166 Commerce Dr.
Stoystown, PA 15563
(814) 629-7118
www.chemstream.com

Safety Data Sheet
Clearal 2024

1. IDENTIFICATION

Product Name Clearal 2024
Description Microbiocidal bactericide, fungicide, algicide, and slimicide

Product class Biocide **-** Mixed Isothiazolins

Recommended Use For industrial use

Supplier Address
166Commerce Dr.
Stoystown, PA 15563

Emergency Telephone Number
Company Phone Number (814) 629-7118
Emergency Telephone (24 hr) CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1B
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3

Signal Word
Danger

Hazard Statements
Causes severe skin burns and eye damage
May cause an allergic skin reaction
May cause respiratory irritation. May cause drowsiness or dizziness.

Appearance Colorless to yellow liquid **Physical State** Liquid **Odor** Pungent

Precautionary Statements – Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Contaminated work clothing must not be allowed out of the workplace
Use only outdoors or in a well-ventilated area

Precautionary Statements – Response
Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse
If skin irritation or rash occurs: get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
Call a poison center or doctor/physician if you feel unwell
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Precautionary Statements – Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements – Disposal
Dispose of contents/container to an approved waste disposal plant

Other hazards
Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms Mixed isothiazolins.

Components	CAS No.	Weight %
Water	7732-18-5	95.0 – 96.0
Magnesium Nitrate	10377-60-3	1.4 – 2.0
Methylchloroisothiazolinone	26172-55-4	1.1 – 1.35
Magnesium Chloride	7786-30-3	1.0 – 1.2
Methylisothiazolinone	2682-20-4	0.35 – 0.45

4. FIRST AID MEASURES

First Aid Measures

Eye Contact 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.

Skin Contact IF ON SKIN (or hair): remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or rash occurs: get medical advice/attention.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

Ingestion Rinse mouth. Do not induce vomiting. Slowly provide victim with copious amounts of water. Do not give fluids by mouth if victim is semi-comatose, comatose, or convulsing. Seek immediate medical attention/advice.

Most important symptoms and effects

Symptoms Causes severe skin burns and eye damage. May cause sensitization by skin contact. May cause an allergic skin reaction. May cause respiratory irritation. May cause drowsiness or dizziness.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. Material is corrosive. Possible mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock and convulsions may be necessary.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media

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

Unsuitable Extinguishing Media Not determined.

Specific hazards arising from the chemical

Material is corrosive.

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 Use personal protection recommended in Section 8.

Environmental Precautions Do not allow material to contaminate ground water system. Prevent product from entering drains. See Section 12 for additional ecological Information.

Methods and material for containment and cleaning up

Methods for Containment WARNING: KEEP SPILLS AND CLEAN-UP RESIDUALS OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER. Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Absorb the spill with spill pillows or inert solids such as clay or vermiculite, and transfer contaminated material to suitable containers for disposal. Deactivate spill area with freshly prepared solution of 5% sodium bicarbonate and 5% sodium hypochlorite in water. Apply solution to the spill area at a ratio of 10 volumes of deactivation solution per estimated volume of residual spill to deactivate any residual active ingredient. Let stand for 30 minutes. Flush the spill area with copious amounts of water to chemical sewer (if in accordance with local procedures, permits, and regulations). DO NOT add deactivation solution to the waste pail to deactivate the absorbed material. See Section 13 “Disposal Considerations”, for information regarding the disposal of contained materials.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling — Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Use only outdoors or in a well-ventilated area. Use personal protection recommended in Section 8. Keep away from food, drink, and animal feeding stuffs. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions — Keep containers tightly closed and store in a dry, cool, and well-ventilated place. Store locked up. The product as supplied may evolve gas (largely carbon dioxide) slowly. To prevent the buildup of pressure the product is packaged in specially vented containers, where necessary. Keep this product in the original container when not in use. Storage temperature ≥ 1°C (≥ 34°F) and ≤ 55°C (≤ 131°F). Container must be stored and transported in an upright position to prevent spilling the contents through the vent, where fitted. Do not store this material in containers made of steel. Do not store this material near food, feed, or drinking water.

