



# MATERIAL SAFETY DATA SHEET

## Credence

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### **SECTION 1: IDENTIFICATION OF THE MATERIAL**

#### **1.1 Product Identifier**

- |      |                        |  |
|------|------------------------|--|
| 1.10 | Product name:          | Credence   |
| 1.11 | Correct shipping name: | Credence   |
| 1.12 | Other names:           | Not applicable   |
| 1.13 | Use:                   | Tablets are used for disinfection of drinking water for animal consumption and for surface disinfection. |

### **SECTION 2: HAZARD IDENTIFICATION**

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017  
EPA Approval No: Water Treatment Chemicals (subsidiary) – HSR002684

Pictograms



Signal Word: Warning

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1E (dermal)	H313	May be harmful in contact with skin	Acute Tox. 5
6.3A	H315	Causes skin irritation	Skin Irrit. 2
6.4A	H319	Causes serious eye irritation	Eye Irrit. 2A
9.1A	H400	Very toxic to aquatic life	Aquatic Acute 1
9.2A	H421	Very toxic to the soil environment	
9.3C	H433	Harmful to terrestrial vertebrates	

Prevention Code	Prevention Statement
P102	Keep out of reach of children
P103	Read label before use
P264	Wash hands thoroughly after handling
P273	Avoid release into the environment
P280	Use personal protective clothing as detailed in Section 8

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand
P312	Call a POISON CENTER or doctor/physician if you feel unwell
P362	Take off contaminated clothing and wash before re-use
P391	Collect spillage
P302 + P352	IF ON SKIN: Wash with plenty of soap and water
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P332 + P313	If skin irritation occurs: Get medical advice/attention
P337 + P313	If eye irritation persists: Get medical advice/attention

Storage Code	Storage Statement
None allocated	

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

### SECTION 3: COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS

Ingredients	Wt%	CAS NUMBER
Sodium Dichloroisocyanurate	40-70	2893-78-9
Adipic Acid	10-30	124-04-9
Non-hazardous	To balance	

**SECTION 4: FIRST AID MEASURES**

## Routes of Exposure:

- If in Eyes      Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.
- If on Skin      Take off contaminated clothing and wash before re-use. Wash skin with plenty of soap and water. If skin irritation occurs: get medical advice/attention.
- If Swallowed    Never give anything by mouth to an unconscious person. If swallowed do not induce vomiting. Give large quantities of water. (If available give several glasses of milk) If vomiting occurs spontaneously keep airway clear and give more water. Get medical attention if there are signs of discomfort or ill health.
- If Inhaled      Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

**Most important symptoms and effects, both acute and delayed**

## Symptoms:

- Ingestion:      Not a likely route of exposure. Harmful if swallowed. Ingestion may cause immediate pain and severe burns of the mucous membranes. There may be discoloration of the tissues. Swallowing and speech may be difficult at first and then almost impossible. The effects on the oesophagus and gastrointestinal tract may range from irritation to severe corrosion. Oedema of the epiglottis and shock may occur.
- Inhalation:     This material contained in this tablet in solid form is not expected to produce respiratory effects. Particles of respirable size are generally not encountered. The respirable fraction for the tablet active ingredient is typically less than 0.1% by weight for the granular and extra granular grades. If it is ground or otherwise in a powdered form, effects similar to a corrosive substance may occur. May cause severe irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. If significant or prolonged exposure occurs, pulmonary oedema may develop, either immediately or more often within a period of 5-72 hours. The symptoms may include tightness in the chest, dyspnea, frothy sputum, cyanosis, and dizziness. Physical findings may include moist rales, low blood pressure and high pulse pressure. Severe cases may be fatal.
- Skin:            Direct contact with wet material or moist skin may cause severe irritation, pain, and possibly burns. Dry material is less irritating than wet material.
- Eye:             This material is irritating to the eye. Direct contact may cause severe irritation, pain and burns, possibly severe, and permanent damage including blindness. The degree of injury depends on the concentration and duration of contact.

