THEIC

SECTION 1. IDENTIFICATION

Product identifier

Trade name : **THEIC**

Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Manufacture of plastics products
Polymer additive
Stabilizer

Recommended restrictions on use : None known.

Details of the supplier of the safety data sheet

Company : Baerlocher Production USA LLC
5890 Highland Ridge Drive
Cincinnati, OH 45232

Telephone : 513-604-2327
E-mail address : Hotline.PS@baerlocher.com
Responsible/issuing person : Product Safety Department

Emergency telephone number (0 - 24 h)

CHEMTREC: 1-800-424-9300 (inside U.S.) / 1-703 527-3887 (outside U.S.) Collect calls are accepted

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Combustible dust

GHS label elements

Signal word : Warning

Hazard statements : May form combustible dust concentrations in air.

Other hazards

Dust can form an explosive mixture in air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance
Chemical nature : 1,3,5-Tris(2-hydroxyethyl)-cyanuric acid

SECTION 4. FIRST AID MEASURES

General advice : If symptoms persist, call a physician.
If inhaled : Remove to fresh air.
Get medical advice/ attention if you feel unwell.
In case of skin contact : Wash off with soap and water.
In case of eye contact : Rinse opened eye for several minutes under running water.
Consult a physician.

If swallowed	:	Drink plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Obtain medical attention.
Most important symptoms and effects, both acute and delayed	:	No information available.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Carbon dioxide (CO2) Dry powder water spray, Fight larger fires with water jet or alcohol-resistant foam.
Unsuitable extinguishing media	:	none
Specific hazards during fire-fighting	:	Formation of toxic gases is possible during heating or in case of fire. Can be released in case of fire: Nitrogen oxides (NOx), Carbon monoxide (CO), Hydrogen cyanide (HCN).
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Provide adequate ventilation. Wear respiratory protection. Avoid dust formation. Use personal protective equipment. Keep people away from and upwind of spill/leak.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.
Methods and materials for containment and cleaning up	:	Use mechanical handling equipment. Avoid dust formation. Use approved industrial vacuum cleaner for removal. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Take precautionary measures against static discharges. Dust may form explosive mixture in air.
Advice on safe handling	:	Provide sufficient air exchange and/or exhaust in work rooms. Avoid formation and buildup of dust. Dust must be extracted directly at the point of origin.

Avoid contact with skin and eyes.

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.
Store in original container.
Keep away from heat.
Keep away from direct sunlight.

Technical measures/Precautions : Keep away from fire, sparks and heated surfaces.

Materials to avoid : Keep away from oxidizing agents and strongly acid or alkaline materials.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
General limits for air contaminants (PNOC)	Not Assigned	air 8 h (total dust)	15 mg/m3	OSHA Z-3
		air 8 h (Respirable fraction)	5 mg/m3	OSHA Z-3
		air 8 h (inhalable dust)	10 mg/m3	ACGIH
		air 8 h (Respirable fraction)	3 mg/m3	ACGIH

Engineering measures : Local exhaust
Keep away from open flames, hot surfaces and sources of ignition.

Personal protective equipment

Respiratory protection : P1 filter respirator for inert particles

Hand protection

Remarks : Protective gloves The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Skin should be washed after contact. Material: nitrile rubber (0,1 millimetre) Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. butyl-rubber

Eye protection : Tightly fitting safety goggles

Skin and body protection : Long sleeved clothing

Protective measures : antistatic shoes

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Keep away from food, drink and animal feedingstuffs.
Remove and wash contaminated clothing before re-use.

Wash hands before breaks and at the end of workday.
Avoid contact with the skin and the eyes.
Use protective skin cream before handling the product.
Do not breathe dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Crystalline powder
Color	:	white
Odor	:	alcohol-like
Odor Threshold	:	No data available
pH	:	No data available
Melting point/range	:	136 °C
Boiling point/boiling range	:	314 °C
Flash point	:	241 °C (1,013 hPa) Method: DIN ISO 2592 Cleveland
Evaporation rate	:	No data available
Flammability (solid, gas)	:	The product is not flammable.
Upper explosion limit	:	not determined
Lower explosion limit	:	not determined
Vapor pressure	:	0.00001 hPa (50 °C)
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	1.47 g/cm3 (20 °C)
Bulk density	:	500 kg/m3 (20 °C)
Solubility(ies)		
Water solubility	:	572 g/l (20 °C)
Partition coefficient: n-octanol/water	:	log Pow: - 1.63
Auto-ignition temperature	:	430 °C
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if used as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No data available
Conditions to avoid	:	To avoid thermal decomposition, do not overheat.
Incompatible materials	:	Acids and bases Amines Oxidizing agents
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 401 GLP: yes Remarks: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	:	No mortality observed at this dose. (Rat): 9.33 mg/l Exposure time: 8 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: no Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	:	Remarks: Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Product:

