Section 1 Identification Page E1 of E2

INNOVATING SCIENCE

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221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300

For laboratory and industrial use only. Not for drug, food or household use.

Product BLOOD, SIMULATED

Synonyms None

Section 2 Hazards identification

Signal word: DANGER
Pictograms: GHS08 / GHS07
Target organs: None known.





GHS Classification:

Acute tox. (Category 4) Carc. (Category 1B) Repr. (Category 2) Skin irrit. (Category 2) Eye irrit. (Category 2B)

GHS Label information: Hazard statement(s):

H302: Harmful if swallowed. H315: Causes skin irritation. H320: Causes eye irritation. H350: May cause cancer.

H361: Suspected of damaging fertility or the unborn child.

Precautionary statement(s):

P202: Do not handle until all safety precautions have been read and understood.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.

P302+P352: IF ON SKIN: Wash with plenty of water and soap. P332+P313: If skin irritation occurs: Get medical advice/attention.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical attention. P308+P313: IF exposed or concerned: Get medical attention.

P362+P364: Take off contaminated clothing and wash it before reuse.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Chemical Name	CAS#	%	EINECS	
Water	7732-18-5	95.4%	231-791-2	
Magnesium sulfate, heptahydrate	10034-99-8	2.0%	231-298-2	
Magnesium nitrate, hexahydrate	13446-18-9	2.0%	233-826-7	
Congo red (C.I. No. 22120)	573-58-0	0.5%	209-358-4	
FD&C yellow #6 (C.I. No. 15985)	2783-94-0	0.1%	220-491-7	
,				

Section 4 First aid measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY CAUSE IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. Causes eye irritation.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. Causes skin irritation.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water. Avoid runoff into storm sewers and ditches which lead to waterways.

Page E2 of E2 Section 7 Handling and storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits.	No components listed	None established.	None established.	None established.			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Physical and chemical properties Section 9

Appearance: Red liquid.

Odor: No odor.

Section 10

Odor threshold: Data not available. pH: Data not available

Melting / Freezing point: Approximately 0°C (32°F) (water) Boiling point: Approximately 100°C (212°F) (water)

Flash point: Data not available

Stability and reactivity

Evaporation rate (Water = 1): <1

Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available

Vapor pressure (mm Hg): 14 (water) Vapor density (Air = 1): 0.7 (water)

Relative density (Specific gravity): Approximately 1.0 (water)

Solubility(ies): Complete in water.

Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available.

Marine pollutant: No

Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures which cause evaporation.

Incompatibilities with other materials: Strong oxidizers and reducing agents.

Hazardous decomposition products: Carbon oxides, nitrogen oxides and sulfur oxides.

Section 11 **Toxicological information**

Acute toxicity: Data not available

Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. CA Prop 65: 🛆 WARNING! : This product can expose you to, Benzidine-based dyes, which are known to the State of California to cause cancer.

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: May be harmful if inhaled. Ingestion: May be harmful by ingestion. Skin: Contact may cause irritation. Eyes: Contact may cause irritation.

Signs and symptoms of exposure: Contact with eyes may cause transient irritation. To the best of our knowledge the chemical, physical and toxicological properties have not

been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: No data available

Section 12 **Ecological information**

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available Bioaccumulative potential: No data available PBT and vPvB assessment: No data available Mobility in soil: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Reportable Quantity: No

Section 14 Transport information

UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable

Exceptions: Not applicable 2020 ERG Guide # Not applicable

Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list

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Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65	
Magnesium sulfate Magnesium nitrate	Listed Listed	Not listed Not listed	Not listed D001	Listed Listed	Not listed Not listed	WARNING -Cancer - www.P65Warnings.ca.gov.	
Congo red	Listed	Not listed	Not listed	Listed	Not listed		

Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook

Revision Date: July 21, 2022 Supercedes: September 17, 2020 Form 06/2015

Identification Section 1 Page E1 of E2

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Avon, NY 14414-9409 (585) 226-6177

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

DIALYSIS TUBING Product N/A

Section 2 Hazards identification

This substance or mixture has not been classified at this time according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

Signal word: Not a dangerous substance according to GHS Pictograms: Not a dangerous substance according to GHS

Target organs: None known

GHS Classification:

Synonyms

Not a dangerous substance according to GHS

GHS Label information: Hazard statement(s): Not a dangerous substance according to GHS

Precautionary statement(s):

Not a dangerous substance according to GHS

Semi-permeable membrane tubing made of regenerated cellulose from cotton linters, one of the purest naturally occurring sources of cellulose. Contains water, glycerol as a humectant, and small quantities of sulfur compounds, primarily as polysulfides (approximately 0.1%). Store in air-tight container or rehumidify before use. Contains a solution which may cause irritation to eyes. In case of contact with eyes, flush thoroughly with water for 15 minutes.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / information on ingredients								
Chemical Name		CAS#	%	EINECS				
	erol as a humectant, and small quant oved by proper washing.	ities of sulfur compounds,	primarily as polysul	fides (approximately 0.1%). Both the glycerol and				
Section 4	First aid measures							

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. Causes eye irritation.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. Causes skin irritation.

Section 5 Fire fighting measures

Extinguishing Media: Use any media suitable for extinguishing supporting fire

General information: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Section 6 Accidental release measures

Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling and storage Page E2 of E2

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Handling: Avoid contact with eyes, skin and clothing. Avoid ingestion. Wash thoroughly after handling.

Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits.	No components listed	None established.	None established.	None established.		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures.

