SAFETY DATA SHEET

COMPANY IDENTITY: CCI SDS DATE: 09/13/2019
PRODUCT IDENTITY: MemCide 550

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements and the International Chemical Safety Cards of the Global Harmonizing System.
THIS SDS COMPLIES WITH CFR 1910.1200 (HAZARD COMMUNICATIONS STANDARD)
IMPORTANT: Read this SDS before handling & disposing of this product.
Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: MemCide 550
SDS NUMBER: CR7225
COMPANY IDENTITY: CCI CHEMICAL
COMPANY ADRESS: 3540 EAST 26TH STREET, VERNON, CALIFORNIA 90058
COMPANY PHONE: 800-767-9112
EMERGENCY PHONES: CHEMTREC: 1-800-424-9300 (USA)
CANUTEC: 1-613-996-6666 (CANADA)

SECTION 2. HAZARDS IDENTIFICATION

DANGER!!

EXPOSURE PREVENTION:

HAZARD STATEMENTS:
H100s = General, H200s = Physical, H300 = Health, H400s = Environmental

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.

PRECAUTIONARY STATEMENTS:

P100s = General, P200s = Prevention, P300s = Response, P400s = Storage, P500s = Disposal

P262	Do not get in eyes, on skin, or on clothing.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present & easy to do – Continue rinsing.
P309+311	If exposed or you feel unwell: Call a POISON CENTER or doctor/physician.
P405+102	Store locked up. Keep out of reach of children.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS#	WT %
Hazardous Components		
Water	7732-18-5	95.0-96.0
Magnesium Nitrate	10377-60-3	1.4-2.0
2-Methyl-4-isothiazolin-3-one	2682-20-4	0.35-0.45
5-Chloro-2-Methyl-4-isothiazolin-3-one	26172-55-4	1.1-1.1.35
Magnesium Chloride	7786-30-3	1.0-1.2

Trace components: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant Additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

SECTION 4. FIRST AID MEASURES

EYE CONTACT:

If this product enters the eyes, open eyes while under gently running water. Use sufficient force to open eyelids. Roll eyes to expose more surface. Minimum flushing is for 15 minutes. Seek immediate medical attention.

SKIN CONTACT:

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INHALATION:

Move person to fresh air. If person is not breathing, call 911 or an ambulance, than give artificial respiration, preferably by mouth-to-mouth if possible.

INGESTION:

Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water, if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor.
Do not give anything by mouth to an unconscious person.

Note to Physician:

Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:

Use an extinguishing agent suitable for the surrounding fire.

UNSUITABLE EXTINGUISHING MEDIA:

None known.

SPECIAL HAZARDS ARISING FROM THE CHEMICAL:

In a fire or heated, a pressure increase will occur and the container may burst. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

HAZARDOUS THERMAL DECOMPOSITION PRODUCTS:

Decomposition products may include the following materials. Carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides, halogenated compounds, metal oxide/oxides.

SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without-suitable training.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with full face-piece operated in positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

FOR NON-EMERGENCY PERSONNEL:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

FOR EMERGENCY RESPONDERS:

If specialized clothing is required to deal with the spillage, take note of any information in section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel.

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). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

SMALL SPILLS:
Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste water disposal contractor.

LARGE SPILLS:
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. Note to see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

PROTECTIVE MEASURES:
Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitizations problems should not be employed in any process in which this product is used.
Do not get in eyes or skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid
Release to the environment. If during normal use the material presents a respiratory hazard,
Use only with adequate ventilation or wear appropriate respirator. 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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene Measures.

CONDITIONS FOR SAFE STORAGE:
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. Store locked up. 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.

Satisfactory Materials of Construction

304 Stainless steel
316 Stainless steel
PVC-flexible
PVC-rigid
Polyethylene- crosslink
Polyethylene- high density
Polyethylene- low density
Polypropylene
Rehau Tubing
EPDM rubber
Butyl rubber
ABS (Plastic)
Teflon
Tygon F-4040
Tygon tubing R3603
Polyurethane Tubing
Dow Sillastic Tube
Polycarbonate

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENVIRONMENTAL ENGINEERING CONTROLS:
If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

ENVIRONMENTAL EXPOSURE CONTROLS:
Emissions from ventilation or work process equipment should be checked to ensure they
Comply with the requirements of environmental protection legislation. In some cases,
Fumes scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual Protection Measures

Hygiene measures:
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the work location.

Eye/face Protection:
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin/Hand Protection:
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacture, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufactures. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body Protection:
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection:
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES:

Physical state:	Liquid
Color:	Colorless to pale yellow
Odor:	Pungent
pH:	2.0-4.0
Melting point:	-3 °C (26.6°F)
Boiling point:	100°C (212°F)
Flash point:	Closed cup: >100°C (> 212°F) Pensky-Martens
Evaporation rate:	Not available
Flammability (solid, gas):	Not available
Lower and upper explosive limits:	Not available
Vapor pressure:	0.0013 kPa (0.01 mm Hg) room temperature
Vapor density:	Not available
Relative density:	1.02
Dispensability properties:	Not available
Solubility:	Soluble in cold and hot water
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Dynamic (room temperature) 3 mPa.s (3cP)
VOC:	0% (w/w) Method 24

SECTION 10. STABILITY & REACTIVITY

Reactivity:
No specific test data related to reactivity available for this product or its ingredients.