## Repeated Exposure (Chronic)

Based on animal studies, exposure to concentrations of monosodium cyanurate at the solubility limit may cause cardiovascular, kidney and urinary bladder effects.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** eye disorders, respiratory disorders, skin disorders and allergies

**TARGET ORGANS:** cardiovascular system, kidneys, bladder.

**SECTION 5: FIRE FIGHTING MEASURES**

<b>Hazard Type</b>	Non Flammable
<b>Hazards from combustion products</b>	If heated by outside source to temperatures above 240°C, this product will undergo decomposition with the evolution of noxious gases but no visible flame. Wet material may generate nitrogen trichloride, an explosion hazard. Thermal decomposition or combustion products: chlorine, nitrogen, nitrogen trichloride, cyanogens chloride, oxides of carbon, phosgene.
<b>Suitable Extinguishing media</b>	Do not attempt to extinguish the fire without a self-contained breathing apparatus. Do not let the fire burn. Flood with copious amounts of water. Do not use dry chemicals, carbon dioxide or halogenated extinguishers since there is potential for a violent reaction.
<b>Precautions for firefighters and special protective clothing</b>	Fire-fighters should wear full protective clothing and a self-contained breathing apparatus. Using a 10% solution of sodium carbonate, thoroughly decontaminate fire-fighting equipment including all fire-fighting wearing apparel after the incident.
<b>HAZCHEM CODE</b>	<b>2Z</b>

**SECTION 6: ACCIDENTAL RELEASE MEASURE**

Wear protective gear as detailed in Section 8. Evacuate all unnecessary personnel. Handle product in a well-ventilated area.

Do not release into the environment. Prevent flow of material into water source and begin monitoring available chlorine and pH immediately. Notify all downstream users of possible contamination.

Contain spilled material. Any spillage should be cleaned up as soon as possible. Do not add water to spilled material. Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean, dry containers for disposal. Do not close drums containing wet or damp material. Do not transport wet or damp material. Dispose of waste according to the applicable local and national regulations.

**SECTION 7: HANDLING AND STORAGE****Precautions for Handling in bulk:**

- Read label before use.
- Avoid release to the environment.
- Use personal protective clothing as detailed in Section 8.
- Do not get in eyes, on skin or on clothing.
- Avoid breathing airborne particulates; wear respiratory protection when exposure is possible wear goggles or face shield and rubber gloves when handling.
- Wash hands thoroughly with soap and water after handling.
- Wash contaminated clothing before use.
- Use only outdoors or in a well-ventilated area
- Vapour space in a closed container may contain a slight amount of chlorine gas and compounds from decomposition of the product.

**Precautions for Storage:**

- Store away from incompatible materials listed in Section 10.
- Store in original container and in a cool dry area where temperatures do not exceed 25°C.
- Keep container tightly closed.(s).
- Do not allow water to get into the container.
- Keep out of reach of children.

## Handling Instructions for Specific Uses

Mix only with water. Use clean dry utensils. Do not mix this product with remnants of any other products. Such uses may cause a violent reaction leading to fire or explosion.

Contamination with moisture, organic matter or other chemicals may start a chemical reaction with generation of heat, liberation of hazardous gases, and possible generation of fire and explosion.

Vapour space in a closed container may contain a slight amount of chlorine gas and other chlorine containing compounds from decomposition of the product. Exposure to chlorine gas may cause burning of the eyes, burning of the nose and mouth and irritation of the linings of the respiratory tract with coughing, a choking sensation, substernal pain, vomiting, nausea, headache, dizziness and fainting.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	Ppm	mg/m <sup>3</sup>	Ppm	mg/m <sup>3</sup>
No ingredients have exposure limits.	1			

