

ICD CHEMICALS  
P.D.I.C.  
(Potassium Dichloroisocyanurate)

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

Available Chlorine.....59%

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

200 LBS. NET ACTIVE INGREDIENT:  
POTASSIUM DICHLORO-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:**

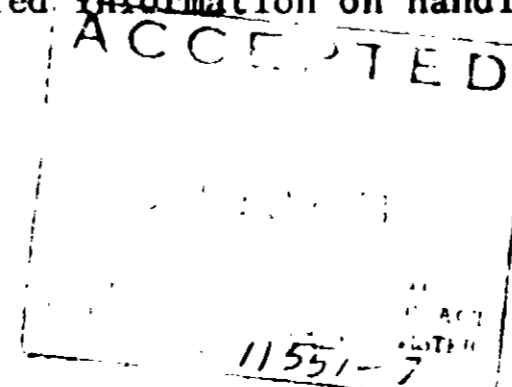
Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

**CONTAINER DISPOSAL:**

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

EPA REG. NO. 11551-7

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





ICD CHEMICALS, INC.

ISOCYANURATES FOR MANUFACTURING OR FORMULATING  
BACTERICIDES AND/OR ALGAEICIDES ONLY

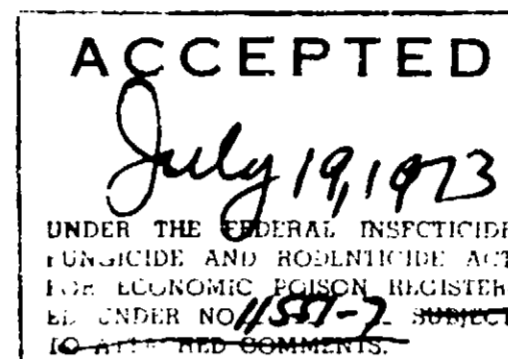
PRODUCTS

CHEMICAL NAME

Sodium Dichloroisocyanurate  
Potassium Dichloroisocyanurate  
Trichloroisocyanuric Acid

ICD CHEMICALS TRADENAME

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



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.

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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.

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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.

ICD CHEMICALS  
P.O. BOX  
(Potassium Dichloro-s-triazinetrione)

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

Available Chlorine.....59%

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

200 LBS. NET ACTIVE INGREDIENT:  
POTASSIUM DICHLORO-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.

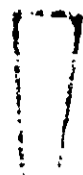
**CONTAINER DISPOSAL:** Rinse empty container and polyethylene bag thoroughly clean with water before discarding.

EPA REG. NO. 11551-7

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

ACCEPTED

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ICD CHEMICALS, Inc.

ISOCYANURATES FOR MANUFACTURING OR FORMULATION  
OF POLYURETHANES AND POLYURETHANES ONLY

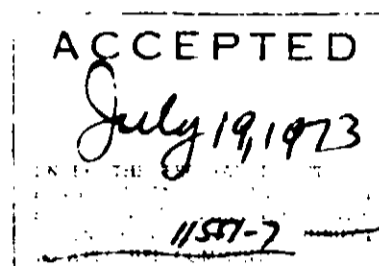
PRODUCTS

CHEMICAL NAME

Sodium Dichloroisocyanurate  
Potassium Dichloroisocyanurate  
Trichloroisocyanuric Acid

ICD CHEMICALS COMPANY

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



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 contact with the floor. ICD CHEMICALS ISOCYANURATES will decompose in an exothermic reaction if heated above about 220°C. (See Precautions) to give off chlorine gases. 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 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. Accidental contact with the eyes produces damage, and painful irritation, wear goggles when there is exposure to dust.

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

MIXING EQUIPMENT

**BEST DOCUMENT AVAILABLE**

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.

**ICD CHEMICALS INC.** ■ 17411 Lehigh Avenue, Lehigh, Pa. 18229 ■ Telephone: (610) 770-1000

NEW YORK OFFICE ■ 1000 Broadway, New York, N.Y. 10018 ■ Telephone: (212) 512-1000



result of accidental contamination. If possible, the mixer should be set aside to be used only for formulations containing available chlorine. Due to the thermal decomposition of ICD CHEMICALS ISOCYANURATES formulations, tear-producing vapors may be produced whenever possible.

SPILLAGE, CONTAMINATION AND WASTE DISPOSAL

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

In case of minor spillage, the material should be swept up, and all 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 undervapor 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.

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ICD CHEMICALS ISOCYANURATES

These products should be powdered only with anhydrous calcium carbonate or with anhydrous calcium sulfate. Heating should be avoided to prevent crystallization of the hydrate. The hydrated salt undergoes an exothermic reaction, liberating water from the hydrate and producing a more rapid decomposition, which can occur at atmospheric pressure, and the evolution of acrylamide, cyanuric acid, and other chlorine carriers. These products should not be used with organic chemicals, i.e., terpenes, long chain alcohol, unsaturated fatty acids, ethers, etc., which are relatively easily oxidized or chlorinated.

These products should not be used with nonionic surfactants 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 nitrous 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 toxic and contain chlorine and other toxic gases. None of the product 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.