SECTION 1. IDENTIFICATION

Product name: HTH Stabilizer

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


Recommended use of the chemical and restrictions on use
Recommended use: Water treatment chemical

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Skin irritation: Category 2
Eye irritation: Category 2B
Specific target organ toxicity - single exposure: Category 3

GHS label elements
Hazard pictograms:

Signal word: Warning

Hazard statements:
H315 Causes skin irritation.
H320 Causes eye irritation.
H335 May cause respiratory irritation.

Precautionary statements:
Prevention:
P261 Avoid breathing vapours.
P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name / Synonyms</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3,5-Triazine-2,4,6-triol</td>
<td>108-80-5</td>
<td>90 - 100</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

If inhaled : Remove to fresh air. Get medical attention if symptoms occur.

In case of skin contact : Immediately flush skin with large amounts of water. Remove contaminated clothing. If irritation develops, get medical attention.

In case of eye contact : Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.

If swallowed : Drink water as a precaution. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Choose extinguishing media suitable for surrounding materi-
Specific hazards during firefighting: Material will not ignite or burn. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Further information: In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus. Use water to cool containers.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

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.

Conditions for safe storage: Store in a cool, dry and well ventilated place. Keep containers tightly closed when not in use.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3,5-Triazine-2,4,6-triol</td>
<td>108-80-5</td>
<td>TWA (Total)</td>
<td>10 mg/m³</td>
<td>WEEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable.)</td>
<td>5 mg/m³</td>
<td>WEEL</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Protection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory protection</td>
<td>Wear a NIOSH approved respirator if levels above the exposure limits are possible.</td>
</tr>
<tr>
<td>Eye protection</td>
<td>Use safety glasses with side shields. Emergency eyewash should be provided in the immediate work area.</td>
</tr>
<tr>
<td>Skin and body protection</td>
<td>Impervious</td>
</tr>
</tbody>
</table>

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>granules, or, powder</td>
</tr>
<tr>
<td>Colour</td>
<td>white</td>
</tr>
<tr>
<td>Odour</td>
<td>none</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>pH</td>
<td>ca. 5.0</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>626 °F / 330 °C Sublimes</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>no data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>no data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Nil</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Product is not known to be flammable, combustible, pyrophoric or explosive.</td>
</tr>
<tr>
<td>Flammability (liquids)</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>no data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.768</td>
</tr>
<tr>
<td>Water solubility</td>
<td>no data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>no data available</td>
</tr>
</tbody>
</table>
HTH Stabilizer

Viscosity, dynamic : no data available
Viscosity, kinematic : no data available
Oxidizing properties : no data available
Molecular weight : 129.08 g/mol

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : High temperatures
Contact with incompatible substances
Incompatible materials : Oxidizing
Hazardous decomposition products : Carbon monoxide, Carbon dioxide
Oxides of nitrogen
cyanic acid

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Skin, eyes, ingestion

Acute toxicity
Acute oral toxicity : LD50 (Rat): Believed to be > 5,000 mg/kg
Acute inhalation toxicity : Remarks: no data available
Acute dermal toxicity : LD50 (Rabbit): Believed to be > 2,000 mg/kg

Skin corrosion/irritation
Assessment: Skin irritation

Serious eye damage/eye irritation
Result: Mild eye irritation

Respiratory or skin sensitisation
Remarks: This material is not known or reported to be a skin or respiratory sensitizer.

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.

OSHA
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.
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
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

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 : Practically non-toxic to fish and other aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues : If this product becomes a waste, it will be a nonhazardous waste.
As a nonhazardous solid waste it should be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable
HTH Stabilizer

TDG : Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable

IATA : Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable

IMDG : Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable

ADR : Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable

RID : Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable

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

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**
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).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3,5-Triazine-2,4,6-triol</td>
<td>108-80-5</td>
<td>90 - 100 %</td>
</tr>
</tbody>
</table>

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**
No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

<table>
<thead>
<tr>
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<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
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**New Jersey Right To Know**

<table>
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<tr>
<td>1,3,5-Triazine-2,4,6-triol</td>
<td>108-80-5</td>
</tr>
</tbody>
</table>

**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.
Canadian lists

NPRI

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

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

TSCA : The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

WEEL : US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

AIICS - 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

Revision Date : 2019.02.25

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