/m³).

RESPIRATORY PROTECTION: In dusty atmospheres (>10 mg/m³), use a NIOSH-approved dust respirator.

SKIN PROTECTION: Rubber gloves and cotton-blend coveralls.

EYE PROTECTION: Safety glasses or goggles.

GENERAL HYGIENE CONSIDERATIONS: There are no known health hazards associated with this material when used as recommended. Follow good industrial hygiene

PRODUCT: SODIUM BISULFATE, ANHYDROUS GLOBULAR, TECHNICAL

ORDER NO: 209212

PROD NO : 344B20

practices including but not limited to: (1) wash hands after use and before eating; (2) avoid breathing dust; and (3) wear safety glasses.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Off-white granular material.
ODOR: Fresh to Pungent
PHYSICAL STATE: Dry (Anhydrous) crystalline solid spherical shape beads
SOLUBILITY: 1000 g/l @ 68 F (20 C)
MOLECULAR FORMULA: NaHSO_4
PARTICLE SIZE: plus or minus 0.75 mm diameter
BULK DENSITY: 8X - 85 lbs/ft³ (loose)
MELTING POINT: 350 F (177 C)
PERCENT VOLATILE: Non-volatile
MOLECULAR WEIGHT: 120

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable.

INCOMPATIBILITY: Avoid contact with strong alkaline material such as caustic. Dissolves readily in water to form a weak acid solution. DO NOT MIX with liquid chlorine bleach, ammonia cleansers or similar products.

CONDITIONS TO AVOID: DO NOT store dry product where exposed to moist conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: Only if heated over 806 F (430 C), at which sulfur dioxide and sulfur trioxide are formed.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

REPORTED HUMAN EFFECTS: No human data are available for this product.

REPORTED ANIMAL EFFECTS: Oral - LD50 (rat) 2000 mg/kg.

Skin irritation - This material is neither corrosive nor destructive to the skin of New Zealand rabbits. Occasionally, a very slight rash may appear.

PRODUCT: SODIUM BISULFATE, ANHYDROUS GLOBULAR, TECHNICAL

ORDER NO: 209212

PROD NO : 344820

SECTION 12 ECOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: This product readily dissolves in water to form weak acid solution. A 0.05 percent or greater (by weight) solution of this product will likely be acutely harmful to fish and other water organisms.

ECOLOGICAL FATE INFORMATION: Material will decompose in soil. Studies show that there are no adverse effects of applying the main ingredient in this product (sodium bisulfate) directly to crops. In fact, there are existing products on the market that use sodium bisulfate as a soil additive to improve crop production. However, do not apply excessive quantities to soil.

SECTION 13 DISPOSAL CONSIDERATIONS

If this product as supplied becomes a waste, it does not meet the criteria for a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA), 40 CFR Part 261. Dispose of in accordance with local, State and Federal laws and regulations.

SECTION 14 TRANSPORT INFORMATION

DOT (Land, Department of Transportation): Not regulated.

International (Water, IMD): Not regulated.
International (Air, ICAO & IATA): Not regulated.
Shipment in Canada: Not regulated.
Surface Shipments in Europe: Not regulated.

SECTION 15 REGULATORY INFORMATION

MSHA: This product is classified as an Irritant by definition of Hazard Communication Standard (29 CFR 1910.1200).

HHS Rating:
Health - 1; Flammability - 0; Reactivity - 1; Protective Equipment - F

OSHA Rating:
Health - 1; Flammability - 0; Reactivity - 1; Special Precautions - None

DOT: Listed in U.S. TSCA Section 8(b) Inventory.

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UNITAR USA INC.

PAGE: 007

MSDS NO: P12106VS

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 06/22/02

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PRODUCT: SODIUM BISULFATE, ANHYDROUS GLOBULAR, TECHNICAL

ORDER NO: 209212

PROD NO : 344820

CERCLA (RQ): This product contains no Hazardous Substances listed in 40 CFR Part 302.

SARA Title III: Section 311/312 Hazard Class - Acute.

This product contains NONE of the substances subject to the reporting requirements of Section 313 (40 CFR Part 372).

California Proposition 65:

This product does not contain any ingredient known to the State of California to cause cancer or reproductive toxicity as listed under the Safe Drinking Water and Toxic Enforcement Act of 1986.

