

ICD CHEMICALS
T.I.C.A.
(Trichloroisocyanuric Acid)

A GRANULAR FORM OF CHLORIDE FOR MANUFACTURING OR
FORMULATING BACTERICIDES AND/OR ALGAEICIDES ONLY

Available Chlorine.....89%

SOLD BY: ICD CHEMICALS, INC.
641 LEXINGTON AVENUE
NEW YORK, NEW YORK 10022

200 LBS. NET ACTIVE INGREDIENT:
TRICHLORO-s-TRIAZINETRIONE.....99.0%
INERT INGREDIENT.....1.0%

DANGER

KEEP OUT OF REACH OF CHILDREN

CORROSIVE:

Causes eye damage. May cause burns on wet skin. Causes skin irritation. May be fatal or harmful if swallowed. Wear goggles or face shield, rubber gloves and protective clothing when handling. Do not get in eyes, on skin or on clothing. Avoid contamination of food.

Contact with organic matter may cause fire. Contact with water slowly liberates irritating and hazardous gases.

FIRST AID:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Call a physician immediately.

NOTE TO PHYSICIAN:

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

CONTAINER DISPOSAL:

Rinse empty container and polyethylene bag thoroughly clean with water before discarding.

EPA REG. NO. 11551-6

Refer to ICD CHEMICALS, INC. Data Sheet
04273 for detailed information on handling
and storing.

ACCEPTED



ICD CHEMICALS, INC.

ISOCYANURATES FOR MANUFACTURING OR FORMULATING
BACTERICIDES AND/OR ALGAECIDES ONLY

PRODUCTS

CHEMICAL NAME

ICD CHEMICALS TRADENAME

Sodium Dichloroisocyanurate
Potassium Dichloroisocyanurate
Trichloroisocyanuric Acid

S. D. I. C.
P. D. I. C.
T. I. C. A.

ACCEPTED

BY THE FEDERAL INSECTICIDE
AND FUNGICIDE ACT
FOR TOXIC POISON REGISTER-
ED UNDER NO. ... SUBJECT
TO ATTACHED COMMENTS.

STORAGE AND HANDLING

PACKING

These products are shipped in 200 pound net fiber drums with a poly-ethylene bag liner.

STORAGE

The products should be stored inside a cool, dry place away from oxidizable materials. It is suggested that drums be placed on pallets to guard against package damage and spillage caused by wet floors. ICD CHEMICALS ISOCYANURATES will decompose in an exothermic reaction if heated above about 220°C. (See Precautions) to give off chlorine fumes. It should not be stored in an exothermic reaction area where there is any possibility of its exposure to high temperature.

To prevent contamination, opened drum liners should be retied, and the lids securely replaced.

PROTECTIVE CLOTHING

Protective clothing is recommended when handling these products to minimize contact with the skin, eyes and respiratory system. The material causes eye damage, irritation and may produce an edema and burns when left in contact with the skin, especially if perspiration or moisture is present. If an appreciable amount is spilled on the hair, face, arms or clothing, it should be removed as fully as possible by mechanical means (brush or vacuum cleaner) in a well-ventilated area; residue should then be washed from the skin with cold water. Because contact with the eyes produces damage, and painful irritation, wear goggles whenever there is exposure to dust.

If material gets into the eyes, they should be flushed immediately with copious quantities of water.

MIXING EQUIPMENT

Conventional mixer types can be used for the formulation of these products, but should be designed or modified to minimize dusting or spilling. All equipment should be thoroughly cleaned before and after mixing to prevent the possibility of undesired reactions or fire as a

result of accidental contamination. If possible, it is suggested that one mixer be set aside to be used only for formulations containing available chlorine. Due to the thermal decomposition properties of ICD CHEMICALS ISOCYANURATES (see Precautions), friction-producing equipment such as screw conveyors or items with internal bearings should be avoided whenever possible.

SPILLAGE, CONTAMINATION AND WASTE DISPOSAL

Any spillage of these products should be cleaned up or hosed down as soon as possible to prevent its becoming mixed with foreign material (easily oxidized organic matter, sawdust, etc.) with which it might react and cause fire. If allowed to stand in damp or wet areas, tear-producing vapors may result.

In case of minor spillage, the material should be swept up, and small increments flushed down a drain. Large amounts of uncontaminated spilled material can be recovered, but if there is any question about contamination, the product should be discarded. (The area where spillage occurred should then be washed thoroughly.) Products accidentally contaminated with other materials should be discarded.

To prevent accidental contamination, do not discard products into general purpose wastebaskets, or into containers used for other waste.

Floor sweeping compounds should not be used in removal of ICD CHEMICALS ISOCYANURATES spillage.

Any product or formulation which becomes damp or wet from contamination with water should be discarded. These materials cannot be recovered, and objectionable quantities of tear-producing vapors may be produced.

