TCI AMERICA

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	**Harmful compound, minimize exposure.** **Irritating to skin, eyes, and the respiratory system.**	

Section I. Chemical Product and Company Identification

Chemical Name: **3,4-Dihydro-4-oxo-1,2,3-benzotriazine**

Catalog Number	K0003
Synonym	Benzazimide; 1,2,3-Benzotriazin-4-(2H)-one
Chemical Formula	$C_7H_5N_3O$
CAS Number	90-16-4

Supplier: TCI America
9211 N. Harborgate St.
Portland OR
1-800-423-8616

In case of Emergency Call: **Chemtrec®**
(800) 424-9300 (U.S.)
(703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
3,4-Dihydro-4-oxo-1,2,3-benzotriazine	90-16-4	Min. 98.0 (T)	Not available.	Rat LD_{50} (oral) 595mg/kg Rat LD_{50} (intraperitoneal) 222mg/kg Mouse LD_{50} (oral) 440mg/kg

Section III. Hazards Identification

Acute Health Effects

Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Chronic Health Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: Reproductive: mouse (oral) 2400mg/kg. Duration: male 15 days prior to mating.
Effects on fertility- male fertiity index.
mouse (oral) 3480mg/kg. Duration: male 8 days and 21 days prior to mating.
Effects on fertility- Female fertility index.
Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section IV. First Aid Measures

Eye Contact

Check for and remove any contact lenses. IMMEDIATELY flush eyes with runing water for at least 15 minutes. keeping eyelids open. COLD water may be used. DO NOT use an eye oitment. Flush eyes with running water for a minimum of 15 minutes, occasionally lifting the upper eyelids. Seek medical attention. Treat symptomatically and supportively.

Skin Contact

After contact with skin, wash immediately with plenty of water. Gently and thorough wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. Cover the irritated skin with an emollient. Seek medical attention. Treat symptomatically and supportively. Wash any contaminated clothing before reusing.

Inhalation

If the victim is not breathing, perform artificial respiration. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention. Treat symptomatically and supportively.

Ingestion

INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt, or waistband. If the victim is not breathing, administer artificial respiration. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Seek immediate medical attention and, if possible, show the chemical label. Treat symptomatically and supportively.

Section V. Fire and Explosion Data

Flammability	May be combustible at high temperature.	Auto-Ignition	Not available.
Flash Points	Not available.	Flammable Limits	Not available.

Combustion Products: These products are toxic carbon oxides (CO, CO_2), nitrogen oxides (NO, NO_2).

Fire Hazards: No specific information is available regarding the flammability of this compound in the presence of various materials.

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Emergency phone number (800) 424-9300

Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. No additional information is available regarding the risks of explosion.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO_2, water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.

Section VI. Accidental Release Measures

Spill Cleanup Instructions	Harmful material. Irritating material. In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and exercise caution. Use a shovel to put the material into a convenient waste disposal container. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage

Handling and Storage Information	HARMFUL. IRRITANT. Handle with caution and minimize exposure. Keep away from heat and sources of ignition. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. DO NOT ingest. DO NOT breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively. Always store away from incompatible compounds such as oxidizing agents.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Dust respriator. Boots. Gloves. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. 
Exposure Limits	Not available.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Off-white to light-yellow powder.	Solubility	Soluble in alkaline solvents and organic bases.
Specific Gravity	Not available.		
Molecular Weight	147.13	Partition Coefficient	Not available.
Boiling Point	Not available.	Vapor Pressure	Not available.
Melting Point	216 to 218°C (420.8 to 424.4°F)	Vapor Density	Not available.
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Not available.
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data

Stability	This material is stable if stored under proper conditions. (See Section VII for instructions)
Conditions of Instability	Avoid excessive heat and light.
Incompatibilities	Reactive with strong oxidizing agents.

Section XI. Toxicological Information

RTECS Number	DM0800000
Routes of Exposure	Eye contact. Ingestion. Inhalation. Skin contact.
Toxicity Data	Rat LD_{50} (oral) 595mg/kg Rat LD_{50} (intraperitoneal) 222mg/kg Mouse LD_{50} (oral) 440mg/kg
Chronic Toxic Effects	**CARCINOGENIC EFFECTS** : Not available. **MUTAGENIC EFFECTS** : Not available. **TERATOGENIC EFFECTS** : Not available. **DEVELOPMENTAL TOXICITY**: Reproductive: mouse (oral) 2400mg/kg. Duration: male 15 days prior to mating. Effects on fertility- male fertiity index. mouse (oral) 3480mg/kg. Duration: male 8 days and 21 days prior to mating. Effects on fertility- Female fertility index. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

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Acute Toxic Effects	Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	1,2,3-Benzotriazin-4-(1H)-one may be released to the environment as a result of its formation as a soil biodegradation product and as a product of sunlight photolysis of the pesticide azinphos-methyl. Azinphos-methyl is used as an insecticide and acaricide on fruit and vegetable crops, nuts, melons, field crops, cotton, citrus, grapes, maize, ornamentals, and forest and shade trees. If 1,2,3-benzotriazin-4-(1H)-one is released to soil, it will exhibit a high mobility in soil and, therefore, may leach to groundwater. It may be biodegraded in soil based upon its cometabolism in aqueous screening tests utilizing soil bacteria inoculums and disodium fumarate as an added carbon source. It will not be expected to volatilize from near surface soil. If 1,2,3-benzotriazin-4-(1H)-one is released to water, it will not be expected to volatilize, adsorb to sediment or suspended particulate matter or to bioconcentrate in aquatic organisms. It may directly photolyze based upon the absorption of UV light at wavelengths >290nm by the structurally similar pesticide azinphos-methyl and it may be biodegraded in natural waters based upon its moderate cometabolism in aqueous screening tests utilizing soil bacteria inoculums and disodium fumarate as an added carbon source. If 1,2,3-benzotriazin-4-(1H)-one is released to the atmosphere, it will be expected to exist mostly in the particulate phase. It may directly photolyze in the atmosphere. It will be susceptible to photooxidation via vapor phase reaction with photochemically produced hydroxyl radicals and ozone. An atmospheric half-life of 5.2 hours at an atmospheric concentration of 5X10+5 hydroxyl radicals per cu cm and 7X10+11 ozone molecules per cu cm has been estimated for this process. Oral exposure may occur through the ingestion of food or water contaminated with the chemical. The contamination may occur due to the use of the insecticide and acaricide azinphos-methyl, from which 1,2,3-benzotriazin-4-(1H)-one is formed via biodegradation in soil.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local or regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state, and local regulations when disposing of the substance.

Section XIV. Transport Information

DOT Classification	Not a DOT controlled material (United States).
PIN Number	Not applicable.
Proper Shipping Name	Not applicable.
Packing Group (PG)	Not applicable.
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is **ON** the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	Not available.
EINECS Number (EEC)	201-971-5
EEC Risk Statements	R36/37/38- Irritating to eyes, respiratory system and skin.
Japanese Regulatory Data	Not available.

Section XVI. Other Information

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Notice to Reader