New Jersey: Department of Health RTK List - sm 1704,
Special Hazardous Substances - Corrosive

Australia: List of Designated Hazardous Substances - Corrosive (R34),
Harmful (R37)

Canada - WMIS: Controlled Product Hazard Class E; D2A.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Canada - CEPA: All components of this product are on the Domestic Substances List (DSL), and acceptable for use under the provisions of CEPA.

European Union (EU): Dangerous Substances (Annex I)

- Classification: Xi, R-41

- Labels: Xi

- Safety Phrases: S-2, S-24, S-26

Germany: Water Classification (VwWS) - Water Hazard Class: 1

Switzerland: Toxic Substance Classification - Giftklasse 3

Inventories: Australian Inventory of Chemical Substances; China; European Industry of Existing Commercial Chemical Substances (231-665-7); European Union Inventory of Cosmetic Ingredients, Other Ingredients; ICCA High Production Volume Working List; Japan Existing and New Chemical Substances (1-83, 1-491, 1-501); Korea Existing and Evaluated Chemical Substances (KE-31481); Philippines Inventory of Chemicals and Chemical Substances; OECD List of High Production Volume Chemicals.

SECTION 16 OTHER INFORMATION

REPORT NUMBER: 703

UNIVAR USA INC.

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MSDS NO: P12108VS

MATERIAL SAFETY DATA SHEET

FRAME UPLOAD DATE: 08/22/02

VERSION: 009

PRODUCT: SODIUM BISULFATE, ANHYDROUS GLOBULAR, TECHNICAL

ORDER NO: 209212

PROD NO : 344820

----- FOR ADDITIONAL INFORMATION -----

CONTACT: MSDS COORDINATOR UNIVAR USA INC.
DURING BUSINESS HOURS, PACIFIC TIME (425)889-3400

12/24/02 11:17 PRODUCT: 344820 CUST NO: 113365 ORDER NO: 209212

----- NOTICE -----

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*** END OF MSDS ***

Material Safety Data Sheet PYROGALLIC ACID

ACETO CORPORATION

One Hollow Lane
Lake Success, NY 11042-1215
Phone: (516) 627-6000 Fax: (516) 627-6093

DATE PREPARED:.....JUNE 1998
REVISION DATE: FEBRUARY 1999
REVISED BY: SIMONE YEARWOOD
CHEMTREC:800-424-9300
PRODUCT NUMBER:33201-2

SECTION 1 - IDENTIFICATION

PRODUCT NAME:PYROGALLIC ACID
SYNONYMS:1,2,3-BENZENETRIOL; TRIHYDROXYBENZENE; PYROGALLOL
FORMULA:C₆H₆O₃
CAS NUMBER:87-66-1

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS NUMBER
Pyrogallic Acid	87-66-1

SECTION 3 - HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

..... White to off-white crystalline powder.
..... Severe irritant.
..... Toxic.
..... Can cause cyanosis (a bluish discoloration of skin).
..... May cause skin sensitization.

POTENTIAL HEALTH EFFECTS:

..... Inhalation: Harmful by inhalation. High concentrations are extremely destructive to tissues of the mucous membranes and upper respiratory tract.
..... Eye Contact: Material causes eye irritation. High concentrations are extremely destructive to tissues of the eye.
..... Skin Contact: Harmful by skin absorption. Material causes skin irritation. High concentrations are extremely destructive to tissues of the skin. Absorption into the body leads to the formation of methemoglobin which in sufficient concentrations causes cyanosis (a bluish discoloration of skin).
..... Ingestion: Harmful by ingestion.

Material Safety Data Sheet PYROGALLIC ACID

Overview: Harmful by inhalation, ingestion, or skin absorption. High concentrations are extremely destructive to tissues of the eyes, skin, mucous membranes and upper respiratory tract. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Absorption into the body leads to the formation of methemoglobin which in sufficient concentrations causes cyanosis. Onset may be delayed 2 to 4 hours or longer. May cause allergic skin reaction. Severe irritant. Toxic. Pyrogallol acid has a tremendous affinity for oxygen of the blood causing death by respiratory failure. Intoxication signs are vomiting, hypothermia, weakness, muscular incoordination, fine tremors, loss of reflexes, diarrhea, and coma. Studies in animals have shown edema and hyperemia of the lungs, moderate fatty degeneration, round cell infiltration and necrosis of the liver. The kidney showed hyperemia, necrosis of the epithelium, granular pigmentation and glomerular nephritis. The heart showed separation of fibers of the myocardium, interfibrillary hemorrhages, infiltration of the endocardium, lesions of the endothelium and fibrinous deposits in the valves. Changes in bone marrow and myeloid changes in the spleen were observed. Changes in muscle included the disappearance of nuclei in striated muscle, loss of striation and the swelling of the muscle plasma which coagulates and decomposes.

