

Issue Date 12-Jan-2015

Revision Date 18-July-2018

Version 1.1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product identifier****Product Name** FS#-HSC, ForenSeq™ Human Sequencing Control**Other means of identification****Product Code** 15054261**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.
11111 Flintkote Avenue
San Diego, CA 92121 USA
www.verogen.com**Company Phone Number**1.833.837.6436
1.858.285.4101**E-mail address**

info@verogen.com

Emergency telephone number**24 Hour Emergency Phone Number** 1.858.285.4101**2. HAZARDS IDENTIFICATION****Classification****OSHA Regulatory Status**This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)**Label elements****Emergency Overview**

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 - Response

Wash hands thoroughly after handling

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)

Other Information

Unknown Acute Toxicity

2 % 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.

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. 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 occur.

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** See Section 12 for additional Ecological Information.

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 appropriate personal protective equipment (PPE). Contain and/or absorb spill with inert material (specify sand, vermiculite or other appropriate material)*, then place in suitable container. Prevent runoff from entering drains, sewers or waterways.

7. HANDLING AND STORAGE

Precautions for safe handling

- Advice on safe handling** Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

- Storage Conditions** Keep container tightly closed in a dry and well-ventilated place. Store away from incompatible materials.
- 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 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
Odor No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>•Method</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 limit:	No data available		
Lower flammability limit:	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
Density No data available
Bulk density No data available

10. STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions Stable under recommended storage conditions

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.

Information on toxicological effects**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

Germ cell mutagenicity	Not classified.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity	2 % of the mixture consists of ingredient(s) of unknown toxicity
-------------------------------	--

12. ECOLOGICAL INFORMATION**Ecotoxicity**

2 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

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

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO (air)</u>	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	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

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	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**U.S. EPA Label Information**

EPA Pesticide Registration Number Not Applicable

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

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

Issue Date 12-Jan-2015

Revision Date 18-July-2018

Revision Note

Not Applicable.

Disclaimer

Although reasonable care has been taken in the preparation of this document, Verogen makes no warranties or representations of any kind as to the accuracy or completeness of the information contained herein, and Verogen assumes no responsibility regarding the suitability of this information or the product for the user's intended purposes or for the consequences of use of this information or the use of the product. The user of this (M)SDS and product should make a determination as to the suitability of the information and the product for their particular purpose(s). To the extent provided by applicable law, Verogen shall not be held liable for any damage or expenses of any kind resulting from handling, use, storage, or disposal of the product.

End of Safety Data Sheet