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HTH

COMMERCIAL DRY
CHLORINATING GRANULES
FOR INDUSTRIAL USE AND COMMERCIAL POOLS
GRANULAR

COMMERCIAL CHLORE SEC
EN GRANULES
A USAGE INDUSTRIEL ET
POUR PISCINES PUBLIQUES

WARNING / AVERTISSEMENT
POISON CORROSIVE/CORROSIF

READ THE LABEL BEFORE USING
LIRE LE LABEL AVANT L'EMPLOI

GUARANTEE/GARANTIE:
Calcium Hypochlorite 65%

REGISTRATION NO. 17654
PEST CONTROL PRODUCTS ACT

NO. D'ENREGISTREMENT 17654
LOI SUR LES PRODUITS ANTIPARASITAIRES

EPA EST NO. 1258-TN-1

OLIN CORPORATION
CONSUMER PRODUCTS
120 LONG RIDGE ROAD
STAMFORD, CT
06904
NET WT. 56.7 kg

OLIN HOLDINGS LTD.
 SUITE 2700
 COMMERCIAL UNION TOWER
 P.O. BOX 451
 TORONTO, ONTARIO
 M5K 1M5

READ THE PRECAUTIONARY STATEMENTS BEFORE USE.

CYANIDE WASTE TREATMENT: The use of solutions of HTH in water offers a simple, economical method of destroying harmful cyanides in plant waste.

In most cases, cyanide will be contained in liquid waste. When cyanide is found in solid waste, it must be dissolved in water to 500 ppm or less to prevent a high reaction temperature.

Approximately 4.2 Kg of HTH Dry Chlorine per Kg of free cyanide in the waste will oxidize the toxic cyanides, producing harmless cyanates. This reaction is slowed by the presence of monovalent nickel and copper in the waste liquid, so it's important to analyze the contents of the waste thoroughly before the HTH solution is prepared. Table 1 shows how much HTH Dry Chlorine will be needed, depending on the content of the waste.

Table 1 Effect of Metal Content in Cyanide Waste on Amount of HTH(R) Dry Chlorine Requirement			
If present in waste			HTH per Kg of cyanide
Copper	Nickel		(Kilograms)
XX	X X		4.2 4.7 - 5.5 4.7 - 5.7 4.4 - 4.7

Batch Treatment: Where cyanide concentrations in waste are relatively high and the flow is within practical limitations (less than 40,000 liters in an 8-hour period), batch treatment provides an effective, economical method of chlorination. The following is a general description of a typical batch treatment with HTH Dry Chlorine.

Divert all waste water containing cyanides to a steel or concrete

retention tank, located in a well-ventilated or open air area. Avoid mixing cyanide waste with acid waste, plant sewage and other plant waste.

The proper capacity of the retention tank is determined by the frequency of batches to be treated and the maximum volume of discharge during each collection period. The tank should be equipped with an efficient agitator and a means of measuring the temperature.

Once waste is collected in the tank, agitate thoroughly to establish good uniformity.

If cyanide concentrations exceed 500 ppm, waste liquid should be diluted before treatment to prevent unusually high reaction temperatures. (Waste from plating and treating baths may sometimes contain more than 500 ppm of cyanide, whereas dragout water and wash water usually will not).

If necessary, adjust the pH of the mixture to between 10 and 11 by adding caustic soda, with constant agitation. Be sure to maintain this level during the entire process, adding more caustic soda during treatment, when necessary. If the pH is allowed to fall below 7.0, highly toxic hydrogen cyanide gas may be generated.

Add 4.2 kg of HTH Dry Chlorine per Kg of cyanide evenly over the surface of the waste liquid, while agitating. Make sure the final temperature of the solution is not above 49°C (120°F).

After agitating for at least 15 minutes, test for the presence of available chlorine.

Use starch-iodide papers, a chlorine test kit or an analytical test procedure. If the presence of available chlorine is indicated, as is expected, hold the treated solution for a minimum of 1 hour without further agitation. If a minimum chlorine residual of 0.5 to 1.0 ppm is indicated, the waste may be considered free of cyanides.