Packaging Materials — CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since empty containers retain product residue, follow all SDS and label warnings even after container is emptied. Expiration date based only on retention of >95% actives during storage at 20°C – 25°C (69°F – 77°F).

Incompatible Materials — Strong oxidizing agents. Reducing agents. Amines. Mercaptans.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines — No exposure limits noted for ingredient(s)

Appropriate Engineering Controls

Engineering Controls — Ensure adequate ventilation (capture velocity of 150 ft/min minimum). Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/Face protection — Use chemical safety goggles and/or full-face shield where splashing is possible.

Skin/Body protection — Protective Chemical impervious gloves of butyl rubber, nitrile rubber, or PVC, chemical resistant suit and boots. Use body protection appropriate for task. An apron or other impermeable body protection is suggested. Full-body chemical protective clothing is recommended for emergency response procedures.

Respiratory protection — NIOSH approved respirators should be worn if misting may occur and exposure is likely to exceed exposure limits up to 10X. Wear SCBA for exposure greater than 10X exposure limits.

General Hygiene Considerations — Handle in accordance with good industrial hygiene and safety practice. Keep away from food and drink.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Colorless to yellow liquid	**Odor**	pungent
Color	Colorless to yellow	**Odor Threshold**	Not Det.

Property	**Values**	**Remarks / Method**
pH	2.0 – 4.0	@ 25°C (77°F)
Melting point/range	-3°C / 26.6°F	Water Solution
Boiling point/range	~ 100°C / 212°F	Water Solution
Flash point	Not applicable	
Evaporation rate	< 1.00	
Flammability (solid, gas)	Liquid - Not applicable	
Upper Flammability Limit	Not applicable	
Lower Flammability Limit	Not applicable	
Vapor pressure	Not determined	
Vapor density	~ 0.6	
Relative density (Specific Gravity)	1.02	
Water Solubility	Completely Soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	log Pow: 0.401	Method not specified
Auto-ignition temperature	Not determined	
Decomposition temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	3 mPa s	@ 25°C (77°F)
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
Additional Information	Note: The physical data presented above are typical values and should not be construed as a specification.	

10. STABILITY AND REACTIVITY

Reactivity	Not reactive under normal conditions.
Stability	Stable under recommended storage conditions
Possibility of hazardous reactions	None under normal processing
Hazardous Polymerization	Hazardous Polymerization does not occur
Conditions to avoid	Keep out of reach of children. Keep separated from incompatible substances.
Incompatible Materials	Strong oxidizing agents. Reducing agents. Amines. Mercaptans.
Hazardous decomposition products	Thermal decomposition of product can produce toxic vapors of sulfur oxides, hydrogen chloride, and oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye Contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns.

Inhalation May cause irritation of respiratory tract. May cause drowsiness or dizziness.

Ingestion Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Magnesium Nitrate 10377-60-3	= 5440 mg/kg (Rat)	-	-
Methylchloroisothiazolinone 26172-55-4	= 481 mg/kg (Rat)	-	= 1.23 mg/L (Rat) 4 hr
Magnesium chloride 7786-30-3	= 2800 mg/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see Section 4 of this SDS for symptoms

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

Sensitization May cause sensitization by skin contact. May cause an allergic skin reaction.

Carcinogenicity Nitrate or nitrite ingested under conditions that result in endogenous nitrosation are considered IARC group 2A carcinogens.

