Tetraiodomethane

sc-229422

Material Safety Data Sheet

Hazard Alert Code Key:	EXTREME	HIGH	MODERATE	LOW

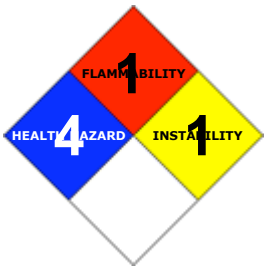
Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Tetraiodomethane

STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

NFPA



SUPPLIER
Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

EMERGENCY
ChemWatch
Within the US & Canada: 877–715–9305
Outside the US & Canada: +800 2436 2255
(1–800-CHEMCALL) or call +613 9573 3112

SYNONYMS
CI4, "carbon tetraiodide", "carbon iodide", "methane, tetraiodo-"

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability:	1		
Toxicity:	2		
Body Contact:	2		
Reactivity:	1		
Chronic:	2		

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK

Forms very sensitive explosive metallic compounds.
Harmful by inhalation, in contact with skin and if swallowed.
Irritating to eyes, respiratory system and skin.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

EYE

■ This material can cause eye irritation and damage in some persons.

SKIN

■ Skin contact with the material may be harmful; systemic effects may resultfollowing absorption.
■ This material can cause inflammation of the skin oncontact in some persons.
■ The material may accentuate any pre-existing dermatitis condition.
■ Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.
■ Open cuts, abraded or irritated skin should not be exposed to this material.
■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

■ Inhalation of dusts, generated by the material, during the course of normalhandling, may be harmful.
■ The material can cause respiratory irritation in some persons.
The body's response to such irritation can cause further lung damage.
■ Inhalation of vapours may cause drowsiness and dizziness.
This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.
■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.
■ Acute intoxication by halogenated aliphatic hydrocarbons appears to take place over two stages.
Signs of a reversible narcosis are evident in the first stage and in the second stage signs of injury to organs may become evident, a single organ alone is (almost) never involved.
■ In the case of iodised and brominated compounds, exposure effects cannot be described by simple central nervous system depression produced by other halogenated aliphatic hydrocarbons.
Headache, nausea, ataxia (loss of muscle co-ordination), tremors, speech difficulties, visual disturbances, convulsions, paralysis, delirium, mania and apathy are all evidence of additional effects.

CHRONIC HEALTH EFFECTS

■ Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.
Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
There is some evidence that inhaling this product is more likely to cause a sensitization reaction in some persons compared to the general population.
Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
tetraiodomethane	507-25-5	>98
slowly hydrolyes in water to form		
iodoform	75-47-8	
iodine	7553-56-2	
under the influence of light and heat converts to		
tetraiodoethylene	513-92-8	

Section 4 - FIRST AID MEASURES

SWALLOWED

· IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. · Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:. · Avoid giving milk or oils. · Avoid giving alcohol.

EYE

■ If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

SKIN
■ If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).
INHALED
· If fumes or combustion products are inhaled remove from contaminated area. · Lay patient down. Keep warm and rested.

NOTES TO PHYSICIAN
■ for poisons (where specific treatment regime is absent):
----------BASIC TREATMENT

· Establish a patent airway with suction where necessary.
· Watch for signs of respiratory insufficiency and assist ventilation as necessary.
Treat symptomatically.
for intoxication due to Freons/ Halons;
A: Emergency and Supportive Measures
· Maintain an open airway and assist ventilation if necessary
· Treat coma and arrhythmias if they occur. Avoid (adrenaline) epinephrine or other sympathomimetic amines that may precipitate ventricular arrhythmias. Tachyarrhythmias caused by increased myocardial sensitization may be treated with propranolol, 1-2 mg IV or esmolol 25-100 microgm/kg/min IV.

Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG):	Negligible
Upper Explosive Limit (%):	Not available
Specific Gravity (water=1):	4.32
Lower Explosive Limit (%):	Not available

EXTINGUISHING MEDIA
· Foam.
· Dry chemical powder.
FIRE FIGHTING
· Alert Emergency Responders and tell them location and nature of hazard.
· Wear breathing apparatus plus protective gloves.
When any large container (including road and rail tankers) is involved in a fire,
consider evacuation by 800 metres in all directions.
GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS
· Combustible solid which burns but propagates flame with difficulty.
· Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
Combustion products include: carbon monoxide (CO), carbon dioxide (CO2), hydrogen iodide, other pyrolysis products typical of burning organic material.
May emit poisonous fumes.
May emit corrosive fumes.
FIRE INCOMPATIBILITY
■ Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids,chlorine bleaches, pool chlorine etc. as ignition may result.

PERSONAL PROTECTION
Glasses:
Chemical goggles.
Gloves:
Respirator:
Type B-P Filter of sufficient capacity

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
· Remove all ignition sources.
· Clean up all spills immediately.
· Avoid contact with skin and eyes.
· Control personal contact by using protective equipment.
· Use dry clean up procedures and avoid generating dust.
· Place in a suitable, labelled container for waste disposal.
MAJOR SPILLS
■ Moderate hazard.
· CAUTION: Advise personnel in area.
· Alert Emergency Responders and tell them location and nature of hazard.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

· Avoid all personal contact, including inhalation.
· Wear protective clothing when risk of exposure occurs.
Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.
· Do NOT cut, drill, grind or weld such containers.
· In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

RECOMMENDED STORAGE METHODS

■ DO NOT use aluminum or galvanized containers.
· Polyethylene or polypropylene container.
· Check all containers are clearly labelled and free from leaks.

STORAGE REQUIREMENTS

· Store in original containers.
· Keep containers securely sealed.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC	Notes
Canada - British Columbia Occupational Exposure Limits	tetraiodomethane (Particles (Insoluble or Poorly Soluble) Not Otherwise Classified (PNOC))		10 (N)						
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	tetraiodomethane (Particulates not otherwise regulated (PNOR)(f)-Respirable fraction)		5						
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	tetraiodomethane (Particulates not otherwise regulated Respirable fraction)		5						
US - California Permissible Exposure Limits for Chemical Contaminants	tetraiodomethane (Particulates not otherwise regulated Respirable fraction)		5						(n)
US - Oregon Permissible Exposure Limits (Z-1)	tetraiodomethane (Particulates not otherwise regulated (PNOR) (f) Total Dust)	-	10						Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. PNOR means “particles not otherwise regulated.”
US - Michigan Exposure Limits for Air Contaminants	tetraiodomethane (Particulates not otherwise regulated, Respirable dust)		5						
Canada - Prince Edward Island Occupational Exposure Limits	tetraiodomethane (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable		10						See Appendix B current TLV/BEI Book

	particles)				
US - Oregon Permissible Exposure Limits (Z-1)	tetraiodomethane (Particulates not otherwise regulated (PNOR) (f) Respirable Fraction)	-	5		Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. PNOR means “particles not otherwise regulated.”
US ACGIH Threshold Limit Values (TLV)	tetraiodomethane (Iodides)	0.01			TLV Basis: Hypothyroidism; upper respiratory tract irritation
Canada - Prince Edward Island Occupational Exposure Limits	tetraiodomethane (Iodides)	0.01			TLV Basis: Hypothyroidism; upper respiratory tract irritation
Canada - Alberta Occupational Exposure Limits	iodoform (Iodoform)	0.6	9.7		
Canada - British Columbia Occupational Exposure Limits	iodoform (Iodoform)	0.6			
US ACGIH Threshold Limit Values (TLV)	iodoform (Iodoform)	0.6			TLV Basis: central nervous system impairment
US NIOSH Recommended Exposure Limits (RELs)	iodoform (Iodoform)	0.6	10		
US - Minnesota Permissible Exposure Limits (PELs)	iodoform (Iodoform)	0.6	10		
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	iodoform (Iodoform)	0.6	10		
US - California Permissible Exposure Limits for Chemical Contaminants	iodoform (Iodoform)	0.6	10		
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	iodoform (Iodoform)	0.6	10		
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	iodoform (Iodoform)	0.6	10		
Canada - Saskatchewan Occupational Health and	iodoform (Iodoform)	0.6		1.2	

Safety Regulations - Contamination Limits								
US - Hawaii Air Contaminant Limits	iodoform (Iodoform)	0.6	10	1	20			
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	iodoform (Iodoform)	0.2	3	0.4	6			
US - Washington Permissible exposure limits of air contaminants	iodoform (Iodoform)	0.6		1.8				
US - Alaska Limits for Air Contaminants	iodoform (Iodoform)	0.6	10					
Canada - Nova Scotia Occupational Exposure Limits	iodoform (Iodoform)	0.6						TLV Basis: central nervous system impairment
Canada - Prince Edward Island Occupational Exposure Limits	iodoform (Iodoform)	0.6						TLV Basis: central nervous system impairment
US - Michigan Exposure Limits for Air Contaminants	iodoform (Iodoform)	0.6	10					
Canada - Northwest Territories Occupational Exposure Limits (English)	iodoform (Iodoform)	0.6	9.6	1	16			
US TSCA New Chemical Exposure Limits (NCEL)	iodoform (Halogenated alkanes (P84-106/107))	1.0						
Canada - British Columbia Occupational Exposure Limits	iodine (Iodine Revised 2008; 2010)					0.1		
US - Minnesota Permissible Exposure Limits (PELs)	iodine (Iodine)					0.1	1	
US ACGIH Threshold Limit Values (TLV)	iodine (Iodine)	0.01		0.1				TLV Basis: Hypothyroidism; upper respiratory tract irritation
US NIOSH Recommended Exposure Limits (RELs)	iodine (Iodine)					0.1	1	
Canada - Alberta Occupational Exposure Limits	iodine (Iodine)					0.1	1	
US - Tennessee Occupational Exposure Limits - Limits For Air	iodine (Iodine)					0.1	1	

Contaminants								
US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants	iodine (Iodine)	(C)0.1	(C)1					
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	iodine (Iodine)					0.1	1	
US - California Permissible Exposure Limits for Chemical Contaminants	iodine (Iodine)	0.1	1			C		
US - Idaho - Limits for Air Contaminants	iodine (Iodine)					0.1	1	
US OSHA Permissible Exposure Levels (PELs) - Table Z1	iodine (Iodine)					0.1	1	
US - Hawaii Air Contaminant Limits	iodine (Iodine)					0.1	1	
US - Alaska Limits for Air Contaminants	iodine (Iodine)					0.1	1	
US - Michigan Exposure Limits for Air Contaminants	iodine (Iodine)					0.1	1	
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	iodine (Iodine)	0.7	1	1	1			
US - Washington Permissible exposure limits of air contaminants	iodine (Iodine)					0.1		
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	iodine (Iodine)					0.1		
Canada - Prince Edward Island Occupational Exposure Limits	iodine (Iodine)	0.01		0.1				TLV Basis: Hypothyroidism; upper respiratory tract irritation
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	iodine (Iodine)					0.1	1	

Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	iodine (Iodine)			0.1	1.0	
US - Oregon Permissible Exposure Limits (Z-1)	iodine (Iodine)			0.1	1	
Canada - Northwest Territories Occupational Exposure Limits (English)	iodine (Iodine)			0.1	1	
Canada - Nova Scotia Occupational Exposure Limits	iodine (Iodine)	0.01	0.1			TLV Basis: Hypothyroidism; upper respiratory tract irritation
US TSCA New Chemical Exposure Limits (NCEL)	tetraiodoethylene (Halogenated alkene (P84-105))	0.05				

ENDOELTABLE

PERSONAL PROTECTION




RESPIRATOR

Type B-P Filter of sufficient capacity

EYE

· Safety glasses with side shields.
· Chemical goggles.

HANDS/FEET

■ Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
· frequency and duration of contact,
· chemical resistance of glove material,
· glove thickness and
· dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).
· When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
· When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.
· Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.
· polychloroprene
· nitrile rubber
· butyl rubber
· fluorocaoutchouc
· polyvinyl chloride

Gloves should be examined for wear and/ or degradation constantly.

OTHER

· Overalls.
· P.V.C. apron.
· Barrier cream.
· Skin cleansing cream.
· Eye wash unit.

ENGINEERING CONTROLS
· Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
· Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES
Solid.

State	Divided solid	Molecular Weight	519.63
Melting Range (°F)	340	Viscosity	Not Applicable
Boiling Range (°F)	Not available	Solubility in water (g/L)	Reacts
Flash Point (°F)	Not Available	pH (1% solution)	Not applicable.
Decomposition Temp (°F)	334	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available	Vapour Pressure (mmHG)	Negligible
Upper Explosive Limit (%)	Not available	Specific Gravity (water=1)	4.32
Lower Explosive Limit (%)	Not available	Relative Vapor Density (air=1)	Not Applicable
Volatile Component (%vol)	Negligible	Evaporation Rate	Not available

APPEARANCE
Red crystalline powder with iodine-like odour; does not mix with water. Soluble in benzene, chloroform, toluene, carbon disulfide.