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

**The information below relates to Sodium Dichloroisocyanurate in its pure form.**

#### Derived No Effects Level (DNEL): Workers

Long-Term Exposure (Systemic Effects): Dermal - 2.3 mg/kg bw/day

Long-Term Exposure (Systemic Effects): Inhalation - 8.11 mg/m<sup>3</sup>

#### Derived No Effects Level (DNEL): Population

Long-Term Exposure (Systemic Effects): Dermal - 1.15 mg/kg bw/day

Long-Term Exposure (Systemic Effects): Oral - 1.15 mg/kg bw/day

Long-Term Exposure (Systemic Effects): Inhalation - 1.99 mg/m<sup>3</sup>

#### Predicted No Effect Concentration (PNEC): Environment

**PNEC: Aquatic –**  
 PNEC aqua (freshwater): 0.00017 mg/L  
 PNEC aqua (marine water): 1.52 mg/L  
 PNEC aqua (intermittent releases): 0.00017 mg/L

**PNEC: Soil –**  
 PNEC sediment (freshwater): 7.56 mg/kg sediment dw  
 PNEC soil: 0.756 mg/kg soil dw

**PNEC: Sewage Treatment Plant –**  
 PNEC STP: 0.59 mg/L

#### PNEC Mammals (oral) –

There is no concern for secondary poisoning from the substance or the degradant.

## Engineering Controls

Use only in well-ventilated areas. Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

## Personal Protection Equipment



<b>Eyes</b>	Wear chemical safety goggles. Avoid wearing contact lenses. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
<b>Hands</b>	Wear appropriate chemical resistant gloves. Protective Material Types: Butyl rubber, Natural rubber, Neoprene, Nitrile, Polyvinyl chloride (PVC).
<b>Skin</b>	Wear protective clothing to minimize skin contact. When potential for contact with dry material exists, wear disposable coveralls suitable for dust exposure. Contaminated clothing should be removed and laundered before reuse.
<b>Respiratory</b>	An approved respirator with EN140 (chlorine) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. The added protection of a full-face piece respirator is required when visible dusty conditions are encountered and eye irritation may occur. A respiratory protection program that meets applicable regulatory requirements must be followed whenever workplace conditions warrant use of a respirator.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Tablet
Colour	White/Off White
Odour	Slight Chlorine Odour
Odour Threshold	Not available
pH	5 - 6
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Specific Gravity	Not available
Water Solubility	Completely Soluble in Water
Partition Coefficient:	Log Kow = 0
Auto-ignition Temperature	Not available
Decomposition Temperature	225 - 250°C
Kinematic Viscosity	Not available
Particle Characteristics	Not available

**SECTION 10: STABILITY AND REACTIVITY**

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Do not get water inside packaging.
Incompatible Materials	Strong acids and/or alkalines. Reducing agents. Combustible material. The active ingredient in this preparation is a strong oxidising agent. The preparation of concentrated solutions or slurries is not recommended. Avoid contact with water on concentrated material in the container. Also avoid contact with easily oxidisable organic material: ammonia, urea or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; calcium hypochlorite and alkalis.
Hazardous Decomposition Products	Chlorine, Nitrogen trichloride, Cyanogen chloride, Oxides of carbon, Phosgene.

**SECTION 11: TOXICOLOGICAL INFORMATION****Acute Effects:**

Swallowed	Not applicable.
Dermal	May be harmful if in contact with skin.
Inhalation	Sodium Dichloroisocyanurate is irritating to the respiratory system.
Eye	Causes severe eye irritation. (Note: the in-use solution is not irritating to eyes)
Skin	Causes skin irritation.

**Chronic Effects:**

Carcinogenicity	Not applicable
Reproductive Toxicity	Not applicable
Germ Cell Mutagenicity	Not applicable
Aspiration	Not applicable
STOT/SE	Not applicable
STOT/RE	Not applicable

**Acute Toxicity**

Chemical Name	LD50 (Oral)	LD50 (Dermal)	LC50 (inhalation)
<b>Product</b>			
Sodium Dichloroisocyanurate Cas No 2893-78-9	1823mg/kg (Rat)	>5000mg/kg (rabbit)	0.27-1.17 mg/L/4 hour(s) inhalation-rat
Adipic Acid (Cas No 124-04-9)	940mg/kg(Rat)	-	

**SECTION 12: ECOTOXICOLOGICAL INFORMATION**

HSNO Classes:	9.1A = Very toxic to aquatic life.
	9.2A = Very toxic to the soil environment.
	9.3C = Harmful to terrestrial vertebrates.