Chemical Name	ACGIH	IARC	NTP	OSHA
Magnesium Nitrate 10377-60-3		Group 2A		X

Legend

IARC (International Agency for Research on Cancer)
Group 2A – Probably Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Numerical measures of toxicity

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

Oral LD50	27,756.00 mg/kg
Dermal LD50	74,667.00 mg/kg
ATEmix (inhalation-vapor)	91.11 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Methylchloroisothiazolinone 26172-55-4	0.31: 120 h Anabaena flos-aquae mg/L EC50 0.11 – 0.16: 72 h Pseudokirchneriella Subcapitata mg/L EC50 static 0.03 – 0.13: 96 h Pseudokirchneriella Subcapitata mg/L EC50 static	1.6: 96 h Oncorhynchus mykiss mg/L LC50 semi-static	4.71: 48 h Daphnia magna mg/L EC50 0.12 – 0.3: 48 h Daphnia magna mg/L EC50 Flow through 0.71 – 0.99: 48 h Daphnia magna mg/L EC50 static
Magnesium Chloride 7786-30-3	82.7: 72 h Pseudokirchneriella subcapitata mg/L EC50	1970 - 3880: 96 h Pimephales promelas mg/L LC50 static 4210: 96 h Gambusia affinis mg/L LC50 static	140: 48 h Daphnia magna mg/L EC50 Static 1400: 24 h Daphnia magna mg/L EC50

Persistence and degradability
Not determined

Bioaccumulation
Not determined

Mobility

Chemical Name	Partition Coefficient
Methylchloroisothiazolinone 26172-55-4	0.75

Other adverse effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste disposal Disposal should be in accordance with applicable regional, national, and local laws and regulations

Contaminated Packaging Disposal should be in accordance with applicable regional, national, and local laws and regulations

US EPA Waste Number
D002

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Magnesium Nitrate 10377-60-3	Ignitable Reactive

14. TRANSPORTATION INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT
UN/ID No UN3265
Proper shipping Name Corrosive liquid, acidic, organic, n.o.s (5-Chloro-2-methyl-4-isothiazolin-3-one)
Hazard Class 8
Packing Group II

IATA
UN/ID No UN3265
Proper shipping Name Corrosive liquid, acidic, organic, n.o.s (5-Chloro-2-methyl-4-isothiazolin-3-one)
Hazard Class 8
Packing Group II

IMDG
UN/ID No UN3265
Proper shipping Name Corrosive liquid, acidic, organic, n.o.s (5-Chloro-2-methyl-4-isothiazolin-3-one)
Hazard Class 8

Packing Group II
Marine Pollutant This product contains a chemical, which is listed as a severe marine pollutant according to IMDG/IMO

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Water	X	ACTIVE	X	X	X	X	X	X	X
Magnesium Nitrate	X	ACTIVE	X	X	X	X	X	X	X
5-Chloro-2-methyl-4-isothiazolin-3-one	X	ACTIVE	X	X	X	X	X	X	X
Magnesium Chloride	X	ACTIVE	X	X	X	X	X	X	X
Methylisothiazolinone	X	ACTIVE	X	X	X	X	X	X	X

Legend:
TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*
DSL/NDSL *- 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

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) Releases in excess of its reportable quantity must be reported to the National Response Center (1-800-424-8802) and to the appropriate state and local emergency response organizations. The formulation of this mixture as a whole has a reportable quantity of 100 lb. for EPA waste code D002.

SARA 311/312 Hazard Categories

Acute Health Hazard yes

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	CAS No	Weight %	SARA 313 – Threshold Values %
Magnesium Nitrate 10377-60-3	10377-60-3	1.4 – 2.0	1.0

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

US State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Magnesium Nitrate 10377-60-3	X	X	X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	Not determined	Not determined	Not determined	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	3	0	0	Not determined

SDS Issue Date: 5/7/2020

Version 1

All sections reformatted in accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

The product information contained herein is believed to be accurate as of the date of the Safety Data Sheet, and is provided without warranty, expressed or implied, as to the results of use of this information or the product to which it relates. Recipient assumes all responsibility for the use of this information and the use (alone or in combination with any other product), storage or disposal of the product, including any resultant personal injury or property damage.

In an event of discrepancy between the contents of this SDS and the English version of it, the English version shall prevail.

End of safety data sheet