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY
· Presence of incompatible materials.
· Product is considered stable.

STORAGE INCOMPATIBILITY
■ Segregate from alcohol, water.
· NOTE: May develop pressure in containers; open carefully. Vent periodically.
Haloalkanes:
· are highly reactive:some of the more lightly substituted lower members are highly flammable; the more highly substituted may be used as fire suppressants, not always with the anticipated results.
· may react with the lighter divalent metals to produce more reactive compounds analogous to Grignard reagents.
· may produce explosive compounds following prolonged contact with metallic or other azides
· may react on contact with potassium or its alloys - although apparently stable on contact with a wide rage of halocarbons, reaction products may be shock-sensitive and may explode with great violence on light impact; severity generally increases with the degree of halocarbon substitution and potassium-sodium alloys give extremely sensitive mixtures .
BRETHERICK L.: Handbook of Reactive Chemical Hazards
· react with metal halides and active metals, eg. sodium (Na), potassium (K), lithium (Li),calcium (Ca), zinc (Zn), powdered aluminium (Al) and aluminium alloys, magnesium (Mg) and magnesium alloys.
· may react with brass and steel.
· may react explosively with strong oxidisers
· may degrade rubber, and plastics such as methacrylate polymers, polyethylene and polystyrene, paint and coatings.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

tetraiodomethane

TOXICITY AND IRRITATION
■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.
■ Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.
TETRAIODOMETHANE:

TOXICITY	IRRITATION

Intravenous (mouse) LD50: 178 mg/kg Nil Reported

TOXICITY	IRRITATION
IODOFORM:	
Oral (rat) LD50: 355 mg/kg	Nil Reported
Inhalation (rat) LC50: 165 ppm/7h	
IODINE:	
Oral (human) LD50: 30 mg/kg*	Nil Reported
Oral (rat) LD50: 14000 mg/kg	
Inhalation (rat) LCLo: 800 mg/m³/1h	
■ The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.	
The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function.	
The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.	
Oral (woman) TDLo: 26 mg/kg/1y - int *[BDH]	
TETRAIODOETHYLENE:	
Intravenous (mouse) LD50: 56 mg/kg	Nil Reported

CARCINOGEN

	US - Rhode Island Hazardous Substance List	IARC	
TRIHALOGENATED METHANES (THM)	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	P65-MC
RADIONUCLIDES	US Environmental Defense Scorecard Recognized Carcinogens	Reference(s)	P65
RADIONUCLIDES	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	P65

Section 12 - ECOLOGICAL INFORMATION

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
tetraiodomethane	HIGH		LOW	HIGH
iodoform	HIGH		LOW	HIGH
iodine	HIGH		LOW	HIGH
tetraiodoethylene	HIGH		LOW	MED

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.
¦ Puncture containers to prevent re-use and bury at an authorized landfill.
Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must

refer to laws operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate:
· Reduction
· Reuse
· Recycling
· Disposal (if all else fails)
This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.
· Recycle wherever possible.
· Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

Section 14 - TRANSPORTATION INFORMATION

DOT:
Symbols: None Hazard class or Division: 6.1
Identification Numbers: UN2811 PG: III
Label Codes: 6.1 Special provisions: IB8, IP3,
T1, TP33
Packaging: Exceptions: 153 Packaging: Non- bulk: 213
Packaging: Exceptions: 153 Quantity limitations: 100 kg
Passenger aircraft/rail:
Quantity Limitations: Cargo 200 kg Vessel stowage: Location: A
aircraft only:
Vessel stowage: Other: None
Hazardous materials descriptions and proper shipping names:
Toxic solids, organic, n.o.s.

