

Safety Data Sheet

TG 3304

1. Identification		
Product identifier	TG 3304	
Product code	TG 3304	
Other means of identification	None.	
Recommended use of the chemical and restrictions on use	High performance purified tannin based corrosion inhibitor ar systems.	nd antiscalant. For all closed loop
Supplier	ANDERSON CHEMICAL COMPANY 325 South Davis Avenue Litchfield, MN 55355 Phone: (320) 693.2477 Web: www.accomn.com	Purified Tannins provided by TGWT - The Tannin Guys ®
Emergency phone number	Canutec - Day or night: 1-613-996-6666	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



Skin irritation (Category 2) Serious eye damage (Category 1)

DANGER

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 POISON CENTER or a doctor.

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.

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	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	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)		

Immediately Dangerous to Life or Health	Sodium hydroxide: 10	mg/m3.	
Sodium hydroxide	Ceiling	2 mg/m³	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 n	neasures		
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	and the risks involved		elected based on the task being performed ing arms and legs as required by employer tive coverall suit.
Respiratory	respirator, it is necess equipment (RPE) mus and standard 29 CFR NIOSH/MSHA. In case protection factor (APF	ary to follow a respiratory protection to selected, fitted, maintained are 1910.134 (OSHA), ANSI Z88.2 or e of insufficient ventilation or in contract to 10 times the exposure limit	nere the conditions in the workplace require a on program. Moreover, respiratory protection and inspected in accordance with regulations CSA Z 94.11 (Canada) and approved by affined or enclosed space and for an assigned, wear a half mask respirator with organic til 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.	





9. Physical an	d chemical properties		
Physical state	Liquid	Flammability	Non-flammable
Colour	Brown	Flammability limits	N/Ap.
Odour	Characteristic	Flash point	N/Ap.
Odour threshold	N/Av.	Auto-ignition temperature	N/Av.
pH	11.6 to 12.6 @ 100%	Sensibility to electrostatic charges	N.Det.
Melting point	N/Ap.	Sensibility to sparks and/or friction	N.Det.
Freezing point	<5°C (41°F)	Vapour density	N/Av. (Air = 1)
Boiling point	>100°C (212°F)	Relative density	1.1 to 1.16 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/Ap.

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.

Und.: Undetermined

N/Ap.: Not Applicable

N/E: Not Established

N/Av.: Not Available

11. Toxicolo	ogical informat	ion			
Numerical measures of toxicity	Mixture		Ingestion >8000 m Inhalation >20 mg/l Skin >2000 m		050 050 050
	Purified tannins extra	acted from cultivated trees	Ingestion >5000 m		050
	Sodium hydroxide		Ingestion 340 mg/k Skin 1350 mg/k	g Rat LD kg Rabbit LD	050 050
Likely routes of exposure	Skin, eyes, inhalation	, ingestion.			
Delayed, immediate and chronic effects	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.			
	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 3304 has been tested with Corrositex® in vitro Membrane Barrier Test Method for Skin Corrosion (OECD 435). It is considered non-corrosive to the skin.			
	Inhalation	No adverse effects expec	ted under normal co	nditions of use).
	Ingestion	May cause gastrointestina	al irritation with naus	ea and vomitin	ng.
	Respiratory or skin sensitization	Ingredients present at lev or respiratory sensitizers.	els greater than or e	qual to 0.1% o	f this product are not skin
	IARC/NTP	Common name		IARC NTP	
	Classification	Purified tannins extracted from cultivated trees IARC: 1- Carcinogenic; 2A- Probably carcinogenic; 2B- Possibly carcinogenic. NTP: K- Known to be carcinogens; R- Reasonably anticipated to be carcinogens.			
	Carcinogenicity	Ingredients present at lev listed as a carcinogen by			
	Mutagenicity	Ingredients in this production known to cause mutagent	c effects.		
	Reproductive toxicity	Ingredients in this production known to cause reproductions.		eater than or e	equal to 0.1% are not
	Specific target organ toxicity - single exposure	No target organ is listed.			
	Specific target organ toxicity - repeated exposure	No target organ is listed.			
Interactive effects	No information availa	ble for this product.			
Other information	mg/kg. The acute tox	Ite toxicity estimates (ATE) icity estimate (ATE) by inhes are not classified accord	alation of the mixture	was calculate	ed to be greater than 20

12. Ecologic	12. Ecological information		
Ecological toxicity	Aquatic Invertebrate - Ceriodaphnia dubia (static) EC50 188 mg/L; 48h (TG 3304) EPA Aquatic Invertebrate - Ceriodaphnia dubia (static) CESO 150 mg/L (TG 3304) 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.

13. Disposal considerations

Container

Important! Prevent waste generation. Use in full. DO NOT dispose residue in sewers, streams or drinking water supply. Triple rinse empty container (or equivalent) promptly after emptying and offer for reconditioning if appropriate. Empty the rinse water into a mix tank or store it for later use or disposal. Dispose via a licensed waste disposal contractor. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities.

14. Transport in	formation
UN Number	UN N/A
UN Proper Shipping Name	Not regulated by TDG (Canada) and 49 CFR DOT (USA).
Environmental hazards	This material does not contain marine pollutant.
Special precautions for user	No information available for this product.
TDG - Transportation o	of Dangerous Goods (Canada)
Transport hazard class(es)	Not regulated
Packing group	Not regulated
Emergency response guidebook 2016	
IMO/IMDG - Internation	al Maritime Transport
Classification	Not regulated
IATA - International Air	Transport Association
Classification	Not regulated
	are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper ckaging. In addition, if a domestic exemption exists, it is the responsibility of the shipper to define the application of it.

15. Regulatory information

CANADA

Common name	CAS	CEPA	DSL	NDSL	NPRI
Purified tannins extracted from cultivated trees	Tannins				
Sodium hydroxide	1310-73-2		X		

- CEPA: List of Toxic Substances Managed Under Canadian Environmental Protection Act
- DSL: Domestic Substances List Inventory
- NDSL: Non-Domestic Substances List Inventory
- NPRI: National Pollutant Release Inventory Substances

UNITED STATE OF AMERICA

Common name	CAS	11 C(1-V			EPCRA 302/304	112(b)	CAA 112(b) HAP	CAA 112(r)	CWA 311	CWA Prio.
Purified tannins extracted from cultivated trees	Tannins									
Sodium hydroxide	1310-73-2	Х	Х	Х						

- 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.

140 ingrediente ne	tou.			
Other regulations				
	HMIS	NFPA 3		

Date (YYYY-MM-DD)	TGWT CLEAN TECHNOLOGIES INC 2020-02-18
Version	04
Other information	REFERENCES: - 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 - NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, http://www.cdc.gov/niosh/npg/npg.html - TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, http://toxnet.nlm.nih.gov/ - The National Center for Biotechnology Information, National Institutes of Health (NIH), U.S. National Library of Medicine, https://pubchem.ncbi.nlm.nih.gov/ DATE OF FIRST VERSION OF SDS: 2015-09-29. CHANGES MADE IN THE VERSION 02: sections 1, 3 and 15. DATE OF THIRD VERSION OF SDS: 2019-11-05. CHANGES MADE IN THE VERSION 03: sections 1, 3, 9, 11 and 15. DATE OF THIRD VERSION OF SDS: 2019-11-20. CHANGES MADE IN THE VERSION 04: sections 1, 11, 12 and 15.
	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

WHMIS: Workplace Hazardous Materials Information System

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