

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name GEMINI BIO-1200

Other means of identification

Product Code 397
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Acid Replacement Oxidizer One-Step Cleaner
Uses advised against No information available

Manufacturer Address

Anderson Chemical Company, 325 South Davis Avenue, Litchfield, MN 55355 (320-693-2477)

Emergency telephone number

Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Corrosive to metals	Category 1

Label elements

Emergency Overview

Danger

Hazard statements

Causes serious eye damage
 May be corrosive to metals
 Causes skin irritation



Appearance aqueous solution

Physical state liquid

Odor Odorless

Precautionary Statements - Prevention

Wash hands and exposed skin thoroughly after handling
 Wear protective gloves/eye protection/face protection
 Keep only in original container.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
 IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
 Absorb spillage to prevent material damage

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other information

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Organic salt	Trade Secret	35	
Hydrogen peroxide	7722-84-1	4	

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

Eye contact	Flush immediately with water for 15 minutes. Lift upper and lower eyelids for complete rinsing. Get immediate medical attention.
Skin Contact	Flush with water for 15 minutes. If irritation persists after rinsing, get medical attention. Remove contaminated clothing and wash before reuse.
Inhalation	Remove victim to fresh air. If breathing difficulty occurs or persists, get medical attention.
Ingestion	Rinse mouth with water. Give water to dilute. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to a semi-comatose, comatose, convulsing

Most important symptoms and effects, both acute and delayed

Symptoms	Causes serious eye irritation (pain, irritation, watering, redness). Exposure to decomposition products or mist may cause a health hazard. Serious effects may be delayed following exposure. Causes skin irritation (irritation, redness). Irritating to mouth, throat and stomach.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical

At temperatures above 60°C/140°F acid action on most metals may release hydrogen, a highly flammable and explosive gas.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
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Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for containment	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.
Methods for cleaning up	Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. HANDLING AND STORAGE

Protective Measures:	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on General: occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.
Conditions for Safe: Storage, including any Incompatibilities	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters None

Appropriate engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear protective splash proof safety goggles. Additional full face protection is recommended if splashing is a possibility.
Skin and body protection	For prolonged or repeated exposures, use impervious clothing (boots, gloves, aprons, etc.) over parts of the body subject to exposure.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid	Odor	Odorless
Appearance	aqueous solution	Odor threshold	No information available
Color	pale, straw colored		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	<1	
Melting point/freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	1.186	
Water solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoidHeating above 110°C results in an exothermic decomposition with rapid release of CO₂ gas.**Incompatible materials**

Reactive or incompatible with the following materials: metal powders, bases, strong oxidizing or reducing agents.

Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Product Information	No data available
Inhalation	Exposure to decomposition products or mist may cause a health hazard. Serious effects may be delayed.
Eye contact	Serious eye irritation
Skin Contact	Cause skin irritation
Ingestion	May be irritating to mouth, throat and stomach.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrogen peroxide 7722-84-1	= 801 mg/kg (Rat)	= 4060 mg/kg (Rat) = 2000 mg/kg (Rabbit)	= 2 g/m ³ (Rat) 4 h

Information on toxicological effects

Symptoms See section 4

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	Not a skin sensitizer
Germ cell mutagenicity	No information available.
Carcinogenicity	No components are listed as carcinogens by IARC, ACGIH, OSHA or NTP
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

Numerical measures of toxicity - Product Information

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

1% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Species		
Trade Secret	48 hr; Ceriodaphnia dubia; Acute LC50 >100 mg/L		
Chemical Name	Algae/aquatic plants	Fish	Crustacea
Hydrogen peroxide 7722-84-1	2.5: 72 h Chlorella vulgaris mg/L EC50	16.4: 96 h Pimephales promelas mg/L LC50 18 - 56: 96 h Lepomis macrochirus mg/L LC50 static 10.0 - 32.0: 96 h Oncorhynchus mykiss mg/L LC50 static	7.7: 24 h Daphnia magna mg/L EC50 18 - 32: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability

Readily biodegradable

Bioaccumulation

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

Chemical Name	California Hazardous Waste Status
Hydrogen peroxide 7722-84-1	Toxic Corrosive Ignitable Reactive

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

International Lists

Australia (AICS): One or more components are not listed.
Canada (DSL): All components are listed or exempted.
China (IECSC): One or more components are not listed.
Europe (EINECS): All components are listed or exempted.
Japan (ENCS): All components are listed or exempted.
New Zealand (NZIoC): All components are listed or exempted.
Philippines (PICCS): One or more components are not listed.
Republic of Korea (KECL): All components are listed or exempted.
Taiwan (NECI): All components are listed or exempted.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
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
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 311/312 Hazard Categories

Serious eye damage or irritation
 Skin corrosion or irritation
 Corrosive to metals

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)

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

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
Hydrogen peroxide 7722-84-1	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NFPA	Health hazards 2	Flammability 0	Instability 1	Physical and Chemical Properties -
HMIS	Health hazards 2	Flammability 0	Physical hazards 1	Personal protection X

Prepared By lmt
 Issue Date 27-Dec-2017
 Revision Date 19-Jun-2023
 Revision Note
 19-Mar-2021 Updated Section 15; 19-Jun-2023 Updated section 2

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet