



Be Right™

SAFETY DATA SHEET

Issue Date 21-04-2016

Revision Date 08-Feb-2023

Version 4.3

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1. IDENTIFICATION

Product identifier

Product Name COD,TNT+,ULR(1.0-60 MG/L) PK/25

Other means of identification

Product Code(s) TNT820

Safety data sheet number M02451

UN/ID no UN3316

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent. Determination of Chemical Oxygen Demand.

Uses advised against Consumer use.

Restrictions on use For Laboratory Use Only.

Details of the supplier of the safety data sheet

Manufacturer Address

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

Emergency telephone number

+1(303) 623-5716 - 24 Hour Service

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals	Category 1
Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Aquatic Acute Toxicity	Category 1
Chronic aquatic toxicity	Category 1

Hazards not otherwise classified (HNOC)

Data insufficient for GHS classification but significant enough for mention suggests:

CANCER HAZARD. STRONG INORGANIC ACID MISTS CONTAINING SULFURIC ACID CAN CAUSE CANCER.

Inhalation of low concentrations of sulfuric acid may result in airway irritation such as cough and shortness of breath; high concentrations may result in acute effects such as cough.

Label elements

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Signal word
Danger



Hazard statements

H290 - May be corrosive to metals
H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H332 - Harmful if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements

P270 - Do not eat, drink or smoke when using this product
P501 - Dispose of contents/ container to an approved waste disposal plant
P405 - Store locked up
P271 - Use only outdoors or in a well-ventilated area
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P280 - Wear protective gloves, protective clothing, eye protection, and face protection
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P363 - Wash contaminated clothing before reuse
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P273 - Avoid release to the environment
P391 - Collect spillage
P234 - Keep only in original container
P390 - Absorb spillage to prevent material damage

Other Hazards Known
None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Not applicable

Mixture

Chemical Family Mixture.
Chemical nature Aqueous solution of inorganic acids and salts.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Sulfuric acid	7664-93-9	80 - 90%	-
Sulfuric acid, mercury(2+) salt (1:1)	7783-35-9	1 - 5%	-
Sulfuric acid, disilver(1+) salt	10294-26-5	<1%	-
Potassium dichromate	7778-50-9	<0.1%	-

4. FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.
Skin contact	Get immediate medical advice/attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid breathing vapors or mists.

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	Caution: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous combustion products	This material will not burn.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

U.S. Notice	Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.
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Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Attention! Corrosive material. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.
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Other Information	Refer to protective measures listed in Sections 7 and 8.
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Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.
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Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.
Reference to other sections	See section 8 for more information. See section 13 for more information.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Avoid breathing vapors or mists.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.
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Flammability class	Not applicable
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Sulfuric acid CAS#: 7664-93-9	TWA: 0.2 mg/m ³ thoracic particulate matter	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 15 mg/m ³ TWA: 1 mg/m ³
Sulfuric acid, mercury(2+) salt (1:1) CAS#: 7783-35-9	TWA: 0.025 mg/m ³ Hg S*	(vacated) Ceiling: 0.1 mg/m ³	IDLH: 10 mg/m ³ Hg Ceiling: 0.1 mg/m ³ Hg TWA: 0.05 mg/m ³ except Organo alkyls Hg vapor
Sulfuric acid, disilver(1+) salt CAS#: 10294-26-5	TWA: 0.01 mg/m ³ Ag	TWA: 0.01 mg/m ³ (vacated) TWA: 0.01 mg/m ³	IDLH: 10 mg/m ³ Ag TWA: 0.01 mg/m ³ Ag
Potassium dichromate CAS#: 7778-50-9	dermal sensitizer;respiratory sensitizer STEL: 0.0005 mg/m ³ Cr(VI) inhalable particulate matter TWA: 0.0002 mg/m ³ Cr(VI) inhalable particulate matter S*	TWA: 5 µg/m ³ (vacated) Ceiling: 0.1 mg/m ³ Ceiling: 0.1 mg/m ³	IDLH: 15 mg/m ³ Cr(VI) TWA: 0.0002 mg/m ³ Cr

Appropriate engineering controls

Engineering Controls

Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Wear breathing apparatus if exposed to vapors/dusts/aerosols.

Hand Protection

Wear suitable gloves. Impervious gloves. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

Eye/face protection

Face protection shield.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

General Hygiene Considerations

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace.