Section 9 Physical and chemical properties

Appearance: Solid, transparent, light amber tubing.

Odor: No odor.

Odor threshold: Not applicable

pH: Not applicable

Melting / Freezing point: Not applicable

Boiling point: Not applicable Flash point: Not applicable

Evaporation rate (= 1): Not applicable Flammability (solid/gas): Not applicable

Explosion limits: Upper: / Lower: Not applicable Vapor pressure (mm Hg): Not applicable

Vapor density (Air = 1): Not applicable Relative density (Specific gravity): Not applicable

Solubility(ies): Insoluble

Partition coefficient: (n-octanol / water): Not applicable

Auto-ignition temperature: Not applicable Decomposition temperature: Not applicable

Viscosity: Not applicable

Molecular formula: Not applicable Molecular weight: Not applicable

Section 10 Stability and reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Do not allow product to dry out.

Incompatibilities with other materials: No specific data.

Hazardous decomposition products: No specific data.

Section 11 Toxicological information

Acute toxicity: Oral-rat LD50: 12,000 mg/kg [Glycerol]
Skin corrosion/irritation: Non-irritating [Glycerol]
Serious eye damage/irritation: Non-irritating [Glycerol]
Respiratory or skin sensitization: Non-sensitizing [Glycerol]

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Not expected to cause ill effects. Ingestion: Not expected to cause ill effects. Skin: Not expected to cause ill effects. Eyes: Contact may cause irritation.

Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is

not available. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: None assigned.

Section 12 Ecological information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Exceptions: Not applicable

Persistence and degradability: No data available

Mobility in soil: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport information

UN/NA number:Not applicableShipping name:Not RegulatedHazard class:Not applicablePacking group:Not applicable

2020 ERG Guide # Not applicable

Reportable Quantity: No Marine pollutant: No

Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Data not available						This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Form 06/2015 Revision Date: September 26, 2022 Supercedes: September 25, 2020

Section 1 Identification Page E1 of E2

INNOVATING SCIENCE®

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221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

Product DEIONIZED WATER

Synonyms Hydrogen Oxide / Distilled Water

Section 2 Hazards identification

This substance has not been classified at this time according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

Signal word: Not a hazardous substance Pictograms: Not a hazardous substance

Target organs: None known

GHS Classification: Not a hazardous substance

GHS Label information:

Hazard statement: Not a hazardous substance Precautionary statement(s): Not a hazardous substance

Supplemental information:

Avoid contact with DANGEROUS WHEN WET and WATER-REACTIVE materials. For laboratory use only. Do not ingest.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / information on ingredients							
Chemical Name		CAS#	%	EINECS			
Deionized water		7732-18-5	100%	231-791-2			

Section 4 First aid measures

Uncontaminated water should not pose any ill health effects. If ill effects develop, get immediate medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Not a fire hazard. Water is used for extinguishing fires.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: Avoid contact with DANGEROUS WHEN WET and WATER-REACTIVE materials. See Section 10.

Section 6 Accidental release measures

Personal Precautions: Uncontaminated material poses no hazards.

Environmental Precautions: Uncontaminated material may be flushed to sewer. **Containment and Cleanup:** Uncontaminated material may be flushed to sewer.

Section 7 Handling and storage Page E2 of E2

Precautions for Safe Handling: Read label on container before using. Not for drug, food or household use. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Wash thoroughly after handling.

Conditions for Safe Storage: Store in a cool area away from water-reactive or dangerous when wet substances.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits.	None listed	None listed	None listed	None listed			

Engineering controls: None required. **Respiratory protection:** None required.

Section 9 Physical and chemical properties

Appearance: Clear, colorless liquid. **Odor:** No odor.

Odor threshold: Data not available

pH: Data not available

Melting / Freezing point: 0°C (32°F)

Boiling point: 100°C (212°F)

Boiling point: 100°C (212°F) Flash point: Not flammable Evaporation rate (Water = 1): 1
Flammability (solid/gas): Not flammable
Explosion limits: Lower / Upper: Not flammable

Vapor pressure (mm Hg): 14 Vapor density (Air = 1): 0.7

Relative density (Specific gravity): 0.99707 @ 20/20°C

Solubility(ies): Complete

Partition coefficient: (n-octanol / water): Data not available

Auto-ignition temperature: Not flammable Decomposition temperature: Data not available.

Viscosity: Data not available. Molecular formula: H₂O Molecular weight: 18.01

Section 10 Stability and reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Absorption of fumes and carbon dioxide gas.

Incompatible materials: Water-reactive metals: sodium, potassium, calcium, barium, alkali metal alloys, liquid amalgams, amides, carbides, hydrides, aluminum powders,

silicides, cerium, concentrated acids.

Hazardous decomposition products: Electrolysis will produce explosive and flammable hydrogen and oxygen.

Section 11 Toxicological information

Acute toxicity: Data not available

Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: No ill effects expected. Ingestion: No ill effects expected. Skin: No ill effects expected. Eves: No ill effects expected.

Signs and symptoms of exposure: No ill effects expected. Additional information: RTECS #: Data not available

Section 12 Ecological information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport information

UN/NA number: Not applicable

Hazard class: Not applicable

Shipping name: Not Regulated
Packing group: Not applicable

Exceptions: Not applicable 2020 ERG Guide # Not applicable

Reportable Quantity: No Marine pollutant: No

Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Deionized water	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or

Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Form 06/2015 Revision Date: September 16, 2022 Supercedes: September 25, 2020