



Safety Data Sheet

TG 3134



1. Identification

Product identifier	TG 3134
Product code	TG 3134
Other means of identification	None.
Recommended use of the chemical and restrictions on use	High performance organic component based corrosion inhibitor and antiscalant. For all steam systems.
Manufacturer	TGWT CLEAN TECHNOLOGIES INC. 452 Jean-Neveu Street, Longueuil, QC, Canada, J4G 1N8 Tel. 877-525-8118 514-525-8118 Fax 450-670-7618 http://www.tgwt.com/
Emergency phone number	1-844-390-TGWT (8498) Monday to Friday, 8:30 am to 4:30 pm

2. Hazard identification

Summary	Avoid all contact with the skin, eyes and clothing. Do not breathe vapours, mists or aerosols. Do not ingest. If medical advice is needed, have this SDS or label at hand. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved.
WHMIS 2015/GHS/OSHA HCS 2012	
<p>Skin corrosion/irritation (Category 2) Serious eye damage/eye irritation (Category 1)</p> <p>DANGER</p> <p>H318: Causes serious eye damage H315: Causes skin irritation P264: Wash face, hands and any exposed skin thoroughly after handling. P280: Wear protective gloves, protective clothing and eye protection. P302+352: IF ON SKIN: Wash with plenty of water and soap. P332+313: If skin irritation occurs: Get medical advice or attention. P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P310: Immediately call a physician. P362+364: Take off contaminated clothing and wash before reuse. P501: Dispose of contents and container to a licensed chemical disposal agency in accordance with local, regional and national regulations.</p>	

3. Composition/information on ingredients

Common name	CAS	Weight % content
Purified tannins extracted from cultivated trees	Tannins	15 - 40 %
Sodium hydroxide	1310-73-2	0.1 - 1 %

Note: Tannins are a mixture of several oligomers and polymers that are not regulated under the Hazardous Products Regulations (HPR) SOR/2015-17 (WHMIS 2015). The manufacturer withholds the actual concentration range of the ingredients as a trade secret.

4. First-aid measures

Inhalation	Move person to fresh air. If breathing is difficult, give oxygen by trained personnel. If not breathing, give artificial respiration. Do not use mouth-to-mouth resuscitation unless you use a buccal protective device. If a problem develops or persists, seek medical attention.
Skin contact	Flush with water for at least 20 minutes. Suitable emergency safety shower facility should be immediately available. Remove contaminated clothing and wash before reuse. If a problem develops or persists, seek medical attention. Do not take contaminated clothing home to be laundered. Shoes and other leather items which cannot be decontaminated should be properly disposed.
Eye contact	IMMEDIATELY flush with plenty of water. Remove contact lenses after the first 5 minutes if easy to do. Flush with water for at least 30 minutes. Hold eyelids apart to rinse properly. Do not rub your eyes. Consult a physician, preferably an ophthalmologist. Do not transport the victim until the recommended flushing period is completed, unless a portable emergency eye wash bottle is immediately available.
Ingestion	DO NOT induce vomiting, unless recommended by medical personnel. If victim is conscious wash out mouth with water and give 1-2 glasses of water to drink. Never give anything by mouth if victim is unconscious or convulsing. If spontaneous vomiting occurs, keep head below hip level to prevent aspiration into the lungs. Seek medical attention or contact a Poison Centre immediately.
Other	No information available.
Symptoms	May cause severe eye irritation or eye damage. May cause redness and irritation of the skin.
Notes to the physician	Treat according to person's condition and specifics of exposure. If gastric lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Probable mucosal damage may contraindicate the use of gastric lavage.

5. Fire-fighting measures

Suitable extinguishing media	Use an extinguishing agent appropriate for the surrounding fire.
Specific hazards arising from the chemical	This product is an aqueous solution which does not support combustion unless the water has been evaporated. In a fire or if heated, a pressure increase will occur and the container may burst.
Special protective equipment	Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.
Special protective actions for fire-fighters	Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.
Environmental precautions	Prevent entry into sewers, closed areas and release to the environment. For a large spill, consult the Department of Environment or the relevant authorities.
Methods and materials for containment and cleaning up	Ventilate the area well. Do not breathe vapors and mists. Stop leak, if it's possible to do so without risk. Move containers from spill area. Absorb with inert material (soil, sand, vermiculite) and place in an appropriate waste disposal clearly identified. Finish cleaning the contaminated surface by rinsing with soapy water. Use caution as spill may create a slip hazard. Dispose via a licensed waste disposal contractor.