In most cases, the required chlorine residual will be indicated in both the 15 minute and the 1 hour test. If either test indicates the absence of available chlorine, it is necessary to add more HTH Dry Chlorine to produce the required chlorine residual. After a 5 minute agitation period, continue with the holding and testing steps described above. The objective is to

insure the presence of excess available chlorine throughout the entire treating period, with an excess clearly indicated upon completion.

Contact Olin for information regarding continuous treatment.

DIRECTIONS FOR POOL USE: HTH controls growth of algae and effectively kills many bacteria. Use clean, dry cup to measure HTH Granular.

INITIAL CHLORINATION: For initial chlorination of any pool water add 0.77 Kg for each 100,000 liters. Allow 5 minutes to dissolve and then test the chlorine residual with a pool test kit and if below 1.0 ppm (parts per million) repeat this dosage until 1.0 ppm is obtained. Pool should not be entered until chlorine residual reads 1.0-3.0 ppm.

ROUTINE CHLORINATION DOSAGE: Add 0.46 Kg of HTH per 100,000 L daily or as often as needed to maintain 1.0 ppm whether the pool is in use or not. Use a test kit frequently to determine chlorine residual. If any chlorine residual is present, it is possible to increase the residual in pool water by 1.0 ppm by using 0.15 kg per 100,000 liters of water. pH should be maintained in the 7.2-7.6 range.

STABILIZED POOLS: Always maintain the chlorine residual at 1.0 - 1.5 ppm as determined by test kit.

SHOCK TREATMENT OR SUPERCHLORINATION: If algae develop shock treat or superchlorinate the pool water by adding 1.54 Kg of HTH per 100,000 L of water. Allow 5 minutes for HTH to dissolve and repeat if necessary. Thoroughly clean pool by scrubbing surface of algae growth then vacuum and cycle through filter. Pool should not be entered until chlorine residual reads 1.0-3.0 ppm.

OTHER USES: Ask your HTH supplier or write to Olin Corporation for specific literature on other accepted industrial uses.

STORAGE AND DISPOSAL: Keep product dry in tightly closed container when not in use. Store in a cool, dry, well-ventilated area away from heat or open flame. Do not reuse empty container. Rinse empty container thoroughly with water to dissolve all material before discarding. Place in trash collection or dispose in approved landfill area or bury in a safe place. **EMERGENCY HANDLING:** In case of contamination or decomposition, do not reseal container. If possible, isolate container in open and

well-ventilated area. Flood with large volumes of water.

PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS: Danger: highly corrosive. Causes skin and eye damage. May be fatal if swallowed. Do not get in eyes, on skin, or on clothing. Do not handle with bare hands. Wear goggles or face shield and use rubber gloves and only thoroughly clean, dry utensils when handling. Irritating to nose and throat. Avoid breathing dust and fumes. Remove and wash contaminated clothing before reuse.

FIRST AID (Practical Treatment): IF ON SKIN: Brush off excess chemical and flush skin with cold water for at least 15 minutes. If irritation persists, get medical attention.

IF INHALED: Remove person to fresh air. Get immediate medical attention.

IF IN EYES: Flush with cold water for at least 15 minutes. Get immediate medical attention.

IF SWALLOWED: Give bread soaked in milk, followed by large amounts of water. If person is conscious and vomiting, place face down with head lower than hips. Get immediate medical attention.

CHEMICAL HAZARDS: Danger: strong oxidizing agent. Mix only into water. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases, and possible fire and explosion. Avoid any contact with flame or burning material, such as lighted cigarette. Do not contaminate with moisture, garbage, dirt, organic matter, chemicals including other pool chemicals, pool chlorinating compounds, household products, cyanuric acid pool stabilizers, soap products, paint products, solvents, acids, vinegar, beverages, oils, pine oil, dirty rags or any other foreign matter. Do not use moist or damp utensils.

ENVIRONMENTAL HAZARD: This product is toxic to fish. Do not contaminate lakes, ponds, or streams by cleaning of equipment or disposal of wastes.

NOTICE TO USER: This control product is to be used only in accordance with the directions on this label. It is an offence under the Pest Control Products Act to use a control product under unsafe conditions.

Seller's guarantee shall be limited to the terms set out on the label and subject thereto. The buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

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HTH-CDC-CDN-483 CH

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