Chemical Stability:
The product is stable.

Hazardous Reactions:
Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to Avoid:
No specific data.

Incompatible Materials:
No specific data.

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

SECTION 11. TOXICOLOGIGAL INFORMATION

ACUTE TOXICITY

Ingredient	Result	Species	Dose	Exposure
Nitric acid, copper (2+) Salt (2:1)	LD50 Oral	Rat	794 mg/kg	-
	LC 50 Inhalation	Female	> 5 mg/l	4 hours
	LD 50 Dermal	Rabbit	>5000 mg/kg	-
	LD 50 Oral	Rat	3810 mg/kg	-

SENSITIZATION

Ingredient	Route of exposure	Species	Results
5-Chloro-2-methyl-4-isothiazolin-3-one	Skin	Guinea pig	Sensitizing
2-Methyl-4-isothiazolin-3-one	Skin	Guinea pig	Sensitizing

MUTAGENICITY

Not available.

CARCINOGENICITY

This product has not been tested unless noted in the summary results.

CLASSIFICATION

Ingredient	OSHA	IARC	NTP
Magnesium Nitrate	-------	2A	------
Nitric acid, copper (2+) salt (2:1)	-------	2A	------

REPRODUCTIVE TOXICITY

Not available.

TERATOGENICITY

Not available.

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

Not available.

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)

Not available.

ASPIRATION HAZARD

Not available.

POTENTIAL ACUTE HEALTH EFFECTS

EYE CONTACT Causes serious eye damage.

INHALATION No known significant effects or critical hazards.

SKIN CONTACT Causes severe burns. May cause an allergic skin reaction.

INGESTION No known significant effects or critical hazards.

SYMPTOMS RELATED TO THE PHYSICAL CHEMICAL & TOXICOLOGICAL CHARACTERISTICS

EYE CONTACT Adverse symptoms may include the following.
Pain
Watering
Redness

INHALATION No specific data.

SKIN CONTACT Adverse symptoms may include the following.
Pain or irritation
Redness
Blistering may occur

INGESTION	Adverse symptoms may include the following. Stomach pains

Delayed & immediate effects & also chronic effects from short & long term exposure

SHORT TERM EXPOSURE

Potential Immediate Effects	Not available
Potential Delayed Effects	Not available

SHORT TERM EXPOSURE

Potential Immediate Effects	Not available
Potential Delayed Effects	Not available

POTENTIAL CHRONIC HEALTH EFFECTS

Not available.

Conclusion/Summary

The following teste were conducted with the technical grade active ingredient(s)

Ames Salmonella Assay: Positive (T100) without activation; Negative with activation
Mouse Lymphoma Forward Mutation Assay: Positive
Rat Bone Marrow Cytogenetics Assay: Negative, no chromosomal damage
In Vivo Micronucleus Assay in Mice: Negative
Sex-Linked Recessive Lethal Assay: Negative

Teratology
Rabbits: Dose levels used were 1.5, 4.4 and 13.3 mg/kg/day. Dose related material toxicity was observed. No evidence of a teratogenic response, but evidence of embryotoxicity and fetotoxicity was noted.

Rats: Material toxicity was observed at all dose levels. No evidence of a teratogenic response at doses up to 100 mg/kg/day (highest dose tested).
90 Day Subchronic Toxicity

Oral-Rats: There was a dose related increase in adrenal weights in the females. A slight, but significant increase in SGOT was noted in the high dose (800 ppm) males. No other changes were noted.

Oral-Dogs: No treatment related effects were noted at doses up to 1500 ppm (highest dose tested).

Dermal-Rabbits: Dose levels of 100, 200 and 400 ppm active (1 ml/kg) produced dose dependent signs of dermal irritation. No treatment related signs of systemic toxicity, or changes in clinical chemistry parameters, or histopathological evaluation.

Inhalation-Rats: Exposed to levels of product at 0, 0.34, 1.15 and 2/64 mg active per cubic meter. There were no treatment related changes in hematology, gross pathology or ophthalmology. Decrease weight gains were noted in the dose group. Histopathologic effects related to irritation/rhinitis of the nasal cavity was noted in the mid and high dose groups. No treatment related effects were noted in the low dose group.

Oral-Rats: After a dosage of 2.5 mg/kg/day given for 7 days, 90% of the administered C14 was excreted in 3 days; <2% as parent compound.

