

MATERIAL HEALTH AND SAFETY DATA SHEET

1. CHEMICAL PRODUCT and COMPANY INFORMATION

The Barbee Co. of Canada
1703 Mattawa Ave.
Mississauga, ON L4X 1K5

EMERGENCY TELEPHONE NUMBERS:
Barbee Co. 1-800-268-2839 or 905-276-3101
Chemtrec: 1-613-996-6666

Product Identification

Product Name: #54/56 Tank Block/Powder Chemical Name: Carbonic Acid, Disodium Salt.
Synonyms: Disodium Carbonate. Molecular Formula: Na₂CO₃
Product Use: Water Treatment. pH control. CAS#: Anhydrous: 497-19-8
WHMIS Classification: D-2B: Toxic (Skin and Eye irritant).

READ ENTIRE MSDS FOR COMPLETE EVALUATION OF THIS PRODUCT

2. HAZARDOUS INGREDIENTS

<u>Chemical Ingredients</u>	<u>CAS#</u>	<u>TLV-TWA</u>	<u>Percent</u> <u>(Weight)</u>	<u>LD50</u>	<u>LC50</u>
Sodium Carbonate	497-19-8	Not Listed	95%	Oral, Rat=4,090mg/Kg	Inhal'n, Guinea pig 566 mg/M3
Pylaklor Fluorescence LX1152		None Established	>5%	Not available.	Not available.
(Acid Yellow 17):	6359-98-4				
(Acid Yellow 73):	518-47-8				

3. PHYSICAL DATA & CHEMICAL PROPERTIES

Physical state: Solid/Powder Boiling Point: Not Applicable.
Appearance and Odour: orange powder, odourless Melting/Freezing Point: 854 °C.
Odour Threshold (ppm): Not Applicable. PH: 11.3 (1% aqueous solution)
Vapour Pressure: Not Applicable. 11.7 (15% aqueous solution)
Vapour Density: Not Applicable. Specific Gravity: Not Available.
Evaporation Rate: Not Applicable. Coefficient of water/oil distribution: Not available.

4. FIRE AND EXPLOSION HAZARD

Flammability Class (WHMIS): Not regulated. Autoignition Temp. (°C): Not Applicable.
Flash Point (TCC, °C): Not Applicable.
Flammable Limits in Air (%): LEL: Not Applicable. UEL: Not applicable

Sensitivity to Mechanical Impact: Not Available. Not expected to be sensitive.
Sensitivity to Static Discharge: Not Available. Not expected to be sensitive.

FIRE FIGHTING INSTRUCTIONS

Use water spray to cool fire exposed containers or structures. Use water spray to disperse vapours. Spilled material may cause floors and contact surfaces to become slippery.
Fire Fighters should wear approved Self-Contained Breathing Apparatus and protective clothing.

EXTINGUISHING MEDIA

Use media appropriate for surrounding fire and/or materials.

COMBUSTION PRODUCTS

Oxides of carbon, sodium and irritating gases.

5. STABILITY AND REACTIVITY

Under normal conditions: Stable

Hazardous Polymerization: Will not occur.

Under fire conditions: Not Flammable.

Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition. Minimize airborne spreading of dust. Sweep up immediately to eliminate slipping hazard.

Materials to Avoid: Strong oxidizers. Lewis or mineral acids. Magnesium. Lead. Aluminum and its alloys. Can react violently with red hot aluminum metal; flouring gas; lithium and 2,4,6-trinitrotoluene.

Hazardous Decomposition Products: Thermal decomposition products are toxic and may include oxides of carbon, sodium and irritating gases.

6. TOXICOLOGICAL PROPERTIES

INHALATION: Product may cause severe irritation of the nose, throat and respiratory tract. Brief contact with the dust causes irritation. Greater exposure causes severe burns. In the presence of moisture (perspiration, humidity, tears), the dust dissolves to form a corrosive solution which may cause burns. See "Other Health Effects" section.

EYE CONTACT: This product causes immediate pain, severe burns and permanent corneal damage which may result in blindness. See "Other Health Effects" section.

SKIN CONTACT: Brief contact with the dust can cause irritation. Greater exposure causes severe burns.

In the presence of moisture (perspiration), soda ash and lime dusts (CaO) combine to form corrosive caustic soda which may cause burns. See "Other Health Effects" section.

SKIN ABSORPTION: A single, prolonged skin exposure is not likely to result in the absorption of toxic amounts of the material.

INGESTION: This product causes severe burning and pain in the mouth, throat, and abdomen. Vomiting, diarrhea and perforation of the esophagus and stomach lining may occur. See "Other Health Effects" section.

OTHER HEALTH EFFECTS: Corrosive effects on the skin and eyes may be delayed, and damage may occur without the sensation or onset of pain. Strict adherence to first aid measures following any exposure is essential. May cause central nervous system (CNS) depression.

EXPOSURE LIMITS (Soda Ash): None established for this product.

Particulate Not Otherwise Classified (ACGIH):

10 mg/M3-Inhalable particulate

3 mg/M3-Respirable particulate

Particulate Not Otherwise Classified (OSHA):

15 mg/M3-Total Dust

5 mg/M3-Respirable Fraction.

Carcinogenicity Data: The ingredient(s) of this product is (are) not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

Reproductive Data: No adverse reproductive effects are anticipated.

Mutagenicity Data: No information is available and no adverse mutagenic effects are anticipated.

Teratogenicity Data: No adverse teratogenic/embryotoxic effects are anticipated.

Respiratory /Skin Sensitization Data: None known. **Synergistic Materials:** None known.

Other Studies Relevant to Material: Male rats exposed to an aerosol of a 2% solution of sodium carbonate for 4 hours/day, 5 days/week for 3.5 months showed no pronounced effects.