Species: Rabbit
Exposure time: 20 h
Method: standardised international/national methodology
Result: not irritating
GLP: no
Remarks: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Species: Rabbit
Result: not irritating
Method: OECD Test Guideline 405
GLP: no
Remarks: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Skin sensitisation

Test Type: LLNA
Species: Mouse
Method: OECD Test Guideline 429
Result: negative
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Remarks: Respiratory sensitisation
Not classified due to lack of data.

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Test Type: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Species: Bacteria
Method: OECD Test Guideline 471
Result: negative
GLP: yes

: Test Type: In vitro gene mutation study in mammalian cells
Species: mouse lymphoma cells
Method: OECD Test Guideline 476
Result: negative
GLP: yes

: Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Species: CHL
Method: OECD Test Guideline 473
Result: negative
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: This product contains no known or suspected carcinogens listed by IARC, NTP or OSHA at or above reportable quantities.

Reproductive toxicity

Product:

Effects on fertility : Test Type: Screening for reproductive/developmental toxicity
Species: Rat
Application Route: Oral

Method: OECD Test Guideline 422
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Effects on foetal development : Species: Rat
Application Route: Oral
Method: OECD Test Guideline 422
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Repeated dose toxicity

Product:

Species: Rat
Application Route: Oral
Method: OECD Test Guideline 422
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Based on available data, the classification criteria are not met.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 100 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae	:	NOEC (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201 GLP: yes EC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): >= 100 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211 GLP: yes
Toxicity to bacteria	:	EC10 (activated sludge): > 1,000 mg/l Exposure time: 0.5 h Test Type: Respiration inhibition Method: OECD Test Guideline 209 GLP: no

Ecotoxicology Assessment

Acute aquatic toxicity	:	Based on available data, the classification criteria are not met.
Chronic aquatic toxicity	:	Based on available data, the classification criteria are not met.

Persistence and degradability

Product:

Biodegradability	:	Test Type: aerobic Inoculum: activated sludge Result: Not biodegradable Biodegradation: 0 % Exposure time: 28 d Method: OECD Test Guideline 301E Test Type: aerobic Inoculum: activated sludge Result: Not biodegradable Biodegradation: 0 % Exposure time: 28 d Method: OECD Test Guideline 302B Test Type: aerobic Inoculum: activated sludge Result: Not biodegradable Biodegradation: 7.2 %

Exposure time: 14 d
Method: OECD Test Guideline 301C

Bioaccumulative potential

Product:

Bioaccumulation	:	Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): < 1.6 Exposure time: 42 d Method: standardised international/national methodology GLP: no Remarks: Bioaccumulation is unlikely.

Mobility in soil

Product:

Mobility	:	Remarks: No data available

Other adverse effects

Product:

Results of PBT and vPvB assessment	:	Based on available data, the classification criteria are not met.
Endocrine disrupting potential	:	No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Consult an expert on the disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations. Dispose in accordance with local, state and federal regulations.
Contaminated packaging	:	Empty containers must be handled with care due to product residue.

SECTION 14. TRANSPORT INFORMATION

National Regulations

DOT
Not regulated as a dangerous good

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

SARA 313 : This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

Components	CAS-No.	Wt.
not applicable	Not Assigned	

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

EINECS	listed
TSCA	listed
DSL	listed
AICS	listed
IECSC	listed
ENCS	listed
ECL	listed
PICCS	listed
NZIoC	listed

SECTION 16. OTHER INFORMATION

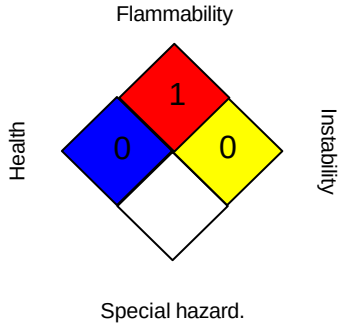
Full text of other abbreviations

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

Further information

NFPA:



HMIS III:

HEALTH	**1**
FLAMMABILITY	**0**
PHYSICAL HAZARD	**0**

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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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.

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