

SAFETY DATA SHEET

according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

GLB STABILIZED CHLORINATING PUCKS

Version 1.3

Revision Date 2019.04.08

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SECTION 1. IDENTIFICATION

Product name : GLB STABILIZED CHLORINATING PUCKS
 Synonyms : Trichloroisocyanuric Acid, TCCA, Trichlor
 PMRA Registration number : 29459, 29847, 30171

Manufacturer or supplier's details

Company : Arch Chemicals, Inc.
 1200 Bluegrass Lakes Parkway
 Alpharetta, GA
 30004
 United States of America (USA)

E-mail address : sds@lonza.com
 Emergency telephone number : In case of emergency call CHEMTREC US: 1-800-424-9300,
 CHEMTREC WORLD-WIDE: +1-703-527-3887.

Recommended use of the chemical and restrictions on use

Recommended use : Water treatment chemical

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Oxidizing solids : Category 2
 Acute toxicity (Oral) : Category 4
 Acute toxicity (Inhalation) : Category 3
 Skin irritation : Category 2
 Serious eye damage : Category 1
 Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H272 May intensify fire; oxidizer.
 H302 Harmful if swallowed.
 H331 Toxic if inhaled.

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H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H335 May cause respiratory irritation.

Precautionary statements : **Prevention:**
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P220 Keep/Store away from clothing/ combustible materials.
 P221 Take any precaution to avoid mixing with combustibles.
 P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
 P304 + P340 + P311 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician.
 P302 + P352 IF ON SKIN: Wash with plenty of water.
 P332 + P313 If skin irritation occurs: Get medical advice/ attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
 P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
Storage:
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
Disposal:
 P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Substance

Hazardous components

Chemical name / Synonyms	CAS-No.	Concentration (% w/w)
1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione	87-90-1	96 - 100

SECTION 4. FIRST AID MEASURES

General advice : Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the

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	product container or label with you when calling a poison control center or doctor, or going for treatment.
If inhaled	: IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
In case of skin contact	: IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
In case of eye contact	: IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed	: IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	: None known.
Notes to physician	: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Water only.
Specific hazards during firefighting	: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Closed containers may explode (due to the build up of steam pressure) when exposed to extreme heat.
Further information	: Use water to cool containers exposed to fire. On small fires, use water spray or fog. On large fires, use heavy deluge or fog streams. Flooding amounts of water may be required before extinguishment can be accomplished. Do not use dry extinguishers containing ammonium compounds.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Response to a large quantity spill (100 pounds or greater) or when dusting or decomposition gas exposure could occur requires the use of a positive pressure full face supplied air respirator or self contained breathing apparatus (SCBA), chemical resistant gloves, coveralls and boots. In case of fire, this personal protective equipment should be used in addition to normal fire fighter equipment. Compatible materials for response to this material are: neo-
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prene.

Protection concerns must also address the following: If this material becomes damp/wet or contaminated in a container, the formation of nitrogen trichloride gas may occur and an explosive condition may exist.

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC: 1-800-424-9300

Hazardous concentrations in air may be found in local spill area and immediately downwind.

If spill material is still dry, do not put water directly on this product as a gas evolution may occur. If material is wet, contact 1-800-654-6911 for proper stabilization procedures.

Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

This material may be neutralized for disposal; you are requested to contact Arch Chemicals at 1-800-654-6911 before beginning any such procedure.

- Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Sweep up and shovel into suitable containers for disposal. Do not flush into surface water or sanitary sewer system. Avoid dust formation.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing dust, mist, vapor or gas.
- Conditions for safe storage : Store in a cool dry ventilated location, away from sources of ignition or other incompatible conditions and chemicals. Keep container(s) closed. Avoid creating dusts.
- Materials to avoid : Refer to Section 10, "Incompatible Materials."

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

- Engineering measures** : Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Personal protective equipment

- Respiratory protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible. A NIOSH approved full-face air purifying respirator equipped with combination chlorine/P100 cartridges. Air purifying respi-

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rators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Hand protection

Remarks : Wear impervious gloves to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body.

Eye protection : Use chemical goggles.

Skin and body protection : Nitrile
Natural Rubber
Neoprene (This includes: gloves, boots, apron, protective suit)

Protective measures : An eye wash and safety shower should be provided in the immediate work area.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : tablet

Colour : white

Odour : Sharp, chlorine-like, bleach odor

Odour Threshold : no data available

pH : 2.7 - 3.2

Melting point/freezing point : no data available

Boiling point/boiling range : no data available

Flash point : no data available

Evaporation rate : Not applicable

Flammability (solid, gas) : Product is not known to be flammable, combustible or pyrophoric.