7. Handling and storage

Precautions for safe handling	Use only in well ventilated area. Avoid all contact with the skin, eyes and clothing. Do not breathe vapors and mists. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet. Keep containers tightly closed when not in use. Do not eat, do not drink and do not smoke during use. Wash hands, forearms and face thoroughly after handling this compound. Remove contaminated clothing and wash before reuse.
Conditions for safe storage, including any incompatibilities	Store tightly closed and in properly labelled container in a dry, cool and well ventilated place. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from acids and from incompatible materials (see section 10). Keep away from direct sunlight and heat.
Storage temperature	10 to 49°C (50 to 120.2°F)

8. Exposure controls/personal protection

Immediately Dangerous to Life or Health	Sodium hydroxide: 10 mg/m ³ .		
Sodium hydroxide	Ceiling	2 mg/m ³	ACGIH , BC, ON, RSST
Appropriate engineering controls	Provide sufficient mechanical ventilation (general and/or local exhaust) to keep the airborne concentrations of vapours, mists, aerosols or dust below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation.		
Individual protection measures			
Eye	Wear chemical splash goggles. Depending on conditions of use, a face shield may be necessary.		
Hands	Wear nitrile or neoprene gloves. Disposable nitrile gloves can also be used, but discard after single use. Before using, user should confirm impermeability. Discard gloves with tears, pinholes, or signs of wear. Gloves must only be worn on clean hands. Wash gloves with water before removing them. After using gloves, hands should be washed and dried thoroughly.		
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code. If necessary, wear an apron or long-sleeve protective coverall suit.		
Respiratory	Respiratory protection is not required for normal use. Where the conditions in the workplace require a respirator, it is necessary to follow a respiratory protection program. Moreover, respiratory protection equipment (RPE) must be selected, fitted, maintained and inspected in accordance with regulations and standard 29 CFR 1910.134 (OSHA), ANSI Z88.2 or CSA Z 94.11 (Canada) and approved by NIOSH/MSHA. In case of insufficient ventilation or in confined or enclosed space and for an assigned protection factor (APF) up to 10 times the exposure limit, wear a half mask respirator with organic vapour cartridges fitted with P100 filters. For an APF until maximum 100 times of exposure limit, wear		

a full face respirator mask with organic vapour cartridges and P100 filters.

Feet

Wear rubber boots to clean up a spill.



Apron



Goggles



Nitrile gloves

9. Physical and chemical properties

Physical state	Liquid	Flammability	Non-flammable
Colour	Brown	Flammability limits	N/Av.
Odour	Characteristic	Flash point	N/Av.
Odour threshold	N/Av.	Auto-ignition temperature	N/Av.
pH	11.6 to 12.6 @ 100%	Sensibility to electrostatic charges	No
Melting point	N/Av.	Sensibility to sparks and/or friction	No
Freezing point	<5°C (41°F)	Vapour density	N/Av. (Air = 1)
Boiling point	>100°C (212°F)	Relative density	1.05 to 1.15 kg/L (Water = 1)
Solubility	Highly soluble in water.	Partition coefficient n-octanol/water	N/Av.
Evaporation rate	= Water	Decomposition temperature	N/Av.
Vapour pressure	N/Av.	Viscosity	N/Av.
Percent Volatile	N/Av.	Molecular mass	N/Av.

N/Av.: Not Available N/Av.: Not Applicable Und.: Undetermined N/E: Not Established

10. Stability and reactivity

Reactivity	Reactive with acids.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions (including polymerizations)	Hazardous polymerization will not occur.
Conditions to avoid	Avoid contact with incompatible materials.
Incompatible materials	Strong acids, strong oxidizing agents (e.g. chlorine, fluorine, nitric acid, perchloric acid, peroxides, nitrates, chlorates, chromates, permanganates and perchlorates).
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Numerical measures of toxicity	Purified tannins extracted from cultivated trees Sodium hydroxide	Ingestion >5000 mg/kg Rat LD50 Skin >2000 mg/kg Rabbit LD50 Ingestion 340 mg/kg Rat LD50 Skin 1350 mg/kg Rabbit LD50
Likely routes of exposure	Skin, eyes, inhalation, ingestion.	
Delayed, immediate and chronic effects	<p>Eye contact May cause severe eye irritation or eye damage. The product is considered to be corrosive based on the pH (>11.5) of the solution. Severity is generally determined by concentration of solution and duration of contact.</p> <p>Skin contact May cause redness and irritation of the skin. Severity is generally determined by concentration of solution and duration of contact. The product TG 3134 has been tested with Corrositex® in vitro Membrane Barrier Test Method for Skin Corrosion (OECD 435). It is considered non-corrosive to the skin.</p> <p>Inhalation No adverse effects expected under normal conditions of use.</p> <p>Ingestion May cause gastrointestinal irritation with nausea and vomiting.</p> <p>Respiratory or skin sensitization Ingredients present at levels greater than or equal to 0.1% of this product are not skin or respiratory sensitizers.</p> <p>IARC/NTP Classification</p> <p>Common name Purified tannins extracted from cultivated trees</p> <p>IARC NTP - -</p> <p><small>IARC : 1- Carcinogenic; 2A- Probably carcinogenic; 2B- Possibly carcinogenic. NTP : K- Known to be carcinogens; R- Reasonably anticipated to be carcinogens.</small></p> <p>Carcinogenicity Ingredients present at levels greater than or equal to 0.1% of this product are not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA.</p> <p>Mutagenicity Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effects.</p> <p>Reproductive toxicity Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause reproduction effects.</p> <p>Specific target organ toxicity - single exposure No target organ is listed.</p> <p>Specific target organ toxicity - repeated exposure No target organ is listed.</p>	
Interactive effects	No information available for this product.	
Other information	The oral and skin acute toxicity estimates (ATE) of the mixture were calculated to be greater than 2000 mg/kg. The acute toxicity estimate (ATE) by inhalation of the mixture was calculated to be greater than 20 mg/L/4h. These values are not classified according to WHMIS 2015 and OSHA HCS 2012.	