Toxicity:

LDLO (oral, humn) 28mg/kg

LD₅₀ (oral, rat) 789mg/kg

LD₅₀ (oral, mus) 300mg/kg

Target Organ: Blood and Kidneys.

SECTION 4 - FIRST AID MEASURES

INHALATION: Remove to fresh air. If breathing has stopped give artificial respiration. If breathing is difficult give oxygen.

EYES CONTACT: Immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating eyelids with fingers.

SKIN CONTACT: Immediately wash skin with soap and copious amounts of water while removing contaminated clothing and shoes.

INGESTION: Wash mouth out with water and consult a physician. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE - FIGHTING MEASURES

FLASHPOINT:

No information.

FLAMMABLE LIMITS:

LEL N/A

UEL N/A

AUTOIGNITION TEMPERATURE:

No information.

EXTINGUISHING MEDIA:

Water Spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL FIRE FIGHTING PROCEDURES:

If excessive smoke or fumes are encountered, wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

UNUSUAL FIRE/EXPLOSION HAZARDS:

Emits toxic fumes carbon monoxide and carbon dioxide.

Material Safety Data Sheet PYROGALLIC ACID

SECTION 6 - ACCIDENTAL RELEASE MEASURES

WASTE DISPOSAL: Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations.

.....Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

SPILLS OR LEAKS:

.....Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

.....Sweep up, place in a bag and hold for waste disposal.

.....Avoid raising dust.

.....Ventilate area and wash spill site after material pickup is complete.

SECTION 7 - HANDLING AND STORAGE

RESPIRATORY PROTECTION: NIOSH/MSHA-approved respirator

PROTECTIVE CLOTHING: Chemical-resistant gloves, safety goggles, and other protective clothing.

ADDITIONAL MEASURES: Safety shower and eye bath. Use only in a well-ventilated area. Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Readily absorbed through skin. Wash thoroughly after handling. Toxic. Severe irritant. Sensitizer. Keep containers tightly closed. Air and light sensitive. Store in a cool dry place.

SECTION 8 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White to off-white crystalline powder.
BOILING POINT: 309°C
MELTING POINT: 133-136°C
VAPOR PRESSURE: 10mm @ 167.7°C (0.01Pa @ 20°C)
VAPOR DENSITY (AIR=1): 4.4
SPECIFIC GRAVITY: No information.
SOLUBILITY IN WATER: 40g/100ml @ 25°C
REACTIVITY IN WATER: No information.

**Material Safety Data Sheet
PYROGALLIC ACID**

SECTION 9 - STABILITY AND REACTIVITY DATA

STABILITY: Stable.

INCOMPATIBILITY: Acid chlorides, acid anhydrides, bases and oxidizing agents. Light sensitive. May discolor on exposure to air.

HAZARDOUS DECOMPOSITION: Toxic fumes of carbon monoxide and carbon dioxide.

SECTION 10 - REGULATORY INFORMATION

CN1= Canadian Workplace Hazardous Materials Information System (WHMIS) Ingredient Disclosure List // Ingredient must be disclosed at a concentration of 1%.

TSCA= This chemical is listed on the TSCA Inventory.

SECTION 11 - TRANSPORTATION DATA

PROPER SHIPPING NAME: Toxic solids, organic, n.o.s. (Pyrogalllic Acid)

HAZARD CLASS AND LABEL: 6.1 "KEEP AWAY FROM FOOD" label required

UN NUMBER: UN2811

PACKAGING: III

SPECIAL PROVISIONS: N/A

NOTE: We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of Aceto Corporation, it is the user's obligation to determine the conditions of safe use of the product.

