SAFETY DATA SHEET

according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

Isocil™ RW 1.5

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SECTION 1. IDENTIFICATION

Product name : Isocil™ RW 1.5

Manufacturer or supplier's details

Company : Lonza Inc.
412 Mount Kemble Avenue, Suite 200S
Morristown, NJ 07960
USA
Business Telephone 1-201-316-9200

E-mail address : prodinfo@lonza.com

Emergency telephone number : +41 61 313 94 94 (24h)

For US only CHEMTREC 1-800-424-9300

Recommended use of the chemical and restrictions on use

Recommended use : Biocides

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion : Category 1

Serious eye damage : Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310 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/doctor.
P363 Wash contaminated clothing before reuse.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name / Synonyms	CAS-No.	Concentration (% w/w)
5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (mixture 3:1)	55965-84-9	1.54
Magnesium nitrate	10377-60-3	1.73
Magnesium chloride	7786-30-3	0.54
Copper dinitrate	3251-23-8	0.16

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Give oxygen.
First aider needs to protect himself.
Call a physician immediately.

In case of skin contact : Take off all contaminated clothing immediately.
After contact with skin, wash immediately with plenty of soap and water.
Call a physician immediately.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Call a physician immediately.

If swallowed : Call a physician immediately.
Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Dry powder Water spray Foam
Further information	:	Use water spray to cool unopened containers.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use respirator when performing operations involving potential exposure to vapour of the product.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system.
Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Take precautionary measures against static discharges.
Advice on safe handling	:	Avoid contact with skin and eyes. Provide sufficient air exchange and/or exhaust in work rooms.
Conditions for safe storage	:	Keep container tightly closed. To maintain product quality, do not store in heat or direct sunlight. Keep in a dry, cool and well-ventilated place.
Further information on storage conditions	:	Open drum carefully as content may be under pressure. Metal containers must be lined. Corrodes base metals.
Technical measures/Precautions	:	Open drum carefully as content may be under pressure. Metal containers must be lined. Corrodes base metals.
Recommended storage temperature	:	34 - 129 °F / 1 - 54 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters / Permissi-	Basis

		exposure)	ble concentra-tion	
5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (mixture 3:1)	55965-84-9		0.2 mg/m3	LIGEL*

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

Hand protection
- Material : Nitrile rubber
- Rate of permeability : > 480 min

Eye protection : Tightly fitting safety goggles
Face-shield

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Rubber or plastic apron
Rubber or plastic boots

Hygiene measures : Wash hands before breaks and immediately after handling the product.
Avoid contact with skin, eyes and clothing.
Remove and wash contaminated clothing and gloves, including the inside, before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	light green
Odour	:	pungent
Odour Threshold	:	no data available
pH	:	2.0 - 4.0
Melting point/range	:	27 °F / -3 °C
Boiling point/boiling range	:	ca. 212 °F / 100 °C
Flash point	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Flammability (liquids)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available

Vapour pressure	:	0.1 hPa
Relative vapour density	:	
		0.6
Relative density	:	no data available
Density	:	1.02 g/cm3 (68 °F / 20 °C)
Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Decomposition temperature	:	no data available
Viscosity, dynamic	:	3 mPa.s (77 °F / 25 °C)
Viscosity, kinematic	:	no data available

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	Stable under normal conditions.
Conditions to avoid	:	no data available
Incompatible materials	:	Reducing agents Amines Bases Oxidizing agents
Hazardous decomposition products	:	Nitrogen oxides (NOx) Carbon oxides Sulphur oxides Hydrogen chloride gas

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Skin Eyes Ingestion Inhalation

Acute toxicity

Acute oral toxicity	:	LD50 (Rat): 2,350 mg/kg Method: OECD Test Guideline 401 GLP: yes
Acute dermal toxicity	:	LD50 (Rabbit): 4.5 - 79 mg/kg
		LD50 (Rabbit): > 2,000 mg/kg

Method: OECD Test Guideline 402
GLP: yes

Skin corrosion/irritation

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: Corrosive
GLP: yes

Serious eye damage/eye irritation

Species: Rabbit
Result: Corrosive
Method: OECD Test Guideline 405
GLP: yes

Respiratory or skin sensitisation

Test Type: Buehler Test
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Sensitising
GLP: yes

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to terrestrial organisms : LD50 (Colinus virginianus (Bobwhite quail)): 65.000 mg/kg
End point: Acute toxicity

LC50 (Colinus virginianus (Bobwhite quail)): 3,536.000 ppm
Exposure time: 8 d
End point: Subacute toxicity

