SAFETY DATA SHEET

1. IDENTIFICATION

Product identifier
Product Name Nitrate LR TNT Reagent A

Other means of identification
Product Code(s) TNT835A

Safety data sheet number M01920

UN/ID no UN1987

Recommended use of the chemical and restrictions on use
Recommended Use Determination of nitrate.
Uses advised against None.
Restrictions on use None.

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 +1(515)232-2533 - 8am - 4pm CST

2. HAZARDS IDENTIFICATION

Classification

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

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A
Respiratory sensitization	
Skin sensitization	
Mutagenicity	
Carcinogenicity	
Reproductive toxicity	
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Signal word - Warning

Hazard statements

H226 - Flammable liquid and vapor
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness

Precautionary statements
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P271 - Use only outdoors or in a well-ventilated area
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CENTER or doctor if you feel unwell
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
P403 + P235 - Store in a well-ventilated place. Keep cool

Other Hazards Known
Causes mild skin irritation

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Not applicable

Mixture

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent Range	HMRIC #
Isopropyl alcohol	67-63-0	20 - 30%	-
2,6-Dimethylphenol	576-26-1	<1%	-
Isoamyl acetate	123-92-2	<1%	-

4. FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.
Unsuitable Extinguishing Media	Caution: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Hazardous combustion products	Carbon monoxide, Carbon dioxide.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

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.

Personal precautions, protective equipment and emergency procedures

Personal precautions	Evacuate personnel to safe areas. Use personal protective equipment as required. See

section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Other Information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

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 Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with particular national and local regulations.

Flammability class Class IC

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH

Isopropyl alcohol CAS#: 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m³ STEL: 500 ppm STEL: 1225 mg/m³
Isoamyl acetate CAS#: 123-92-2	STEL: 100 ppm TWA: 50 ppm	TWA: 100 ppm TWA: 525 mg/m³ (vacated) TWA: 100 ppm (vacated) TWA: 525 mg/m³	IDLH: 1000 ppm TWA: 100 ppm TWA: 525 mg/m³

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.

Hand Protection Wear suitable gloves. Impervious gloves.

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

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

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
Appearance aqueous solution
Color colorless
Odor Alcoholic
Odor threshold No data available

Property	Values	Remarks • Method
Molecular weight	No data available	
pH	6	
Melting point/freezing point	~ -3 °C / 26.6 °F	Estimation based on theoretical calculation
Boiling point / boiling range	82 °C / 179.6 °F	
Evaporation rate	1.03 (water = 1)	Estimation based on theoretical calculation
Vapor pressure	22.052 mm Hg / 2.94 kPa at 25 °C / 77 °F	Estimation based on theoretical

calculation

Vapor density (air = 1) 0.73 (air = 1)

Specific gravity (water = 1 / air = 1) 0.95

Partition Coefficient (n-octanol/water) 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

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	20 °C / 68 °F

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
None reported	No information available	No data available	No information available

Other Information

Metal Corrosivity

Steel Corrosion Rate No data available
Aluminum Corrosion Rate No data available

Volatile Organic Compounds (VOC) Content
See ingredients information below

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Isopropyl alcohol	67-63-0	100%	X
2,6-Dimethylphenol	576-26-1	No data available	-
Isoamyl acetate	123-92-2	No data available	X

Explosive properties

Upper explosion limit No data available
Lower explosion limit No data available

Flammable properties

Flash point 26 °C / 78.8 °F
Method DIN 51755 Part 1

Flammability Limit in Air
Upper flammability limit No data available
Lower flammability limit No data available

Oxidizing properties	No data available.
Bulk density	No data available
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity
Not applicable.

Chemical stability
Stability Stable under normal conditions.

Explosion data
Sensitivity to Mechanical Impact None
Sensitivity to Static Discharge Yes.

Possibility of Hazardous Reactions
Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization
None under normal processing.

Conditions to avoid
Conditions to avoid Heat, flames and sparks.

Incompatible materials
Incompatible materials Strong oxidizing agents, strong acids, and strong bases.

Hazardous Decomposition Products
Carbon monoxide. Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure
Product Information

Inhalation	May cause irritation of respiratory tract. May cause drowsiness or dizziness.
Eye contact	Causes serious eye irritation. May cause redness, itching, and pain.
Skin contact	May cause irritation. Prolonged contact may cause redness and irritation.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Symptoms	May cause redness and tearing of the eyes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Aggravated Medical Conditions	Skin disorders. Eye disorders. Preexisting eye disorders. Respiratory disorders.
Toxicologically synergistic products	None known.
Toxicokinetics, metabolism and distribution	See ingredients information below.