10-0250 Rec'd 10-94

CHARKIT CHEMICAL CORPORATION

330 POST ROAD, DARIEN, CONNECTICUT 06820

TRANSPORTATION EMERGENCY:
CALL CHEMTREC: 800-424-9300

MATERIAL SAFETY DATA SHEET

NON-TRANSPORTATION EMERGENCY:
CALL CHARKIT: 203-655-3400
FAX: 203-655-8643

I. PRODUCT IDENTIFICATION:

CHEMICAL NAME> BENZOTRIAZOLE
PRODUCT NAME> BENZOTRIAZOLE
CHEMICAL FAMILY> TRIAZOLE
PRODUCT CODE> 790-04400
SYNONYMS> 1-H BENZOTRIAZOLE
CAS NUMBER> 95-14-7
FORMULA> C6 H5 N3

II. HAZARDOUS INGREDIENTS:

<u>INGREDIENT NAME</u>	<u>EXPOSURE LIMITS</u>	<u>CONCENTRATION (%)</u>
<u>CAS NUMBER</u>		
BENZOTRIAZOLE		
95-14-7	OSHA PEL: NUISANCE DUST 15mg/m ³	NOT LESS THAN
	ACGIH TLV: NUISANCE DUST 10mg/m ³	99%

III. PHYSICAL PROPERTIES:

<u>PHYSICAL FORM></u>	FLAKES
<u>COLOR></u>	OFF-WHITE
<u>ODOR></u>	SLIGHT CHARACTERISTIC ODOR
<u>MOLECULAR WEIGHT></u>	119.12
<u>pH></u>	NO DATA AVAILABLE
<u>BOILING POINT></u>	350° C
<u>MELTING/FREEZING POINT></u>	94°-99° C
<u>VISCOSITY></u>	NO DATA AVAILABLE
<u>SOLUBILITY IN WATER></u>	2.0
<u>SPECIFIC GRAVITY></u>	1.36 (SOLID)
<u>BULK DENSITY></u>	NO DATA AVAILABLE
<u>VAPOR PRESSURE></u>	0.04mm
<u>EVAPORATION RATE></u>	NON-VOLATILE (BUTYL ACETATE=1)
<u>% VOLATILE BY VOLUME></u>	NONE
<u>VAPOR PRESSURE></u>	4.1 (CALCULATED; AIR-1)

IV. FIRE AND EXPLOSION DATA

<u>FLASH POINT></u>	340° F
<u>TEST CUP METHOD></u>	CC
<u>FLAMMABLE></u>	NO DATA AVAILABLE
<u>COMBUSTIBLE></u>	NO DATA AVAILABLE
<u>UPPER EXPLOSIVE LIMIT></u>	NO DATA AVAILABLE
<u>LOWER EXPLOSIVE LIMIT></u>	DUST MEC. 0.03 oz/cu. ft.%
<u>AUTO-IGNITION TEMP></u>	NO DATA AVAILABLE
<u>EXTINGUISHING MEDIA></u>	CARBON DIOXIDE, DRY CHEMICAL, FOAM

SPECIAL FIRE-FIGHTING>
PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferred. Water may be used to cool closed containers to prevent pressure build-up.

UNUSUAL FIRE AND>
EXPLOSION HAZARDS

Airborne dust is rated a severe explosion hazard at a minimum concentration of 0.03 ounce/cubic foot (30 grams/cubic meter). During emergency conditions over-exposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

V. HUMAN HEALTH DATA

ROUTE(S) OF ENTRY> EYES, SKIN, INHALATION

HUMAN EFFECTS AND SYMPTIONS OF OVEREXPOSURE:

INHALATION> MAY CAUSE IRRITATION OF RESPIRATORY TRACT

INGESTION> INGESTION OF LARGE DOSES MAY CAUSE GASTROINTESTINAL UPSET

SKIN CONTACT> MAY CAUSE MILD IRRITATION AND REDDENING

EYE CONTACT> CONTACT IS LIKELY TO CAUSE SEVERE IRRITATION.

CHRONIC EXPOSURE> DETAILED INFORMATION ABOUT OVEREXPOSURE IS UNAVAILABLE WITH NO EXAMPLE OF OBVIOUS OVEREXPOSURE WITH RESULTANT SYMPTOMS. ANIMAL STUDIES INDICATE NERVOUS SYSTEM EFFECTS.

AGGRAVATION OF PRE-> NO DATA AVAILABLE
EXISTING CONDITONS

CARCINOGENICITY> NOT LISTED BY NTP, IARC OR REGULATED AS A CARCINOGEN BY OSHA.

VI. FIRST AID

INHALATION> REMOVE TO FRESH AIR. CALL A PHYSICIAN.
IF BREATHING IS DIFFICULT GIVE OXYGEN.
IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION.

INGESTION> INDUCE VOMITING BY GIVING SEVERAL GLASSES OF WATER AND STICKING FINGER DOWN THROAT. SEEK MEDICAL ATTENTION.