LC50 (Anas platyrhynchos (Mallard duck)): 945.000 ppm
Exposure time: 8 d
End point: Subacute toxicity

EC50 (Eastern oyster): 28.000 ppb
Exposure time: 48 h
End point: Acute toxicity

LC50 (Anas platyrhynchos domestica (Peking duck)): 530.000 ppm
Exposure time: 8 d
End point: Subacute toxicity

Persistence and degradability

no data available

Bioaccumulative potential

Components:

5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (mixture 3:1):

Partition coefficient: n-octanol/water	:	log Pow: 0.71 - 0.75 (20 °C) Method: OECD Test Guideline 117

Mobility in soil

no data available

Other adverse effects

no data available

The following ecotoxicological data refer to:

5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (mixture 3:1)(CAS-No.: 55965-84-9)

Ecotoxicity

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.19 mg/l Exposure time: 96 h Test Type: flow-through test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.16 mg/l Exposure time: 48 h Test Type: Immobilization Method: OECD Test Guideline 202
Toxicity to algae	:	ErC50 (Selenastrum capricornutum (green algae)): 0.027 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201 NOEC (Skeletonema costatum (marine diatom)): 0.0014 mg/l Exposure time: 72 h Test Type: Growth inhibition
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): 0.05 mg/l Exposure time: 14 d Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.035 mg/l Exposure time: 21 d Test Type: Reproduction Test Method: OECD Test Guideline 202
M-Factor (Chronic aquatic toxicity)	:	1

Persistence and degradability

Biodegradability	:	Result: rapidly degradable Biodegradation: < 50 % Exposure time: 10 d

Bioaccumulative potential

no data available

Mobility in soil

Distribution among environmental compartments	:	Koc: ca. 28Remarks: Highly mobile in soils

Other adverse effects
no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of in accordance with local regulations. Contact waste disposal services.
Contaminated packaging	:	Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number	:	3265
Proper shipping name	:	Corrosive liquid, acidic, organic, n.o.s. (5-Chloro-2-methyl-4-isothiazolin-3-one)
Transport hazard class	:	8
Packing group	:	II
Labels	:	8
Emergency Response Guidebook Number	:	153
Environmental hazards	:	no

TDG

UN number	:	3265
Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (5-Chloro-2-methyl-4-isothiazolin-3-one)
Transport hazard class	:	8
Packing group	:	II
Labels	:	8
Environmental hazards	:	no

IATA

UN number	:	3265
Proper shipping name	:	Corrosive liquid, acidic, organic, n.o.s. (5-Chloro-2-methyl-4-isothiazolin-3-one)
Transport hazard class	:	8
Packing group	:	II
Labels	:	8
Environmental hazards	:	no

IMDG

UN number	:	3265
Proper shipping name	:	Corrosive liquid, acidic, organic, n.o.s. (5-Chloro-2-methyl-4-isothiazolin-3-one)
Transport hazard class	:	8
Packing group	:	II
Labels	:	8
EmS Number 1	:	F-A
EmS Number 2	:	S-B
Environmental hazards	:	Marine pollutant: no

ADR

UN number	:	3265
Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (5-Chloro-2-methyl-4-isothiazolin-3-one)
Transport hazard class	:	8
Packing group	:	II
Classification Code	:	C3
Hazard Identification Number	:	80
Labels	:	8
Environmental hazards	:	no

RID

UN number	:	3265
Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (5-Chloro-2-methyl-4-isothiazolin-3-one)
Transport hazard class	:	8
Packing group	:	II
Classification Code	:	C3
Hazard Identification Number	:	80
Labels	:	8
Environmental hazards	:	no
Special precautions for user	:	none
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:	Not applicable

SECTION 15. REGULATORY INFORMATION

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 for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals.

EPA Registration number	:	6836-258
Signal word	:	DANGER!
Hazard statements	:	Harmful if swallowed. May be fatal if absorbed through skin. Corrosive. Causes skin burns. Corrosive - causes irreversible eye damage. This pesticide is toxic to fish. This pesticide is toxic to aquatic invertebrates.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Copper dinitrate	3251-23-8	100	62500

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 313

Components	CAS-No.	Concentration
Magnesium nitrate	10377-60-3	1.73 %

US State Regulations

Massachusetts Right To Know

Components	CAS-No.
Magnesium nitrate	10377-60-3

Pennsylvania Right To Know

Components	CAS-No.
Magnesium nitrate	10377-60-3

New Jersey Right To Know

Components	CAS-No.
Magnesium nitrate	10377-60-3

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

LIGEL* : Lonza Internal Guidance Exposure Level

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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Date format : yyyy/mm/dd

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