

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):	TCA-20B
SYNONYMS:	TCA-20B microbial consortium
CAS#:	Mixture
PRODUCT USE:	This product is a bioaugmentation culture used for in situ remediation of soil and ground water contaminated with chlorinated ethanes.
CHEMICAL SHIPPING NAME/CLASS:	Non-Regulated Material
U.N. NUMBER:	None
MANUFACTURER'S NAME:	Aptim
ADDRESS:	17 Princess Road, Lawrenceville, NJ 08648
BUSINESS PHONE:	1-609-895-5340
SUPPLIER NAME:	RNAS Remediation Products
ADDRESS:	6712 West River Road, Brooklyn Center, MN 55430
BUSINESS PHONE:	1-763-585-6191
EMERGENCY PHONE:	1-800-424-9300 (Chemtrec 24 Hr Service – Emergency Only)
DATE OF CURRENT REVISION:	September 15, 2026
DATE OF LAST REVISION:	New

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a light greenish, murky liquid with a musty odor.

Health Hazards: Not expected to cause adverse health effects when used as intended. Individuals who are allergic to enzymes or other related proteins should avoid exposure and handling. Prolonged or repeated contact may cause irritation to skin or eyes; inhalation of aerosols may cause respiratory irritation in hypersensitive individuals.

Flammability Hazards: This product is a Non-Flammable liquid.

Reactivity Hazards: None known

Environmental Hazards: The Environmental effects of this product have not been investigated. This material is expected to degrade in the environment and is not anticipated to have significant adverse effects in the aquatic environment.

US DOT SYMBOLS

GHS Hazard Symbols

None

Non-Regulated Material

Signal Word: **None**

GHS LABELING AND CLASSIFICATION:

This product does not meet the definition of a hazardous substance or preparation as defined by 29 CFR 1910. 1200 and regulation (EU) No. 2020/878 and regulation (EC) No. 1272/2008.

EU HAZARD CLASSIFICATION OF INGREDIENTS:

None of the ingredients are listed in Annex VI

Substances not listed either individually or in group entries must be self classified.

Component(s) Contributing to Classification(s):

None applicable

GHS Hazard Classification(s):

Not applicable

Hazard Statement(s):

Not applicable

Response Statement(s):

Not applicable

Prevention Statement(s):

Not applicable

Storage Statement(s):

Not applicable

Disposal Statement(s):

Not applicable

HEALTH HAZARDS OR RISKS FROM EXPOSURE:

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of overexposure for this product are by contact with skin or eyes, inhalation of aerosols, and ingestion. The symptoms of overexposure are described below.

ACUTE:

INHALATION: Hypersensitive individuals may experience breathing difficulties after inhalation of aerosols.

CONTACT WITH SKIN: May cause irritation upon prolonged contact. Hypersensitive individuals may experience allergic reactions.

EYE CONTACT: May cause irritation unless immediately rinsed.

INGESTION: Ingestion of large quantities may result in abdominal discomfort including nausea, vomiting, cramps, diarrhea, and fever.

CHRONIC: None known

TARGET ORGANS: Acute: Skin, Respiratory System and Eyes Chronic: None known

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients:	WT%	CAS#	EINECS #	GHS Hazard Classification(s)
Non-toxic, naturally occurring, non-pathogenic, non-genetically modified anaerobic microbial consortium in a water-based medium	100%	N/A	N/A	Not Classified

4. FIRST-AID MEASURES

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation persists.

SKIN CONTACT: Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation or allergic symptoms develop and persist.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention, especially if allergic symptoms develop.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Non-Flammable

AUTOIGNITION TEMPERATURE: Not Available

FLAMMABLE LIMITS (in air by volume, %): Lower NA Upper NA

FIRE EXTINGUISHING MATERIALS: Use fire extinguishing methods below:

Water Spray: Yes

Carbon Dioxide: Yes

Foam: Yes

Dry Chemical: Yes

Halon: Yes

Other: Any "C" Class

UNUSUAL FIRE AND EXPLOSION HAZARDS: Not considered a fire or explosion hazard.

Explosion Sensitivity to Mechanical Impact: No

Explosion Sensitivity to Static Discharge: No

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Personnel should be trained for spill response operations.

