

VD2020079 FS#-mtPCR2 (15055277)

Issuing Date 02-Dec-2020

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Revision A

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

Product identifier

Product Name FS#-mtPCR2, ForenSeq™ mtPCR2 Reaction Mix

Other means of identification

Product Codes(s) 15055277**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
Verogen, Inc.
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techsupport@verogen.com

2. HAZARDS IDENTIFICATION

GHS Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).

Label elements

Emergency Overview

Signal word

None

Hazard statements

Not Hazardous

The product contains no substances which at their given concentration are considered to be hazardous to health.

Appearance Colorless liquid**Physical state** Liquid**Odor** Odorless

Precautionary Statements – Prevention

Handle in accordance with good industrial hygiene and safety practice.

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 32.1 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration are considered to be hazardous to health.

| Chemical Name | CAS No. | Weight-% | Trade Secret |
|--------------------|-----------|----------|--------------|
| Sucrose | 57-50-1 | 10 - 30 | * |
| Potassium chloride | 7447-40-7 | 1 - 5 | * |

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

4. FIRST AID MEASURES

Description of first aid measures

| | |
|---|---|
| General Advice | Use first aid treatment according to the nature of the injury. |
| Eye Contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| Skin Contact | Wash skin with soap and water. Get medical attention if irritation develops and persists. |
| Inhalation | If symptomatic, move to fresh air. Get medical attention if symptoms persist. |
| Ingestion | Get medical advice/attention. |
| Self-protection of the first aider | 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 No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

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

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

None known.

Hazardous combustion products

No information available.

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.

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 Use personal protective equipment as required. Contain and collect spillage 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).
Large spill. Prevent runoff from entering drains, sewers, or streams. Dike far ahead of liquid spill for later disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep/store only in original container. Store away from incompatible materials.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--------------------|-----------|----------|--|
| Sucrose 57-50-1 | - | - | TWA 10 mg/m ³ (total) TWA 5 mg/m ³ (resp) |

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

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 Handle in accordance with good industrial hygiene and safety practice. Wash after handling this material and before eating, drinking and/or smoking. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|----------------|--------------------------|
| Physical state | Liquid |
| Appearance | Colorless liquid |
| Odor | Odorless |
| Color | Colorless |
| Odor threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Methods</u> |
|---|---|--------------------------|
| pH | No data available | |
| Melting point / freezing point | No data available | |
| Boiling point / boiling range | | |
| Flash point | | |
| Evaporation rate | No data available | |
| Flammability (solid, gas) | No data available | |
| Flammability Limit in Air | | |
| Upper flammability or explosive limits: | No data available | |
| Lower flammability or explosive limits: | No data available | |
| Vapor pressure | No data available | |
| Vapor density | No data available | |
| Specific gravity | No data available | |
| Water solubility | No data available | |
| Solubility in other solvents | No data available | |
| Partition coefficient | No data available | |
| Autoignition temperature | No data available | |
| Decomposition temperature | No data available | |
| Kinematic viscosity | No data available | |
| Dynamic viscosity | 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

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 | Low hazard for usual industrial or commercial handling by trained personnel. |
| 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 | Prolonged contact may cause redness and irritation. |
| Ingestion | No harmful effects expected in amounts likely to be ingested by accident. |

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------------------------|-----------------------|-------------|-----------------|
| Sucrose 57-50-1 | = 29700 mg/kg (Rat) | - | - |
| Potassium chloride 7447-40-7 | = 2600 mg/kg (Rat) | - | - |

Information on toxicological effects

Symptoms None known.

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. |
| Skin sensitization | Not classified. |
| Respiratory sensitization | Not classified. |
| 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. |
| Target organ effects | Eyes, Respiratory system. |
| Aspiration hazard | Not classified. |
| Other adverse effects | No information available. |

Numerical measures of toxicity – Product Information

Unknown acute toxicity 32.1 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|-----------------------------------|---|--|---|
| Potassium chloride 7447-40-7 | 2500 mg/L: EC50 72 h Desmodesmus subspicatus | 750 - 1020 mg/L: LC50 96 h Pimephales promelas static 1060 mg/L: LC50 96 h Lepomis macrochirus static | 825 mg/L: EC50 48 h Daphnia magna 83 mg/L: EC50 48 h Daphnia magna Static |
| Polyethylene glycol 25322-68-3 | - | 5000 mg/L: LC50 24 h Carassius auratus | - |

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.

Ozone

Not classified.

Ozone depletion potential (ODP)

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. 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 |
| IATA | Not regulated |
| IMDF | Not regulated |
| RID | Not regulated |
| ADR | Not regulated |
| ADN | Not regulated |

15. REGULATORY INFORMATION**International Inventories**

| | |
|----------------------|---------------------------------|
| TSCA | Does not comply |
| DSL/NDSL | Does not comply |
| EINECS/ELINCS | Does not comply |
| ENCS | Does not comply |
| IECSC | Does not comply |
| KECL | Does not comply |
| PICCS | Does not comply |
| AICS | Does not comply |
| INSQ | This product complies with INSQ |

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**INSQ**—Mexican National 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 | No |
| 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

This product does not contain any substances regulated by state right-to-know regulations.

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

| |
|------------------------------|
| 16. OTHER INFORMATION |
|------------------------------|

| | | | | |
|-------------|------------------|----------------|--------------------|------------------------------------|
| NFPA | Health Hazards 0 | Flammability 0 | Instability 0 | Physical and Chemical Properties - |
| HMIS | Health Hazards 0 | Flammability 0 | Physical Hazards 0 | Personal Protection X |

| | |
|----------------------|----------------|
| Prepared By | Verogen, Inc. |
| Issuing Date | 02-Dec-2020 |
| Revision Date | 01-Dec-2020 |
| Revision Note | Not applicable |

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End of Safety Data Sheet