PRECAUTIONS

ICD CHEMICALS ISOCYANURATES are highly concentrated, highly reactive oxidizing and chlorinating agents. Because of these properties, due caution should be exercised in their use.

Among the precautions that should be observed are the following items:

The product should be kept dry, away from heat or open flame and stored inside in a location where the containers and products will not get wet. Wet or contaminated products should be discarded to prevent the possible development of lachrymatory vapors or fire.

Partially used containers, should be reclosed, to prevent possible contamination of the remaining products. Proper reclosure includes retieing the bag liner as well as replacing the lid. Formulations should never be slurried with limited amounts of water since undesirable and highly lachrymatory vapors may be given off. It is suggested that dilutions of no more than 1,000 ppm available chlorine be made to minimize this problem.

(...continued...)

These products should be compounded only with anhydrous builders, and not with hydrated salts such as sodium metasilicate, pentahydrate and crystalline trisodium phosphate. The hydrated salts may cause an exothermic reaction, liberating water from the hydrate and promoting an even more rapid decomposition, which may cause container rupture due to pressure, and the evolution of lachrimatory vapors. These products and other chlorine carriers should not be used with certain types of organic chemicals, i.e., terpenes, long chain alcohols, unsaturated fatty acids, ethers, etc., which are relatively easily oxidized or chlorinated.

These products should not be used with nonionic surface active agents such as the ethylene oxide condensates without extremely careful and thorough investigation of all aspects of the possible hazards. Reactions are often unpredictable and may result in a highly vigorous exothermic reaction, causing fire or explosion.

Special techniques are required for spray drying of formulations of ICD CHEMICALS ISOCYANURATES and this type of an operation is not generally recommended because of the potential hazards involved in the crutching and spraying operation if improper conditions exist.

Contact with ammonia, ammonium salts, urea or similar compounds which contain nitrogen in a form which can readily be converted to nitrogen trichloride must be scrupulously avoided.

ICD CHEMICALS ISOCYANURATES can be ignited by high temperature conditions, such as by contact with lighted cigarettes or lighted matches. The reaction (not explosive) will proceed slowly through the entire mass, producing dense fumes. These fumes are extremely noxious, and contain chlorine and other toxic gases. None of the products should be stored where they may be heated to their decomposition points. The decomposition provides sufficient heat to ignite drums, paper, wood, etc. Welding should never be done in equipment used for ICD CHEMICALS ISOCYANURATES unless it is thoroughly cleaned.

No warranty, expressed or implied, is made except that the product conforms to ICD's specifications and is reasonably fit for use as provided in the labeling furnished by ICD. Buyer assumes all risk for use, storage and handling of this product not in strict accordance with such labeling or in abnormal or unforeseeable circumstances. ICD shall not be responsible for special or consequential damages.

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INERT INGREDIENT.....1.0%

DANGER

KEEP OUT OF REACH OF CHILDREN

CORROSIVE: Causes eye damage. May cause burns on wet skin. Causes skin irritation. May be fatal or harmful if swallowed. Wear goggles or face shield, rubber gloves and protective clothing when handling. Do not get in eyes, on skin or on clothing. Avoid contamination of food.

Contact with organic matter may cause fire. Contact with water slowly liberates irritating and hazardous gases.

FIRST AID: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Call a physician immediately.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

CONTAINER DISPOSAL: Rinse empty container and polyethylene bag thoroughly clean with water before discarding.

LPA REG. NO. 11551-6

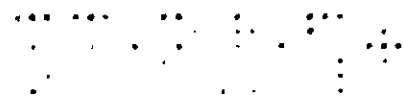
Refer to ICD CHEMICALS, INC. Data Sheet
04273 for detailed information on handling
and storing.

11551



ICD CHEMICALS, INC.

PRODUCTS FOR MANUFACTURING OF FIBERS
SPECIALTY CHEMICALS ONLY



PRODUCTS

COMPOSITION

100% Dichloroisocyanurate
80% 100% Dichloroisocyanurate
100% Dichloroisocyanuric Acid

IDENTIFICATION

80% 100%	ICD
100% 100%	
100% 100%	

STORAGE AND HANDLING

PACKING

These products are shipped in 200 pound net fiber drums with a polyethylene bag liner.

STORAGE

The products should be stored inside a cool, dry place away from oxidizable materials. It is suggested that drums be placed on pallets to guard against package damage and spillage caused by wet floors. ICD CHEMICALS ISOCYANURATES will decompose in an exothermic reaction if heated above about 220°C. (See Precautions) to give off carbon dioxide. It should not be stored in an exothermic reaction area where there is any possibility of its exposure to high temperature.

To prevent contamination, opened drum liners should be retied, and the lids securely replaced.

