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Revision Number 1

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

Product identifier

Product Name MS#-PR2,INCORPORATION BUFFER

Other means of identification

Product Code(s) 15041807

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use reagent

Details of the supplier of the safety data sheet

Manufacturer Address

illumina, Inc.
5200 Illumina Way
San Diego, CA 92122 USA

Company Phone Number

1-858-809-ILMN
1-858-202-4566

E-mail address

SDS@illumina.com

www.illumina.com

Emergency telephone number

24 Hour Emergency Phone Number 1-760-476-3962

2. HAZARDS IDENTIFICATION

GHS Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin sensitization	Category 1
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Label elements

Emergency Overview

Signal word

Warning

Hazard statements

May cause an allergic skin reaction



Appearance liquid

Physical state Liquid

Odor Odorless

Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves

Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label)

IF ON SKIN: Wash with plenty of soap and water

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

Precautionary Statements - Storage

Store away from incompatible materials

Precautionary Statements - Disposal

Dispose of in accordance with federal, state and local regulations

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Unknown acute toxicity

0.050252 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical name	CAS No.	Weight-%	Trade Secret
5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1)	55965-84-9	<0.1	*

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

4. FIRST AID MEASURES

Description of first aid measures

General advice	Treat symptomatically. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.
Inhalation	If symptomatic, move to fresh air. Get medical attention if symptoms persist.
Ingestion	Get medical attention.
Self-protection of the first aider	Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.
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Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water, Water spray (fog), Carbon dioxide (CO₂), Foam, Dry chemical

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

None known.

Hazardous combustion products

Carbon oxides. Nitrogen oxides (NO_x). Sodium oxides. Potassium oxides. Phosphorus oxides.

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 Use personal protective equipment as required. Avoid contact with eyes and skin.

For emergency responders Use personal protection recommended in Section 8. Keep unnecessary personnel away.

Environmental precautions

Environmental precautions Avoid discharge into drains, water courses, or onto the ground.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a cool, well-ventilated place. Keep/store only in original container. Store away from incompatible materials. Store at 2° C to 8° C (35° F to 46° F).

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.

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 When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance liquid
Odor Odorless
Color colorless

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	
Melting point / freezing point °F - VALUE 1	No data available	
Boiling point / boiling range		
Flash point		
Evaporation rate - VALUE	No data available	
Flammability (solid, gas)	No data available	
Flammability Limit in Air		
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	
Vapor density	No data available	
Specific gravity - VALUE 1	No data available	
Water solubility	No data available	
Solubility in other solvents	No data available	
Partition coefficient	No data available	
Autoignition temperature °C - VALUE	No data available	
Decomposition temperature	No data available	
Kinematic viscosity - VALUE 1	No data available	
Dynamic viscosity - VALUE 1	No data available	
Explosive properties	No unusual fire or explosion hazards noted.	
Oxidizing properties	No data available	

Other Information

Softening point No data available
Molecular weight No data available

VOC Content (%)	No data available
Liquid Density	No data available
Bulk density	No data available

10. STABILITY AND REACTIVITY

Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability

Stable under normal conditions. Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

None known.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Eye contact	Direct contact with eyes may cause temporary irritation.
Skin Contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause irritation.
Ingestion	No harmful effects expected in amounts likely to be ingested by accident.

Information on toxicological effects

Symptoms	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	Not classified.
Sensitization	May cause sensitization of susceptible persons.
Germ cell mutagenicity	Not classified.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity	Not classified.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified.

Chronic toxicity Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.
Aspiration hazard Not classified.
Other adverse effects No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 0.050252 % of the mixture consists of ingredient(s) of unknown toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity

99.1977 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium chloride 7647-14-5	-	5560 - 6080 mg/L: LC50 96 h Lepomis macrochirus flow-through 12946 mg/L: LC50 96 h Lepomis macrochirus static 6020 - 7070 mg/L: LC50 96 h Pimephales promelas static 6420 - 6700 mg/L: LC50 96 h Pimephales promelas static 7050 mg/L: LC50 96 h Pimephales promelas semi-static 4747 - 7824 mg/L: LC50 96 h Oncorhynchus mykiss flow-through	340.7 - 469.2 mg/L: EC50 48 h Daphnia magna Static 1000 mg/L: EC50 48 h Daphnia magna

Persistence and degradability
 Not a PBT or vPvB substance or mixture.

Bioaccumulation
 No data available

Mobility
 No data available.

Other adverse effects
 No data 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. Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT Not regulated
TDG Not regulated
MEX Not regulated
ICAO (air) Not regulated

<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Does not comply
DSL/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Does not comply

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

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

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

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

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

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Revision Note
 Not applicable.

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End of Safety Data Sheet