Chemical name	Toxicokinetics, metabolism and distribution

Chemical name	Toxicokinetics, metabolism and distribution
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Isopropanol is rapidly absorbed across the gastric mucosa and reaches a peak concentration approximately 30-120 minutes after ingestion. Isopropanol is primarily metabolized via alcohol dehydrogenase to acetone.

Product Acute Toxicity Data

Oral Exposure Route No data available
Dermal Exposure Route No data available
Inhalation (Dust/Mist) Exposure Route No data available
Inhalation (Vapor) Exposure Route No data available
Inhalation (Gas) Exposure Route No data available

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)	15,425.00 mg/kg
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

Ingredient Acute Toxicity Data

Oral Exposure Route If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Rat LD_{50}	4710 mg/kg	None reported	**Behavioral** General anesthetic	OECD (Organization for Economic Co-operation and Development)
2,6-Dimethylphenol (<1%) CAS#: 576-26-1	Rat LD_{50}	296 mg/kg	None reported	None reported	LOLI
Isoamyl acetate (<1%) CAS#: 123-92-2	Rat LD_{50}	16600 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)

Dermal Exposure Route If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Rabbit LD_{50}	12800 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)
2,6-Dimethylphenol (<1%) CAS#: 576-26-1	Rabbit LD_{50}	1000 mg/kg	None reported	None reported	LOLI

Inhalation (Dust/Mist) Exposure Route If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Rat LC_{50}	72.6 mg/L	4 hours	**Behavioral** General anesthetic **Lungs, Thorax, or Respiration** Other changes	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Vapor) Exposure Route If available, see data below
Inhalation (Gas) Exposure Route If available, see data below

Product Specific Target Organ Toxicity Single Exposure Data

Oral Exposure Route No data available
Dermal Exposure Route No data available
Inhalation (Dust/Mist) Exposure Route No data available
Inhalation (Vapor) Exposure Route No data available
Inhalation (Gas) Exposure Route No data available

Ingredient Specific Target Organ Toxicity Single Exposure Data

Oral Exposure Route If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Human TD_{Lo}	223 mg/kg	None reported	**Behavioral** Hallucinations, Distorted perceptions **Cardiac** Pulse rate decrease with fall in BP **Vascular** BP lowering not characterized in autonomic section	RTECS (Registry of Toxic Effects of Chemical Substances)

Dermal Exposure Route If available, see data below
Inhalation (Dust/Mist) Exposure Route If available, see data below
Inhalation (Vapor) Exposure Route If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Human TC_{Lo}	35 mg/L	4 hours	**Cardiac** Pulse rate decrease with fall in BP **Lungs, Thorax, or Respiration** Other changes	RTECS (Registry of Toxic Effects of Chemical Substances)
Chemical name	**Endpoint type**	**Reported dose**	**Exposure time**	**Toxicological effects**	**Key literature references and sources for data**
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Human TC_{Lo}	150 mg/L	2 hours	**Biochemical** Enzyme inhibition, induction, or change in blood or tissue levels Other enzymes	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Gas) Exposure Route If available, see data below

Aspiration toxicity
No data available

Product Skin Corrosion/Irritation Data
No data available.

Ingredient Skin Corrosion/Irritation Data
If available, see data below

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Standard Draize Test	Rabbit	500 mg	None reported	Mild skin irritant	RTECS (Registry of Toxic Effects of Chemical Substances)
2,6-Dimethylphenol (<1%) CAS#: 576-26-1	Organization for Economic Co-operation and Development (OECD) - Test 404: Acute Dermal Corrosion/Irritation	Rabbit	500 mg	24 hours	Corrosive to skin	ECHA (The European Chemicals Agency)

Product Serious Eye Damage/Eye Irritation Data
No data available.

Ingredient Eye Damage/Eye Irritation Data
If available, see data below

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Standard Draize Test	Rabbit	100 mg	None reported	Corrosive to eyes	RTECS (Registry of Toxic Effects of Chemical Substances)
Isoamyl acetate (<1%) CAS#: 123-92-2	Standard Draize Test	Rabbit	None reported	None reported	Eye irritant	ERMA (New Zealands Environmental Risk Management Authority)

Sensitization Information

Product Sensitization Data
Skin Sensitization Exposure Route No data available.
Respiratory Sensitization Exposure Route No data available.