PROTECTIVE CLOTHING

Protective clothing is recommended when handling these products to minimize contact with the skin, eyes and respiratory system. The material causes eye damage, irritation and may produce an edema and burn when left in contact with the skin, especially if perspiration is present. If an appreciable amount is spilled on the body, face, hands or clothing, it should be removed as fully as possible by mechanical means (brush or vacuum cleaner) in a well-ventilated area; residue should then be washed from the skin with cold water. Because contact with the eyes produce damage, and painful irritation, water should be used if there is exposure to dust.

If material gets into the eyes, they should be flushed rapidly with copious quantities of water.

MIXING EQUIPMENT

Conventional mixer types can be used for the formulation of these products, but should be designed or modified to minimize dust and spillage. All equipment should be thoroughly cleaned before mixing to prevent the possibility of undesired reactions or contamination.

result of accidental contamination. Containers should be sealed and one meter be set aside to be used for the purpose of testing for the presence of cyanide chloride. The test for cyanide chloride is described in the ICD CHEMICALS ISOCYANURATES section. The test should be performed in a well-ventilated area such as screw conveyor or other with adequate ventilation. The test should be avoided whenever possible.

SPILLAGE, CONTAMINATION AND WASTE DISPOSAL

Any spillage of these products should be cleaned up or removed as soon as possible to prevent its becoming mixed with tear-producing, easily oxidized organic matter, sawdust, etc., which may react and cause fire. If allowed to stand in damp or wet areas, tear-producing vapors may result.

In case of minor spillage, the material should be swept up, and small increments flushed down a drain. Large amounts of uncontaminated spilled material can be recovered, but if there is any question about contamination, the product should be discarded. (The area where spillage occurred should then be washed thoroughly.) Products accidentally contaminated with other materials should be discarded.

To prevent accidental contamination, do not discard products into general purpose wastebaskets, or into containers used for other waste.

Floor sweeping compounds should not be used in removal of ICD CHEMICALS ISOCYANURATES spillage.

Any product or formulation which becomes damp or wet from contamination with water should be discarded. These materials cannot be recovered, and objectionable quantities of tear-producing vapors may be produced.

PRECAUTIONS

ICD CHEMICALS ISOCYANURATES are highly concentrated, highly reactive oxidizing and chlorinating agents. Because of these properties, caution should be exercised in their use.

Among the precautions that should be observed are the following items:

The product should be kept dry, away from heat or open flame and stored inside in a location where the containers and products will not react. Wet or contaminated products should be discarded to prevent the possible development of lachrymatory vapors or fire.

Partially used containers, should be reclosed, to prevent possible contamination of the remaining products. Proper reclosure include retrieving the bag liner as well as replacing the lid. Formulation should never be slurried with limited amounts of water since smoke, heat, and highly lachrymatory vapors may be given off. If necessary, use of dilution of no more than 1,000 ppm available chlorine should be used to minimize this problem.

...continued...

These products should be combined only with amines, alcohols, and other materials such as sodium metal, which are known to react with isocyanurates. The hydrolysis of isocyanurates is an exothermic reaction, liberating water from the isocyanurate, and an even more rapid decomposition, which may cause a fire or explosion, to occur, and the evolution of lachrimatory and other extremely irritating vapors. These vapors, which are organic chemical, e.g., terpenes, long chain alcohols, aldehydes, fatty acid, ethers, etc., which are relatively insoluble in water, are chlorinated.

These products should not be used with nonionic surfactants such as the ethylene oxide condensates without extremely careful thorough investigation of all aspects of the possible hazards. Reactions are often unpredictable and may result in a highly exothermic reaction, causing fire or explosion.

Special techniques are required for spray drying of formulations of ICD CHEMICALS ISOCYANURATES and this type of an operation is not generally recommended because of the potential hazards involved in the crutching and spraying operation if improper conditions exist.

Contact with ammonia, ammonium salts, urea or similar compounds which contain nitrogen in a form which can readily be converted to nitrogen trichloride must be scrupulously avoided.

ICD CHEMICALS ISOCYANURATES can be ignited by high temperature conditions, such as by contact with lighted cigarettes or lighted matches. The reaction (not explosive) will proceed slowly through the entire mass, producing dense fumes. These fumes are extremely noxious, and contain chlorine and other toxic gases. None of the products should be stored where they may be heated to their decomposition point. The decomposition provides sufficient heat to ignite drums, paper, wood, etc. Welding should never be done in equipment used for ICD CHEMICALS ISOCYANURATES unless it is thoroughly cleaned.

No warranty, expressed or implied, is made except that the product conforms to ICD's specifications and is reasonably fit for use as provided in the labeling furnished by ICD. Buyer assumes all risk for use, storage and handling of this product not in strict accordance with such labeling or in abnormal or unforeseeable circumstances. ICD shall not be responsible for special or consequential damages.