SKIN CONTACT> IN CASE OF CONTACT WASH SKIN WITH SOAP AND WATER.
WASH CLOTHING BEFORE REUSING.
CALL A PHYSICIAN IF IRRITATION PERSISTS.

VI. FIRST AID (CONTINUED)

EYE CONTACT> IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR 15 MINUTES
CALL A PHYSICIAN

VII. EMPLOYEE PROTECTION RECOMMENDATIONS

EYE PROTECTION> USE CHEMICAL SAFETY GOGGLES.
DO NOT WEAR CONTACT LENS IF AIRBORNE DUST IS PRESENT.

SKIN PROTECTION> USE CHEMICALLY RESISTENT GLOVES AND CLOTHING.
WASH FACE AND HANDS BEFORE EATING OR DRINKING.

PERSONAL RESPIRATORS> USE A NIOSH/MSHA APPROVED DUST RESPIRATOR IF DUST EXPOSURE
LIMITS CANNOT BE CONTROLLED BY VENTILATION.

VENTILATION SYSTEM> USE LOCAL EXHAUST IF DUST CONCENTRATION EXCEEDS NUISANCE
EXPOSURE LIMIT OR IF WORKER DISCOMFORT EXISTS.

ADDITIONAL MEASURES> PROVIDE EMERGENCY SHOWERS AND EYE WASH STATIONS.
TRAIN IN THE SAFE USE AND HANDLING OF HAZARDOUS CHEMICALS.

VIII. REACTIVITY DATA:

STABILITY> STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE.

CONDITIONS TO AVOID> NONE KNOWN

HAZARDOUS POLYMERIZATION> WILL NOT OCCUR

CONDITIONS TO AVOID> NONE KNOWN

INCOMPATIBILITIES> OXIDIZING AGENTS

DECOMPOSITION TEMPERATURE> NO DATA AVAILABLE

DECOMPOSITION PRODUCTS> IN FIRE, CARBON DIOXIDE, CARBON MONOXIDE, NITROGEN OXIDES,
HCN IN REDUCING ATMOSPHERES

IX. SPILL AND LEAK PROCEDURES:

GENERAL SAFETY>

REMOVE ALL SOURCES OF IGNITION; VENTILATE AREA.
PROVIDE PROTECTION FROM INHALATION OF DUST OR FUMES.

SPILL OR LEAK RESPONSE>

UTILIZE RECOMMENDED PROTECTIVE CLOTHING AND EQUIPMENT.
SWEEP UP SPILL AND PLACE IN CONTAINERS TO RECLAIM OR DISPOSE.
AVOID DISPERSING DUST INTO AIR; USE WATER SPRAY IF NEEDED.

WASTE DISPOSAL>

CHECK FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.
PREVENT WASH WATER FROM ENTERING GROUND WATER. DISPOSE
IN SANITARY LANDFILL OR APPROVED INCINERATOR.

X. SPECIAL PRECAUTIONS AND STORAGE DATA:

STORAGE TEMPERATURE>

MIN: NO DATA AVAILABLE

MAX: NO DATA AVAILABLE

AMBIENT: NO DATA AVAILABLE

SHELF LIFE>

NO DATA AVAILABLE

SPECIAL SENSITIVITY>

NO DATA AVAILABLE

HANDLING & STORAGE>

MAINTAIN SAFE HOUSEKEEPING PRACTICES

PRECAUTIONS

STORE IN COOL DRY AREA; KEEP CONTAINERS TIGHTLY CLOSED; AVOID
CREATING AIRBORNE DUST CONCENTRATIONS WHICH MAY CREATE A
POTENTIAL DUST EXPLOSION HAZARD. AVOID CONTACT WITH EYES,
SKIN AND CLOTHING. DO NOT TAKE INTERNALLY. CLEAN UP SPILLS.

XI. SHIPPING INFORMATION:

D.O.T. SHIPPING NAME>

CHEMICALS N.O.S.(BENZOTRIAZOLE)

HAZARD CLASS>

NONE

U.N. NUMBER>

NONE

PACKING GROUP>

NONE

LABELS>

NONE

RQ ENTRY REQUIRED>

NO

XII. ANIMAL TOXICITY DATA:

ACUTE TOXICITY:

<u>ORAL LD 50></u>	560 mg/kG (rat)
<u>DERMAL LD 50></u>	2 g/kG
<u>INHALATION LD 50></u>	1.9 mg/liter (rat; 3 hour)
<u>SKIN EFFECTS></u>	NOT A PRIMARY SKIN IRRITANT (rabbit)
<u>SENSITIZATION></u>	NO DATA AVAILABLE
<u>EYE EFFECTS></u>	CAUSED SEVERE EYE IRRITATION (rabbit)