12. Ecological information

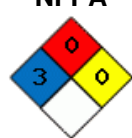
Ecological toxicity	Aquatic Invertebrate - Ceriodaphnia dubia (static) EC50 218 mg/L; 48h (TG 3134) EPA
Persistence	Not persistent in environment.
Degradability	Biodegradable (>70% in 28 days).
Bioaccumulative potential	No bioaccumulation.
Mobility in soil	The product is a mixture of which some ingredients have a high mobility in the soil, while other ingredients have a moderate mobility in the soil.
Other adverse effects	This chemical does not deplete the ozone layer. The observed ecological toxicity presented by this product for the environment was considered a result of pH effects.

Purified tannins extracted from cultivated trees										
Sodium hydroxide	1310-73-2	X	X							

- TSCA: Toxic Substance Control Act
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act list of hazardous substances
- EPCRA 313: Emergency Planning and Community Right-to-Know Act, Section 313 Toxic Chemicals
- EPCRA 302/304: Emergency Planning and Community Right-to-Know Act, Section 302/304 Extremely Hazardous Substances
- CAA 112(b) HON: Clean Air Act - Hazardous Organic National Emission Standard for Hazardous Air Pollutant
- CAA 112(b) HAP: Clean Air Act - Hazardous Air Pollutants lists pollutants
- CAA 112(r): Clean Air Act - Regulated Chemicals for Accidental Release Prevention
- CWA 311: Clean Water Act - List of Hazardous Substances
- CWA Priority: Clean Water Act - Priority Pollutant list

California Proposition 65

No ingredients listed.

Other regulations				
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>HMIS</p> <table border="1" style="border-collapse: collapse; width: 100px;"> <tr><td style="background-color: blue; color: white; text-align: center;">● Health</td></tr> <tr><td style="background-color: red; color: white; text-align: center;">● Flammability</td></tr> <tr><td style="background-color: yellow; text-align: center;">● Reactivity</td></tr> <tr><td style="text-align: center;">○ Protective Equipment</td></tr> </table> </div> <div style="text-align: center;"> <p>NFPA</p>  </div> </div>	● Health	● Flammability	● Reactivity
● Health				
● Flammability				
● Reactivity				
○ Protective Equipment				

16. Other information

Date (YYYY-MM-DD)	TECHNOLOGIES PROPRES TGWT INC 2020-02-19
--------------------------	--

Version	02
----------------	----

Other information	<p>REFERENCES:</p> <ul style="list-style-type: none"> - Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), http://www.reptox.csst.qc.ca - The National Center for Biotechnology Information, National Institutes of Health (NIH), U.S. National Library of Medicine, https://pubchem.ncbi.nlm.nih.gov/ - Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, https://haz-map.com/ - NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, http://www.cdc.gov/niosh/npg/npg.html <p>DATE OF FIRST VERSION OF SDS: 2019-11-21.</p> <p>CHANGES MADE IN THE VERSION 02: sections 1, 11, 12 and 15.</p> <p>ACGIH: American Conference of Governmental Industrial Hygienists AIHA: American Industrial Hygiene Association HMIS: Hazardous Materials Identification System NFPA: National Fire Protection Association OSHA: Occupational Safety and Health Administration (USA) NIOSH: National Institute for Occupational Safety and Health NTP: National Toxicology Program RSST: Règlement sur la santé et la sécurité du travail (Québec) GHS: Globally Harmonized System IARC: International Agency for Research on Cancer IDLH: Immediately Dangerous to Life or Health STEL: Short Term Exposure Limit (15 min) TWA: Time Weighted Averages</p>
--------------------------	---

WHMIS: Workplace Hazardous Materials Information System

To the best of our knowledge, the information contained herein is accurate. However, neither Priziventis System nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.