Dermal-Rats: After a dosage of 0.2-1.6 mg/kg, 60% of the administered C14 was remained at the site of administration on the skin; whereas, 20-40% was absorbed systemically. The C14 was excreted in urine.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity : Did not cause cancer in laboratory animals.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity
Acute toxicity estimates

Not available

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY

Ingredient	Result	Species	Exposure
Memcide 400	Acute IC50 0.16 mg/l	Daphnia	48 hours
	Acute LC50 0.19 mg/l	Fish	96 hours
	Acute LC50 0.28 mg/l	Fish	96 hours
	Acute LC50 0.30 mg/l	Fish	96 hours
	Acute LC50 0.55 mg/l	Fish	96 hours
	Acute LC50 1.90 mg/l	Fish	96 hours

SECTION 13. DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewer.

RCRA classification : D002, 100 lbs.

SECTION 14. TRANSPORT INFORMATION

DOT/TDG SHIP NAME: UN3265, Corrosive Liquid, Acidic, Organic, N.O.S., (Contains 5-Chloro-2-Methyl-4-Isothiazolin-3-one, 2-Methyl-4-Isothiazolin-3-one), 8, PG II.
DRUM LABEL: (CORROSIVE)
IATA / ICAO: UN3265, Corrosive Liquid, Acidic, Organic, N.O.S., (Contains 5-Chloro-2-Methyl-4-Isothiazolin-3-one, 2-Methyl-4-Isothiazolin-3-one), 8, PG II.

IMO/IMDG: UN3265, Corrosive Liquid, Acidic, Organic N.O.S., (Contains 5-Chloro-2-Methyl-4-Isothiazolin-3-one, 2-Methyl-4-Isothiazolin-3-one), 8, PG II.

SECTION 15. REGULATORY INFORMATION

U.S Federal regulations : TSCA 12(b) one-time export: 5-chloro-2methyl-2H-isothiazol-3-one
United States Inventory (TSCA 8b) this product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from US Toxic Substances Control Act (TSCA) Inventory listing requirements.

Clean Water Act (CWA) 307: copper dinitrate
Clean Water Act (CWA) 311: copper dinitrate; nitric acid

SARA 302/304

Composition/Information on Ingredients

				SARA 302 TPQ		SARA 304 RQ
Name	%	EHS	lbs.	gallons	lbs.	gallons
Nitric Acid	0.02	Yes	1000	85.7	1000	85.7

SARA 304 RQ: 5000000 lb. / 2270000 kg (587912.3 gal/222549.2 L)

SARA 311/312
Classification: Immediate (acute) health hazard

Composition/Information on Ingredients

Name	%	Fire hazard	sudden Release	Reactive	Immediate hazard	Delayed hazard
Magnesium Nitrate	1.856-2.	No	No	No	No	Yes
5-Chloro-2-methyl-4-Isothiazolin-3-one	1.16-1.	No	No	No	Yes	No
2-Methyl-4-isothiazolin -3-one	0.348-0.58	No	No	No	Yes	No
Nitric acid, copper (2+) Salt (2:1)	0.212	No	No	No	Yes	Yes

SARA 313

	Product name	CAS number	%
Form R- Reporting	Magnesium Nitrate	10377-60-3	1.856-2.436
Supplier notification	Magnesium Nitrate	10377-60-3	1.856-2.436

CERCLA: Hazardous substances: nitric acid; copper dinitrate: 100 lbs. (45.4 kg)
FDA: This product is allowed under the following FDA (21 CFR) section: 175.105-Limitation:
For use only as an antimicrobial agent in polymer latex emulsions. /175.300, 175.320-Limitation:
For use only as an antimicrobial agent in emulsion-based silicone coatings at a level not to exceed 50 mg active ingredient/KG in the coating formulation. /176.170, 176.180-Limitations: For use only 1) as an antimicrobial agent for polymer latex emulsions in paper coatings at a level not to exceed 50 ppm active ingredient in the coating formulation and 2) as an antimicrobial agent for finished coatings and for additives used in the manufacture of paper and paperboard including fillers, binders, in the coating formulations and additives. /176.300-Limitation: Not to exceed 2.5 pounds per ton of dry weight fiber.

EPA Reg. No. 82760-2-65517
FIFRA: This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required by safety data sheets (SDS), and for workplace labels of non-pesticide label also includes other important information, including direction for use.

SECTION 16. OTHER INFORMATION

HAZARD RATINGS:

HEALTH (NFPA): 3, HEALTH (HMIS): 3, FLAMMABILITY: 0, PHYSICAL HAZARD: 0

(Personal Protection Rating to be supplied by user based on use conditions.)

This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating system.

EMPLOYEE TRAINING:

See Section 2 for Risk & Safety Statements. Employees should be made aware of all hazards of this material (as stated in this SDS) before handling it.

NOTICE

All information, recommendations, and suggestions appearing herein concerning this product are based upon data obtained from the manufacturer and/or recognized technical sources; however, C.C.I. makes no warranty, representation or guaranty as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of the product. Additional product literature may be available upon request. Since actual use by others is beyond our control, no warranty, express or implied is made by C.C.I. as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does C.C.I. assume any liability arising out of use by others of this product.