Flammability (liquids) : no data available

Upper explosion limit : Not applicable

Lower explosion limit : Not applicable

Vapour pressure : Not applicable

Relative vapour density : no data available

Relative density : > 1 (68 °F / 20 °C)

Water solubility : 12 g/l (77 °F / 25 °C)

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Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Decomposition temperature	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Oxidizing properties	:	Oxidizing
Molecular weight	:	232.41 g/mol

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	NFPA Oxidizer Class: Meets the criteria of an NFPA Class 1 Oxidizer May be unstable at temperatures above 225 Deg. C (437 Deg. F) Not sensitive to mechanical shock. Not sensitive to static discharge. Product will not undergo hazardous polymerization.
Conditions to avoid	:	Sparks, open flame, other ignition sources, and elevated temperatures. Contact with small amounts of water may result in an exothermic reaction with the liberation of toxic fumes. Damp or slightly wet product (will evolve nitrogen trichloride) May be unstable at temperatures above 225 Deg. C (437 Deg. F)
Incompatible materials	:	Organic materials Oils Grease Sawdust Reducing agents nitrogen-containing compounds Oxidizing Acids Bases Dry fire extinguishers containing ammonium compounds
Hazardous decomposition products	:	Nitrogen trichloride Chlorine nitrous oxides cyanates Carbon dioxide (CO ₂)

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, skin, eyes, ingestion
Acute toxicity		

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Acute oral toxicity	: LD50 (Rat): 490 mg/kg
Acute inhalation toxicity	: LC50 (Rat): approximately 0.54 mg/l Exposure time: 4 h Test atmosphere: dust/mist Remarks: (Nose Only)
	LC50 (Rat): approximately 2.16 mg/l Exposure time: 1 h Test atmosphere: dust/mist Remarks: (Nose Only)
Acute dermal toxicity	: LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Remarks: DRY MATERIAL CAUSES MODERATE SKIN IRRITATION.
WET MATERIAL CAUSES SKIN BURNS.

Serious eye damage/eye irritation

Result: Corrosive to eyes

Respiratory or skin sensitisation

Remarks: Negative skin sensitizer, guinea pig - Buehler Method

Carcinogenicity

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 0.32 mg/l Exposure time: 96 h
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	LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.30 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: LC50 (Daphnia magna (Water flea)): 0.21 mg/l Exposure time: 48 h
Toxicity to terrestrial organisms	: Dietary LC50 (Anas platyrhynchos (Mallard duck)): > 10,000 ppm Exposure time: 8 d
	Acute Oral LD50 (Anas platyrhynchos (Mallard duck)): 1,600 mg/kg
	Dietary LC50 (Colinus virginianus (Bobwhite quail)): 7,422 ppm Exposure time: 8 d

Persistence and degradability

no data available

Bioaccumulative potential

Components:

1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione:

Partition coefficient: n-octanol/water : log Pow: 0.94
Method: Calculation method

Mobility in soil

no data available

Other adverse effects

Ozone-Depletion Potential : Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-Depleting Substances (40 CFR 82, Subpt. A, App A & B)
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : Highly toxic to fish and other aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D001.
If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal restrictions under 40 CFR 268 and must be managed accordingly.

SECTION 14. TRANSPORT INFORMATION

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DOT

UN number : 2468
Proper shipping name : Trichloroisocyanuric acid, dry
Transport hazard class : 5.1
Packing group : II
 Labels : 5.1
 Emergency Response Guidebook Number : 140
Environmental hazards : yes

TDG

UN number : 2468
Proper shipping name : TRICHLOROISOCYANURIC ACID, DRY
Transport hazard class : 5.1
Packing group : II
 Labels : 5.1
Environmental hazards : yes

IATA

UN number : 2468
Proper shipping name : Trichloroisocyanuric acid, dry
Transport hazard class : 5.1
Packing group : II
 Labels : 5.1
Environmental hazards : no

IMDG

UN number : 2468
Proper shipping name : Trichloroisocyanuric acid, dry
Transport hazard class : 5.1
Packing group : II
 Labels : 5.1
 EmS Number 1 : F-A
 EmS Number 2 : S-Q
Environmental hazards : Marine pollutant: yes

ADR

UN number : 2468
Proper shipping name : TRICHLOROISOCYANURIC ACID, DRY
Transport hazard class : 5.1
Packing group : II
 Classification Code : O2
 Hazard Identification Number : 50
 Labels : 5.1
Environmental hazards : yes

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RID

UN number : 2468
Proper shipping name : TRICHLOROISOCYANURIC ACID, DRY
Transport hazard class : 5.1
Packing group : II
 Classification Code : O2
 Hazard Identification Number : 50
 Labels : 5.1
Environmental hazards : yes

Special precautions for user : none

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15. REGULATORY INFORMATION

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain label.

Read the approved label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

PMRA Registration number : 29459, 29847, 30171
 Hazard pictograms :



Signal word : WARNING!
 Hazard statements : Corrosive. Causes skin burns.
 Corrosive - causes irreversible eye damage.
 May be fatal if swallowed.
 Irritating to nose and throat.
 This pesticide is toxic to fish.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

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This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Components	CAS-No.
1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione	87-90-1

Pennsylvania Right To Know

Components	CAS-No.
1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione	87-90-1

New Jersey Right To Know

Components	CAS-No.
1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione	87-90-1

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA : This chemical is for export only and thus, is not subject to TSCA regulations.

SECTION 16. OTHER INFORMATION

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Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Date format : yyyy/mm/dd

US / EN