Ingredient Sensitization Data
Skin Sensitization Exposure Route If available, see data below.

Chemical name	Test method	Species	Results	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	None reported	Guinea pig	Not confirmed to be a skin sensitizer	OECD (Organization for Economic Co-operation and Development)

Respiratory Sensitization Exposure Route If available, see data below.

Chronic Toxicity Information

Product Specific Target Organ Toxicity Repeat Dose Data
Oral Exposure Route No data available.
Dermal Exposure Route No data available.
Inhalation (Dust/Mist) Exposure Route No data available.
Inhalation (Vapor) Exposure Route No data available.
Inhalation (Gas) Exposure Route No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data
Oral Exposure Route If available, see data below
Dermal Exposure Route If available, see data below
Inhalation (Dust/Mist) Exposure Route If available, see data below
Inhalation (Vapor) Exposure Route If available, see data below
Inhalation (Gas) Exposure Route If available, see data below

Product Carcinogenicity Data
Oral Exposure Route No data available
Dermal Exposure Route No data available
Inhalation (Dust/Mist) Exposure Route No data available
Inhalation (Vapor) Exposure Route No data available
Inhalation (Gas) Exposure Route No data available

Ingredient Carcinogenicity Data

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Isopropyl alcohol	67-63-0	-	Group 3	-	X
2,6-Dimethylphenol	576-26-1	-	-	-	-
Isoamyl acetate	123-92-2	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Group 3 - Not classifiable as a human carcinogen
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of Labor)	X - Present

Oral Exposure Route If available, see data below
Dermal Exposure Route If available, see data below
Inhalation (Dust/Mist) Exposure Route If available, see data below
Inhalation (Vapor) Exposure Route If available, see data below
Inhalation (Gas) Exposure Route If available, see data below

Product Germ Cell Mutagenicity *invitro* **Data**
No data available.

Ingredient Germ Cell Mutagenicity *invitro* **Data**
No data available

Product Germ Cell Mutagenicity *invivo* **Data**
Oral Exposure Route No data available
Dermal Exposure Route No data available
Inhalation (Dust/Mist) Exposure Route No data available
Inhalation (Vapor) Exposure Route No data available
Inhalation (Gas) Exposure Route No data available

Ingredient Germ Cell Mutagenicity *invivo* **Data**
Oral Exposure Route If available, see data below
Dermal Exposure Route If available, see data below
Inhalation (Dust/Mist) Exposure Route If available, see data below

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Cytogenetic analysis	Rat	0.00103 mg/L	16 weeks	Positive test result for mutagenicity	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Vapor) Exposure Route If available, see data below
Inhalation (Gas) Exposure Route If available, see data below

Product Reproductive Toxicity Data
Oral Exposure Route No data available
Dermal Exposure Route No data available
Inhalation (Dust/Mist) Exposure Route No data available
Inhalation (Vapor) Exposure Route No data available
Inhalation (Gas) Exposure Route No data available

Ingredient Reproductive Toxicity Data
Oral Exposure Route If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Rat TD_{Lo}	32.4 mg/kg	None reported	**Effects on Embryo or Fetus** Fetal death	RTECS (Registry of Toxic Effects of Chemical Substances)
Chemical name	**Endpoint type**	**Reported dose**	**Exposure time**	**Toxicological effects**	**Key literature references and sources for data**
Isopropyl alcohol	Rat	3500 mg/kg	None	**Effects on Fertility**	RTECS (Registry of Toxic

(20 - 30%) CAS#: 67-63-0	TD_{Lo}		reported	Mating performance (e.g. # sperm positive females per # females mated; # copulations per # estrus cycles)	Effects of Chemical Substances)

Dermal Exposure Route If available, see data below
Inhalation (Dust/Mist) Exposure Route If available, see data below
Inhalation (Vapor) Exposure Route If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Rat TC_{Lo}	7000 mg/L	19 days	**Specific Developmental Abnormalities** Musculoskeletal system	RTECS (Registry of Toxic Effects of Chemical Substances)
Chemical name	**Endpoint type**	**Reported dose**	**Exposure time**	**Toxicological effects**	**Key literature references and sources for data**
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	Rat TC_{Lo}	10000 mg/L	19 days	**Effects on Embryo or Fetus** Fetal death **Effects on Fertility** Post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants) Pre-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea)	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Gas) Exposure Route If available, see data below