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

Thermal hazards

None under normal processing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Color	light orange
Appearance	Turbid solution	Odor threshold	No data available
Odor	Acidic		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	Not applicable	
pH	< 0.5	
Melting point / freezing point	~ No data available	
Initial boiling point and boiling range	~ 300 °C / 572 °F	
Evaporation rate	0.15 (water = 1)	
Vapor pressure	1.35 mm Hg / 0.18 kPa at 25 °C / 77 °F	
Relative vapor density	0.03	
Specific Gravity	1.89	
Partition coefficient	Not applicable	
Soil Organic Carbon-Water Partition Coefficient	Not applicable	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	No data available	
Kinematic viscosity	No data available	

Solubility(ies)

Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Completely soluble	> 10000 mg/L	25 °C / 77 °F

Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
None reported	No information available	No data available	No information available

Other information

Metal Corrosivity

Classified as corrosive to metal according to GHS criteria

Steel Corrosion Rate

> 6.25 mm/yr / > 0.25 in/yr

Aluminum Corrosion Rate

> 6.25 mm/yr / > 0.25 in/yr

Volatile Organic Compounds (VOC) Content

<u>Chemical name</u>	<u>CAS No</u>	<u>Volatile organic compounds (VOC) content</u>	<u>CAA (Clean Air Act)</u>
Sulfuric acid	7664-93-9	No data available	-
Sulfuric acid, mercury(2+) salt (1:1)	7783-35-9	Not applicable	-
Sulfuric acid, disilver(1+) salt	10294-26-5	No data available	-
Potassium dichromate	7778-50-9	Not applicable	-

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Explosive properties

Upper explosion limit Not applicable
Lower explosion limit Not applicable

Flammable properties

Flash point No data available

Flammability Limit in Air

Upper flammability limit: No data available
Lower flammability limit: No data available

Oxidizing properties

No data available.

Bulk density

Not applicable

10. STABILITY AND REACTIVITY

Reactivity

Corrosive on contact with water. Very reactive. Corrosive to metal.

Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Exposure to air or moisture over prolonged periods. Excessive heat.

Incompatible materials

Oxidizing agent. Acids. Bases.

Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Harmful by inhalation.

Eye contact Causes burns. Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Toxic in contact with skin. Corrosive. Causes severe burns. Avoid contact with skin and clothing.

Ingestion Causes burns. Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Acute toxicity
 Harmful if swallowed
 Toxic in contact with skin
 Harmful if inhaled

Mixture
 No data available.

Ingredient Acute Toxicity Data
 Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid, disilver(1+) salt (<1%) CAS#: 10294-26-5	Rat LD ₅₀	> 5000 mg/kg	None reported	None reported	Vendor SDS
Potassium dichromate (<0.1%) CAS#: 7778-50-9	Rat LD ₅₀	48 mg/kg	None reported	None reported	LOLI

Dermal Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium dichromate (<0.1%) CAS#: 7778-50-9	Rat LD ₅₀	1170 mg/kg	None reported	None reported	ERMA

Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium dichromate (<0.1%) CAS#: 7778-50-9	Rat LC ₅₀	0.094 mg/L	4 hours	None reported	ERMA

Inhalation (Vapor) Exposure Route

Unknown Acute Toxicity
 0% of the mixture consists of ingredient(s) of unknown toxicity.

Acute Toxicity Estimations (ATE)

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	331.80 mg/kg
ATEmix (dermal)	331.10 mg/kg
ATEmix (inhalation-dust/mist)	3.32 mg/l
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

Skin corrosion/irritation

Causes severe burns.

Mixture

No data available.

Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (80 - 90%) CAS#: 7664-93-9	Existing human experience	Human	None reported	None reported	Corrosive to skin	HSDB
Sulfuric acid, mercury(2+) salt (1:1) (1 - 5%) CAS#: 7783-35-9	Existing human experience	Human	None reported	None reported	Skin irritant	GESTIS
Sulfuric acid, disilver(1+) salt (<1%) CAS#: 10294-26-5	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA

Serious eye damage/irritation

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Mixture

No data available.

Ingredient Eye Damage/Eye Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (80 - 90%) CAS#: 7664-93-9	Existing human experience	Human	None reported	None reported	Corrosive to eyes	HSDB
Sulfuric acid, mercury(2+) salt (1:1) (1 - 5%) CAS#: 7783-35-9	Existing human experience	Human	None reported	None reported	Eye irritant	GESTIS
Sulfuric acid, disilver(1+) salt (<1%) CAS#: 10294-26-5	Standard Draize Test	Rabbit	180 mg	None reported	Corrosive to eyes	ECHA

Respiratory or skin sensitization

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

Mixture

No data available.