<b>Persistence and degradability</b>	The materials used in this preparation will not persist in the environment. The free available chlorine from Sodium dishloroisocyanurate is rapidly consumed by reaction with organic and inorganic materials to produce chloride ion. The stable degradation products are chloride ion and cyanuric acid. Sodium Dichloroisocyanurate is subject to hydrolysis. Cyanuric acid produces by hydrolysis is biodegradable.
<b>Bioaccumulation</b>	Trichloroisocyanuric acid hydrolyses in water liberating chlorine and cyanuric acid. These products are not bioaccumulative.
<b>Mobility in Soil</b>	No data available
<b>Other adverse effects</b>	No data available

**Weight of Sodium Dichloroisocyanurate acid in this preparation product (% w/w): 40-70%**

<b>Fish Toxicity</b>	<b>Sodium Dichloroisocyanurate acid</b>
Bluegill Sunfish	0.25-1.0 mg/L 96 hours LC50
Rainbow Trout	0.13-0.36 mg/L 96 hours LC50
Inland Silverside	1.21 mg/L 96 hours LC50
<b>Invertebrate Toxicity</b>	<b>Sodium Dichloroisocyanurate acid</b>
Water flea	0.196 mg/L 48 hours LC50
Mysid Shrimp	1.65 mg/L 96 hours LC50

<b>Other Toxicity</b>	<b>Sodium Dichloroisocyanurate acid</b>
Mallard Duck	Oral LD <sub>50</sub> : 1916mg/Kg
Mallard Duck	LC50: >10,000ppm diet
Bobwhite Quail	Oral LD <sub>50</sub> : 1732 mg/kg
Bobwhite Quail	LD50 10000 ppm diet

**Do not allow to enter waterways.**

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Disposal Method:** Do not put product, spilled product, partially filled containers into the waste compactor. Contact with incompatible materials could cause a reaction and fire. Do not transport damp or wet material. Neutralise materials to a non-oxidising state for safe disposal.

Ensure any container holding waste product or contaminated spill media is labelled "Hazardous Waste – Ecotoxic" and that the label also has the Ecotoxic Pictogram, waste type identifier, and the business name, address, and phone number.

Precautions or methods to avoid: Avoid release to the environment.

**SECTION 14: TRANSPORT INFORMATION**

**This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012**

**Road and Rail Transport**

UN No: 3077  
 Class-primary 9  
 Packing Group III  
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

**Air Transport**

UN No: 3077  
 Class-primary 9  
 Packing Group III  
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

**Marine Transport**

UN No: 3077  
 Class-primary 9  
 Packing Group III  
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
 Marine Pollutant Yes

**Limited Quantities Statement:**

If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

**SECTION 15: REGULATORY INFORMATION**

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval Code: Water Treatment Chemicals (subsidiary) – HSR002684

HSNO Classification: 6.1E(dermal), 6.3A, 6.4A, 9.1A, 9.2A, 9.3C

<b>HSW (HS) Regulations 2017</b>	<b>Trigger Quantity</b>
Certified Handlers	Not required
Location Certificate	Not required
Signage Trigger Quantities (Schedule 3)	100Kg (9.1A)
Emergency Response Plan (Schedule 5)	100Kg (9.1A)
Secondary Containment (Schedule 5)	100Kg (9.1A)
Tracking (Schedule 26)	Not required
<b>HSNO Additional Controls (Restrictions of use)</b>	
	None
<b>Hazardous Property Controls Notice 2017 – Please refer to <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> for details.</b>	
HPC Notice Part 4 Clause 47	Equipment for class 9 substances must be appropriate
HPC Notice Part 4 Subpart A	Site and storage controls for class 9 substances

**SECTION 16: OTHER INFORMATION****Glossary**

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit1.

**References:**

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

**DISCLAIMER**

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