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product Ecological Data

Aquatic toxicity

Fish No data available
Crustacea No data available
Algae No data available

Ingredient Ecological Data

Aquatic toxicity

Fish If available, see ingredient data below

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	96 hours	*Pimephales promelas*	LC_{50}	4200 mg/L	IUCLID (The International Uniform Chemical Information Database)
2,6-Dimethylphenol (<1%) CAS#: 576-26-1	96 hours	*Oryzias latipes*	LC_{50}	15 mg/L	ECHA (The European Chemicals Agency)

Crustacea If available, see ingredient data below

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	48 Hours	None reported	LC_{50}	1400 mg/L	IUCLID (The International Uniform Chemical Information Database)
2,6-Dimethylphenol (<1%) CAS#: 576-26-1	48 Hours	*Daphina magna*	EC_{50}	11 mg/L	ECHA (The European Chemicals Agency)

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
2,6-Dimethylphenol (<1%) CAS#: 576-26-1	21 days	*Daphina magna*	NOEC	0.54 mg/L	ECHA (The European Chemicals Agency)

Algae If available, see ingredient data below

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	72 Hours	*Scenedesmus subspicatus*	EC_{50}	> 1000 mg/L	IUCLID (The International Uniform Chemical Information Database)

Other Information

Persistence and degradability

Product Biodegradability Data
No data available.

Ingredient Biodegradability Data

Chemical name	Test method	Biodegradation	Exposure time	Results
Isopropyl alcohol (20 - 30%) CAS#: 67-63-0	None reported	95%	21 days	Readily biodegradable

Bioaccumulation

Product Bioaccumulation Data
No data available.

Partition Coefficient (n-octanol/water) Not applicable

Ingredient Bioaccumulation Data

Chemical name	Test method	Exposure time	Species	Bioconcentration factor (BCF)	Results
2,6-Dimethylphenol (<1%) CAS#: 576-26-1	Estimation through BCFBAF v3.01 part of the Estimation Programs Interface (EPI) Suite™	None reported	None reported	BCF = 1.22	Does not have the potential to bioaccumulate

Mobility

Soil Organic Carbon-Water Partition Coefficient Not applicable

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	20 °C / 68 °F

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products	Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture of weld containers.
US EPA Waste Number	D001
Special instructions for disposal	Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

14. TRANSPORT INFORMATION

U.S. DOT

UN/ID no	UN1987
Proper shipping name	Alcohol, N.O.S.
DOT Technical Name	Isopropyl alcohol, Isoamyl acetate
Hazard Class	3
Packing Group	III
Description	UN1987, Alcohols, n.o.s., 3, III

TDG

UN/ID no	UN1987
Proper shipping name	Alcohol, N.O.S.
TDG Technical Name	Isopropyl alcohol, Isoamyl acetate
Hazard Class	3
Packing Group	III
Description	UN1987, Alcohols, n.o.s. (Isopropyl alcohol, Isoamyl acetate), 3, III

IATA

UN/ID no	UN1987
Proper shipping name	Alcohol, N.O.S.
IATA Technical Name	Isopropyl alcohol, Isoamyl acetate
Hazard Class	3
Packing Group	III
Description	UN1987, Alcohols, n.o.s. (Isopropyl alcohol, Isoamyl acetate), 3, III

IMDG

UN/ID no	UN1987
Proper shipping name	Alcohol, N.O.S.
IMDG Technical Name	Isopropyl alcohol, Isoamyl acetate
Hazard Class	3
Packing Group	III
Description	UN1987, Alcohols, n.o.s. (Isopropyl alcohol, Isoamyl acetate), 3, III, (26°C c.c.)

Additional information
There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

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	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 %
Isopropyl alcohol (CAS #: 67-63-0)	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	Yes
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
Isoamyl acetate 123-92-2	-	-	-	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)

Isoamyl acetate 123-92-2	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Isopropyl alcohol 67-63-0	X	X	X
Isoamyl acetate 123-92-2	X	X	X

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Isopropyl alcohol	180.0950	-
Isoamyl acetate	180.0910	-

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

Special Comments
None

Additional information

Global Automotive Declarable Substance List (GADSL)
Not applicable

NFPA and HMIS Classifications

NFPA	**Health hazards** - 2	**Flammability** - 3	**Instability** - 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** - 1	**Flammability** - 3	**Physical Hazards** - 0	**Personal protection** - X - See section 8 for more information

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

NIOSH IDLH	*Immediately Dangerous to Life or Health*
ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
NDF	*no data*

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 Note	None

Disclaimer

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