Pregnant female mice were orally intubated with up to 340 mg/Kg of aqueous sodium carbonate solution. No positive findings were reported. Excessive contact may produce "soda ulcers" on hand and perforation of the nasal septum. Sensitivity reactions may occur from prolonged and repeated exposure.

ECOLOGICAL INFORMATION

Ecotoxicity: Not available. May be harmful to aquatic life. Toxicity is primarily associated with pH.

Sodium Carbonate:

Fish toxicity: 48-hour TLm=840 mg/L (Mosquito Fish).

Fish toxicity: 96-hour TLm=500ppm(Daphnia magna).

Fish toxicity: 96-hour TLm=1200 mg/L (Mosquito Fish).

Fish toxicity: 96-hour TLm=300ppm(Lepomis macrochirus)

Environmental Fate: Not available. Can be dangerous if allowed to enter drinking water intakes. Product has an unaesthetic appearance and can be a nuisance. Do not contaminate domestic or irrigation water supplies, lakes streams, ponds, or rivers.

7. PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Eye Protection: Use full face-shield and chemical safety goggles when there is potential for contact. Contact lenses should not be worn when working with this material.

Skin Protection: Gloves and protective clothing made from cotton, canvas, rubber or plastic should be impervious under conditions of use. Prior to use, user should confirm impermeability.

Respiratory Protection: No specific guidelines available. A NIOSH/MSHA - approved dust mask for concentrations of nuisance dust up to 100 mg/M3. An air-supplied respirator if concentrations are higher or unknown.

Other PPE: Wear an impermeable apron and boots. Locate safety shower and eyewash station close to chemical handling area. Take all precautions to avoid personal contact.

ENGINEERING CONTROLS

Local Exhaust ventilation required. Ventilation should be corrosion proof. Make up air should be supplied to balance air that is removed by local or general exhaust ventilation. Ventilate low lying areas such as sumps or pits where dense dust may collect.

ACCIDENTAL RELEASE MEASURES

Information in this section is for responding to spills, leaks or releases in order to prevent or minimize the adverse effects on persons, property and the environment. There may be specific reporting requirements associated with spills, leaks or releases, which change from region to region. The responsibility of reporting lies directly with the handlers of the substance.

Wear respirator, protective clothing and gloves. *Avoid dry sweeping.* Do not use combustible materials such as sawdust as an absorbent. Eliminate all sources of ignition. Collect product for recovery or disposal. For release to land, or storm water runoff, contain discharge by constructing dykes or applying inert absorbent, i.e. sand, earth, or vermiculite. Ventilate enclosed spaces. Notify applicable government authority if release is reportable or could adversely affect the environment. Avoid breathing dust.

DISPOSAL CONSIDERATIONS

This information applies to the material as manufactured. Processing, use or contamination may make the information inappropriate, inaccurate or incomplete. The responsibility for proper waste disposal lies with the owner of the waste.

Deactivating Chemicals: None Known.

Dispose of waste material at an approved waste treatment/disposal facility in accordance with applicable local, provincial and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems.

Safe Handling of Residues: Rinse empty container three times with water dispose of rinse water as a waste product.

Disposal of Packaging: Empty containers retain product residue and can be dangerous. Do not expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.

HANDLING PROCEDURES AND EQUIPMENT

Avoid all ignition sources such as flames and sparks. Insure good ventilation. Containers which have been exposed to heat, may be under pressure. These should be cooled and carefully vented before opening. A face shield apron should be worn. Enforce NO SMOKING rules in area of use. Use normal "good" industrial hygiene and housekeeping practices.

Ventilation Required, and a combination of local or general dilution to maintain allowable PEL or TLV. Respirator protection should consist of a NIOSH/MSHA approved SCBA; however, OSHA regulations also permit other NIOSH/MSHA respirators.

Rubber or plastic gloves should be used. Chemical safety goggles and full face shield must also be used.

STORAGE REQUIRMENTS

Store in a cool, well-ventilated area. Protect from direct sunlight. Keep containers closed.

SHIPPING INFORMATION - Canadian TDG Act Shipping Description.

Not Regulated.

8. FIRST AID PROCEDURES

INHALATION: Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Oxygen administration may be beneficial in this situation, but should only be administered by personnel trained in its use. Obtain medical attention IMMEDIATELY.

SKIN CONTACT: Start flushing while removing contaminated clothing. Wash affected areas thoroughly with soap and water for a minimum of 20 min. If irritation persists, keep flushing. Obtain medical attention **immediately**.

EYE CONTACT: Immediately flush eyes with running water for a minimum of 20 min. Hold eyelids open during flushing. If irritation persists, repeat flushing. Obtain medical attention **immediately**.

INGESTION: Do not attempt to give anything by mouth to an unconscious person. If victim is alert and not convulsing, rinse mouth out and give ½ to 1 glass of water to dilute material. IMMEDIATELY contact local poison control center. Vomiting should only be induced under the direction of a physician or a poison control center. If spontaneous vomiting occurs, have the

victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Vomiting may need to be induced but only under the direction of a physician or a poison control center. IMMEDIATELY transport victim to an emergency facility.

Note to Physicians: Due to the severely irritating or corrosive nature of the material, swallowing may lead to ulceration and inflammation of the upper alimentary tract with hemorage and fluid loss. Also, perforation of the esophagus or stomach may occur, leading to mediastinitis or peritonitis and the resultant complications.

Mucosal injury following ingestion of this corrosive material may contraindicate the induction of vomiting in the treatment of possible intoxication. Similarly, if gastric lavage is performed, intubation should be done with great care. If oral burns are present or a corrosive ingestion is suspected by the patient's history, perform esophagoscopy as soon as possible. Scope should not be passed beyond the first burn because of the risk of perforation.

To obtain revised copies of this or other MSDS's, contact

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