Ingredient Sensitization Data

Test data reported below.

Skin Sensitization Exposure Route

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sulfuric acid, disilver(1+) salt (<1%) CAS#: 10294-26-5	<i>in vivo</i> Assay	Guinea pig	Not confirmed to be a skin sensitizer	ECHA

STOT - single exposure

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

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Single Exposure Data

Test data reported below.

Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid (80 - 90%) CAS#: 7664-93-9	Human TD _{Lo}	0.144 mg/L	5 minutes	Lungs, Thorax, or Respiration Dyspnea	RTECS

STOT - repeated exposure

May cause damage to organs.

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid, disilver(1+) salt (<1%) CAS#: 10294-26-5	Rat LD	> 2000 mg/kg	14 days	No toxicological effects observed	ECHA

Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid (80 - 90%) CAS#: 7664-93-9	Human TC _{Lo}	0.003 mg/L	168 days	Musculoskeletal Changes in teeth and supporting structures	RTECS

Carcinogenicity

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

Mixture

No data available.

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Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Sulfuric acid	7664-93-9	A2	Group 1	Known	X
Sulfuric acid, mercury(2+) salt (1:1)	7783-35-9	-	Group 3	-	-
Sulfuric acid, disilver(1+) salt	10294-26-5	-	-	-	-
Potassium dichromate	7778-50-9	A1	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)	Group 1 - Carcinogenic to Humans Group 3 - Not classifiable as a human carcinogen
NTP (National Toxicology Program)	Known - Known Carcinogen
OSHA	X - Present

Germ cell mutagenicity

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

Mixture invitro Data

No data available.

Substance invitro Data

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (80 - 90%) CAS#: 7664-93-9	Cytogenetic analysis	Hamster ovary	4 mmol/L	None reported	Positive test result for mutagenicity	No information available
Sulfuric acid, disilver(1+) salt (<1%) CAS#: 10294-26-5	Mutation in mammalian somatic cells	Human lymphocyte	.08 mg/L	3 hours	Negative	ECHA
Potassium dichromate (<0.1%) CAS#: 7778-50-9	Micronucleus test	Human lymphocyte	0.3 mg/L	None reported	Positive test result for mutagenicity	RTECS

Mixture invivo Data

No data available.

Substance invivo Data

No data available.

Reproductive toxicity

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

Mixture

No data available.

Ingredient Reproductive Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
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	type	dose	time		sources for data
Potassium dichromate (<0.1%) CAS#: 7778-50-9	Mouse TD _{Lo}	1710 mg/kg	19 days	Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus) Effects on Fertility Post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants) Specific Developmental Abnormalities Craniofacial (including nose and tongue)	RTECS

Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid (80 - 90%) CAS#: 7664-93-9	Rabbit TC _{Lo}	0.02 mg/L	7 hours	Specific Developmental Abnormalities Musculoskeletal system	No information available

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a severe marine pollutant according to DOT.

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Unknown aquatic toxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Mixture

Aquatic Acute Toxicity

No data available.

Aquatic Chronic Toxicity

No data available.

Substance

Aquatic Acute Toxicity

Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfuric acid, disilver(1+) salt (<1%) CAS#: 10294-26-5	96 hours	<i>Pimephales promelas</i>	LC ₅₀	0.0012 mg/L	GESTIS
Potassium dichromate (<0.1%) CAS#: 7778-50-9	96 hours	<i>Oncorhynchus mykiss</i>	LC ₅₀	12.3 mg/L	ERMA

Crustacea

Chemical name	Exposure	Species	Endpoint	Reported dose	Key literature references and
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	time		type		sources for data
Sulfuric acid, disilver(1+) salt (<1%) CAS#: 10294-26-5	48 Hours	<i>Ceriodaphnia dubia</i>	LC ₅₀	0.0045 mg/L	GESTIS
Potassium dichromate (<0.1%) CAS#: 7778-50-9	48 Hours	<i>Daphnia magna</i>	EC ₅₀	0.035 mg/L	ERMA

Aquatic Chronic Toxicity
 No data available.

Persistence and degradability

Mixture
 No data available.

Mixture
 No data available.

Partition coefficient Not applicable

Mobility

Soil Organic Carbon-Water Partition Coefficient Not applicable

Other adverse effects
 No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number D002, D009

Special instructions for disposal Dispose of all mercury contaminated material at an E.P.A. hazardous waste facility. Dispose of material in an E.P.A. approved hazardous waste facility.