OTHER TOXICITY:

<u>SUBCHRONIC TOXICITY></u>	NO DATA AVAILABLE
<u>CHRONIC TOXICITY></u>	NO DATA AVAILABLE
<u>AQUATIC TOXICITY></u>	28 mg/liter (bluegill sunfish; minnow)
<u>OTHER TOXICITY DATA></u>	NO DATA AVAILABLE

XIII. FEDERAL REGULATORY INFORMATION:

<u>OSHA STATUS></u>	NOT HAZARDOUS
<u>TSCA STATUS></u>	LISTED ON TSCA INVENTORY
<u>CERCLA RQ></u>	NONE
<u>RCRA STATUS></u>	NOT HAZARDOUS WASTE IN PURCHASED FORM.

SARA TITLE III:

<u>§302 EHS RQ></u>	NOT APPLICABLE
<u>§302 EHS TPQ></u>	NOT APPLICABLE
<u>§313 TOXIC CHEMICALS></u>	NONE
<u>§311/312></u>	NONE

HAZARD CATEGORIES

OSHA: OCCUPATIONAL HEALTH AND SAFETY ACT; HAZARD STATUS UNDER OSHA HAZARD COMMUNICATION STANDARD 29.

TSCA: TOXIC SUBSTANCES CONTROL ACT; LISTING DOES NOT INDICATE HAZARD STATUS.

CERCLA SEC. 103: COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (SUPERFUND); RELEASES TO AIR, LAND OR WATER OF THESE HAZARDOUS SUBSTANCES WHICH EXCEED THE REPORTABLE QUANTITY (RQ) MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER (800-424-8802); 40 CFR 372.65.

RCRA: RESOURCE CONSERVATION AND RECLAMATION ACT; COMMERCIAL CHEMICAL PRODUCT WASTES DESIGNATED AS ACUTE HAZARDS AND TOXIC; 40 CFR 261.33.

SARA SECTION 302 EHS RQ: REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, LISTED AT 40 CFR 366.

SARA SECTION 302 EHS TPQ: THRESHOLD PLANNING QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE.

SARA SECTION 313 CHEMICALS: TOXIC SUBSTANCES SUBJECT TO ANNUAL RELEASE REPORTING REQUIREMENTS LISTED AT 40 CFR 372.65.

SARA SECTION 311/312 CHEMICALS: HAZARD CATEGORIES FOR REPORTING REQUIREMENTS.

CHARKIT CHEMICAL CORPORATION

BENZOTRIAZOLE

790-04400

MSDS PAGE: 6

APPROVAL DATE: 11 May 1992

XIV. OTHER REGULATORY INFORMATION:

THE FOLLOWING CHEMICALS ARE SPECIFICALLY LISTED BY INDIVIDUAL STATES; OTHER PRODUCT SPECIFIC HEALTH AND SAFETY DATA IN OTHER SECTIONS OF THIS MSDS MAY ALSO BE APPLICABLE FOR STATE REQUIREMENTS. FOR DETAILS ON YOUR REGULATORY REQUIREMENTS YOU SHOULD CONTACT THE APPROPRIATE AGENCY IN YOUR STATE.

STATE CODE	COMMENTS:
<u>NJ4</u>	NEW JERSEY; INCLUDED IN 5 PREDOMINANT INGREDIENTS > 1%
<u>PA3</u>	PENNSYLVANIA; NON-HAZARDOUS PRESENT AT 3% OR GREATER
<u>CA65</u>	CALIFORNIA PROPOSITION 65; TO OUR KNOWLEDGE THIS PRODUCT CONTAINS LEVELS OF LISTED SUBSTANCES WHICH CALIFORNIA HAS FOUND TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE EFFECTS
<u>MSL</u>	MASSACHUSETTS SUBSTANCE LIST (MSL); ; HAZARDOUS SUBSTANCES AND EXTRAORDINARILY HAZARDOUS SUBSTANCES ON THE MSL MUST BE IDENTIFIED WHEN PRESENT IN PRODUCTS

INGREDIENT NAME /CAS NUMBER	CONCENTRATION	STATE CODE
BENZOTRIAZOLE 95-14-7	99%	NJ4, PA3, MSL

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