SPILLS: Contain spill if safe to do so. Clean up residual material by washing area with water and detergent. Dike or retain dilution water or water from firefighting for later disposal. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Use good hygiene practices.

STORAGE AND HANDLING PRACTICES: Store in original container. Keep container closed when not in use. Store in a cool, dry location. Avoid freezing or extended storage in high temperatures and away from incompatible materials. TCA-20B is typically supplied in stainless steel kegs equipped with pressure relief valves, pressurized with Nitrogen gas (N₂) up to 15 psi. Do not exceed a pressure of 15 psi during transfer of TCA-20B from kegs. Do not open a keg while its contents are under pressure. TCA-20B may be stored in the kegs for up to 3 weeks at 2-4°C. Avoid freezing.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Not required under normal conditions of use. An N95 respirator is recommended if aerosols might be generated. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Safety glasses or goggles are recommended to avoid eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

SKIN PROTECTION: Rubber, nitrile, or vinyl gloves are recommended. Wear impervious gloves for prolonged or repeated exposure as appropriate to task when using this product. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

BODY PROTECTION: Use body protection appropriate to task being performed. If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. An eyewash station in the work area is recommended.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE (Physical State) and COLOR: This product is a light greenish, murky liquid.

ODOR: Musty odor

ODOR THRESHOLD: Not Available

pH: 6.0 – 8.0

MELTING/FREEZING POINT: 0°C (water)

BOILING POINT: 100°C (water)

FLASH POINT: Not Available

EVAPORATION RATE (n-BuAc=1): 0.9 – 1.1

FLAMMABILITY (SOLID, GAS): Not Available

UPPER/LOWER FLAMMABILITY OR EXPLOSION LIMITS: Not Available

VAPOR PRESSURE (mm Hg @ 20°C (68°F)): 24 mm Hg (water)

VAPOR DENSITY: Not Available

DENSITY: 0.9 – 1.1 g/cm³ (Specific Gravity, H₂O=1)

SOLUBILITY IN WATER: Soluble in water

PARTITION COEFFICIENT (n-octanol/water): Not Available

AUTO-IGNITION TEMPERATURE: Not Available

DECOMPOSITION TEMPERATURE: Not Available

VISCOSITY: Not Available

INFORMATION WITH REGARD TO PHYSICAL HAZARD CLASSES

EXPLOSIVES: Not Available

FLAMMABLE GASES: Not Available

AEROSOLS: Not Available

OXIDISING GASES: Not Available

GASES UNDER PRESSURE: Not Available
FLAMMABLE LIQUIDS: Not Available
FLAMMABLE SOLIDS: Not Available
SELF-REACTIVE SUBSTANCES AND MIXTURES: Not Available
PYROPHORIC LIQUIDS: Not Available
PYROPHORIC SOLIDS: Not Available
SELF-HEATING SUBSTANCES AND MIXTURES: Not Available
SUBSTANCES AND MIXTURES, WHICH EMIT FLAMMABLE GASES IN CONTACT WITH WATER: Not Available
OXIDISING LIQUID: Not Available
OXIDISING SOLID: Not Available
ORGANIC PEROXIDES: Not Available
CORROSIVE TO METALS: Not Available
DESENSITISED EXPLOSIVES: Not Available
GASES UNDER PRESSURE: Not Available

OTHER SAFETY CHARACTERISTICS

MECHANICAL SENSITIVITY: Not Available
SELF-ACCELERATING POLYMERISATION TEMPERATURE: Not Available
FORMATION OF EXPLOSIBLE DUST/AIR MIXTURES: Not Available
ACID/ALKALINE RESERVE: Not Available
EVAPORATION RATE: Not Available
MISCIBILITY: Not Available
CONDUCTIVITY: Not Available
CORROSIVENESS: Not Available
GAS GROUP: Not Available
REDOX POTENTIAL: Not Available
RADICAL FORMATION POTENTIAL: Not Available
PHOTOCATALYTIC PROPERTIES: Not Available

10. STABILITY and REACTIVITY

STABILITY: Stable under conditions of normal storage and use.
HAZARDOUS DECOMPOSITION PRODUCTS: None
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Water-reactive materials.
POSSIBILITY OF HAZARDOUS REACTIONS: Will not occur.
CONDITIONS TO AVOID: None known.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:

This product contains no toxic ingredients. No LD50 data is available for this product. Note: This product has tested negative for pathogenic microorganisms such as *Bacillus cereus*, *Listeria monocytogenes*, *Salmonella* sp., fecal coliforms, total coliforms, yeast and mold, and *Pseudomonas* sp.