14. TRANSPORT INFORMATION

DOT

UN/ID no UN3316
Proper shipping name Chemical kits
Transport hazard class(es) 9
Reportable Quantity (RQ) Mercuric sulphate: RQ kg= 300.66, Sulfuric acid: RQ kg= 504.89
Marine pollutant This product contains a chemical which is listed as a severe marine pollutant according to DOT.
Emergency Response Guide Number 171

TDG

UN/ID no UN3316
Proper shipping name Chemical kit

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Transport hazard class(es) 9
Marine pollutant This product contains a chemical which is listed as a severe marine pollutant according to TDG.
Description UN3316, Chemical kit, 9

IATA

UN number or ID number UN3316
Proper shipping name Chemical kit
Transport hazard class(es) 9
ERG Code 9L
Special precautions for user A163, A44

IMDG

UN number or ID number UN3316
Proper shipping name Chemical kit
Transport hazard class(es) 9
EmS-No F-A, S-P
Special precautions for user 251, 340
Marine pollutant This material meets the definition of a marine pollutant

Additional information

15. REGULATORY INFORMATION

National Inventories

TSCA Complies
DSL/NDSL Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories

EINECS/ELINCS Complies
ENCS Complies
IECSC Complies
KECL - Existing substances Complies
PICCS Complies
TCSI Complies
AICS Complies
NZIoC Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
TCSI - Taiwan Chemical Substances Inventory
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Sulfuric acid (CAS #: 7664-93-9)	1.0
Sulfuric acid, mercury(2+) salt (1:1) (CAS #: 7783-35-9)	1.0

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Sulfuric acid, disilver(1+) salt (CAS #: 10294-26-5)	1.0
Potassium dichromate (CAS #: 7778-50-9)	0.1

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9	1000 lb	-	-	X
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	10 lb	X	-	X
Sulfuric acid, disilver(1+) salt 10294-26-5	-	X	-	-
Potassium dichromate 7778-50-9	10 lb	X	-	X

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	10 lb	-	RQ 10 lb final RQ RQ 4.54 kg final RQ
Potassium dichromate 7778-50-9	10 lb	-	RQ 10 lb final RQ RQ 4.54 kg final RQ

U.S. - DEA (Drug Enforcement Administration) List I & List II

Chemical name	U.S. - DEA (Drug Enforcement Administration) - List I or Precursor Chemicals	U.S. - DEA (Drug Enforcement Administration) - List II or Essential Chemicals
Sulfuric acid (80 - 90%) CAS#: 7664-93-9	Not Listed	50 gallon Export Volume (exports, transshipments and international transactions to designated countries given in 1310.08(b))

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Sulfuric acid (CAS #: 7664-93-9)	Carcinogen
Sulfuric acid, mercury(2+) salt (1:1) (CAS #: 7783-35-9)	Developmental
Potassium dichromate (CAS #: 7778-50-9)	Carcinogen Developmental

	Female Reproductive Male Reproductive
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WARNING: This product can expose you to chemicals including Sulfuric acid, Potassium dichromate, Sulfuric acid, mercury(2+) salt (1:1), which are known to the State of California to cause cancer or birth defects or reproductive harm. For more information, go to <http://www.P65Warnings.ca.gov>

IMERC: Contains Mercury Dispose of in accordance with local, state and federal regulations or laws.

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid 7664-93-9	X	X	X
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	X	X	X
Sulfuric acid, disilver(1+) salt 10294-26-5	X	-	X
Potassium dichromate 7778-50-9	X	X	X

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Sulfuric acid	180.0910	21 CFR 184.1095

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Special Comments

This product contains mercury and may be subject to reporting and recordkeeping requirements

Additional information

Global Automotive Declarable Substance List (GADSL)

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thresholds
Sulfuric acid, mercury(2+) salt (1:1) 7783-35-9	Declarable Substance (LR) Prohibited Substance (LR)	0.1 %
Potassium dichromate 7778-50-9	Declarable Substance (LR) Prohibited Substance (LR)	0.1 % 3 mg/kg

NFPA and HMIS Classifications

NFPA	Health hazards - 3	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 3 - *	Flammability - 0	Physical hazards - 0	Personal protection - X - I

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Prepared By	Hach Product Compliance Department
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Revision Date	08-Feb-2023
Revision Note	None

Disclaimer

Product Code(s) TNT820
Issue Date 21-04-2016
Version 4.3

Product Name COD,TNT+,ULR(1.0-60 MG/L) PK/25
Revision Date 08-Feb-2023
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USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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End of Safety Data Sheet