Air Transport IATA:

ICAO/IATA Class: 6.1 ICAO/IATA Subrisk: None
UN/ID Number: 2811 Packing Group: III
Special provisions: A3
Cargo Only
Packing Instructions: 200 kg Maximum Qty/Pack: 100 kg
Passenger and Cargo Passenger and Cargo
Packing Instructions: 677 Maximum Qty/Pack: 670
Passenger and Cargo Limited Quantity Passenger and Cargo Limited Quantity
Packing Instructions: 10 kg Maximum Qty/Pack: Y645
Shipping Name: TOXIC SOLID, ORGANIC, N.O.S. * (CONTAINS
TETRAIODOMETHANE)

Maritime Transport IMDG:

IMDG Class: 6.1 IMDG Subrisk: None
UN Number: 2811 Packing Group: III
EMS Number: F-A , S-A Special provisions: 223 274
Limited Quantities: 5 kg
Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.
(contains tetraiodomethane)

Section 15 - REGULATORY INFORMATION

tetraiodomethane (CAS: 507-25-5) is found on the following regulatory lists;
"Canada Non-Domestic Substances List (NDSL)","US Toxic Substances Control Act (TSCA) - Inventory"

Regulations for ingredients

iodoform (CAS: 75-47-8) is found on the following regulatory lists;
"Canada - Alberta Occupational Exposure Limits","Canada - British Columbia Occupational Exposure Limits","Canada - Northwest Territories Occupational Exposure Limits (English)","Canada - Nova Scotia Occupational Exposure Limits","Canada - Prince Edward Island Occupational Exposure Limits","Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)","Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits","Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances","Canada Domestic Substances List (DSL)","Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)","US - Alaska Limits for Air Contaminants","US - California Occupational Safety and Health Regulations (CAL/OSHA) - Hazardous Substances List","US - California Permissible Exposure Limits for Chemical Contaminants","US - Connecticut Hazardous Air Pollutants","US - Hawaii Air Contaminant Limits","US - Michigan Exposure Limits for Air Contaminants","US - Minnesota Hazardous Substance List","US - Minnesota Permissible Exposure Limits (PELs)","US - New Jersey Right to Know Hazardous Substances","US - Pennsylvania - Hazardous Substance List","US - Rhode Island Hazardous Substance List","US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants","US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air

Contaminants","US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants","US - Washington Permissible exposure limits of air contaminants","US ACGIH Threshold Limit Values (TLV)","US FDA Indirect Food Additives: Adhesives and Components of Coatings - Substances for Use Only as Components of Adhesives - Adhesives","US NIOSH Recommended Exposure Limits (RELs)","US Toxic Substances Control Act (TSCA) - Inventory"

iodine (CAS: 7553-56-2) is found on the following regulatory lists;

"Canada - Alberta Occupational Exposure Limits","Canada - British Columbia Occupational Exposure Limits","Canada - Northwest Territories Occupational Exposure Limits (English)","Canada - Nova Scotia Occupational Exposure Limits","Canada - Prince Edward Island Occupational Exposure Limits","Canada - Prince Edward Island Occupational Exposure Limits - Carcinogens","Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)","Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits","Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances","Canada Domestic Substances List (DSL)","Canada Ingredient Disclosure List (SOR/88-64)","Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)","US - Alaska Limits for Air Contaminants","US - California Occupational Safety and Health Regulations (CAL/OSHA) - Hazardous Substances List","US - California Permissible Exposure Limits for Chemical Contaminants","US - Connecticut Hazardous Air Pollutants","US - Florida Essential Chemicals","US - Hawaii Air Contaminant Limits","US - Idaho - Limits for Air Contaminants","US - Massachusetts Oil & Hazardous Material List","US - Michigan Exposure Limits for Air Contaminants","US - Minnesota Hazardous Substance List","US - Minnesota Permissible Exposure Limits (PELs)","US - New Jersey Right to Know Hazardous Substances","US - Oregon Permissible Exposure Limits (Z-1)","US - Pennsylvania - Hazardous Substance List","US - Rhode Island Hazardous Substance List","US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants","US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants","US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants","US - Washington Permissible exposure limits of air contaminants","US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants","US ACGIH Threshold Limit Values (TLV)","US ACGIH Threshold Limit Values (TLV) - Carcinogens","US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)","US DOE Temporary Emergency Exposure Limits (TEELs)","US Drug Enforcement Administration (DEA) List I and II Regulated Chemicals","US NIOSH Recommended Exposure Limits (RELs)","US OSHA Permissible Exposure Levels (PELs) - Table Z1","US Toxic Substances Control Act (TSCA) - Inventory","WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established"

tetraiodoethylene (CAS: 513-92-8) is found on the following regulatory lists;

"Canada Non-Domestic Substances List (NDSL)","US Toxic Substances Control Act (TSCA) - Inventory"

Section 16 - OTHER INFORMATION

ND

Substance CAS Suggested codes tetraiodoethylene 513- 92- 8 Xn; R22

Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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