SUSPECTED CANCER AGENT: Ingredients within this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: No specific data available

SENSITIZATION TO THE PRODUCT: This product is not expected to be a general skin or respiratory sensitizer; however, individuals who are allergic to enzymes or other related proteins should avoid exposure and handling.

REPRODUCTIVE TOXICITY INFORMATION: No information concerning the effects of this product and its components on the human reproductive system.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

TOXICITY: No specific data available on this product.

PERSISTENCE AND DEGRADABILITY: No specific data available on this product.

BIOACCUMULATIVE POTENTIAL: No specific data available on this product.

MOBILITY IN SOIL: No specific data available on this product.

RESULTS OF PBT AND vPvB ASSESSMENT: No specific data available on this product.
ENDOCRINE DISRUPTING PROPERTIES: No specific data available on this product.
OTHER ADVERSE EFFECTS: No specific data available on this product.
WATER ENDANGERMENT CLASS: No data available. At present there are no ecotoxicological assessments for this product.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan. To reduce odors and permanently inactivate microorganisms, mix 100 parts (by volume) TCA-20B with 1 part (by volume) bleach.
EU Waste Code: Not determined

14. TRANSPORTATION INFORMATION

US DOT, IATA, IMO, ADR:

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS: This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows:

PROPER SHIPPING NAME:	Non-Regulated Material
HAZARD CLASS NUMBER and DESCRIPTION:	None
UN IDENTIFICATION NUMBER:	None
PACKING GROUP:	NA
DOT LABEL(S) REQUIRED:	None
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER:	None
RQ QUANTITY:	None

MARINE POLLUTANT: The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA): This product is not considered as dangerous goods.

INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO): This product is not considered as dangerous goods.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product is not considered by the United Nations Economic Commission for Europe to be dangerous goods.

15. REGULATORY INFORMATION

UNITED STATES REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act as follows: None

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the components of this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): None

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory or are exempted from listing.

OTHER U.S. FEDERAL REGULATIONS: None

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): Ingredients within this product are not on the Proposition 65 Lists.

CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: The components of this product are on the DSL Inventory, or are exempted from listing.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: Complies with WHMIS 2022.

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

This product does not meet the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.
See Section 2 for Details

AUSTRALIAN INFORMATION FOR PRODUCT: The components of this product are listed on the International Chemical Inventory list.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

JAPANESE ENCS INVENTORY: The components of this product are on the ENCS Inventory as indicated in the section on International Chemical Inventories, below.

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No component of this product is a listed Specified Poisonous Substance under the Poisonous and Deleterious Substances Control Law.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac: Listed or Exempt from listing

Australian Inventory of Chemical Substances (AICS): Listed or Exempt from listing

Korean Existing Chemicals List (ECL): Listed or Exempt from listing

Japanese Existing National Inventory of Chemical Substances (ENCS): Listed or Exempt from listing

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed or Exempt from listing

Swiss Giftliste List of Toxic Substances: Listed or Exempt from listing

U.S. TSCA: Listed

16. OTHER INFORMATION

HMIS Rating (Scale 0-4)

Health hazard: 1
Flammability: 0
Physical Hazard: 0

NFPA Rating (Scale 0-4)

Health hazard: 1
Flammability: 0
Physical Hazard: 0

ABBREVIATIONS AND ACRONYMS:

EPA: United States Environmental Protection Agency

ARD: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PREPARED BY: Chris Eigbrett (MSDS to GHS Compliance)

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. Remediation and Natural Attenuation Services Inc. assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, Remediation and Natural Attenuation Services Inc. assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.

REVISION HISTORY

September 15, 2026

- Document creation

END OF SDS SHEET