1. IDENTIFICATION

Product Name	Planit Safe™ 3SFF- ARK
Recommended use of the chemical	Surrogate Test Liquid
And restrictions on use	See Section 15
Company Identification	Vector Fire Technology, Inc. 1017 Charles St. Unit B Coatesville, PA 19320
Customer Information Number	(610) 466-1717
Emergency Telephone Number	(610) 466-1717
Issue Date	Nov. 17, 2022
Revision Date	April 24, 2025 – Rev. B 042425
Supersedes Date	3/25/25

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

* Refer to Section 9 Physical and Chemical Properties

2. HAZARD IDENTIFICATION

Hazard Classification
Eye damage/Irritation – 4

Label Elements
Hazard Symbols



Signal Word: Warning

Hazard Statements
Contact with liquid may cause eye irritation.

Precautionary Statements

Prevention
Wash hands thoroughly after handling.
Wear eye protection.
Response
If in eyes: Flush with water for 15 minutes. Remove contact lenses if present and easy to do.
If eye irritation persists, get medical advice/attention.
Storage
None
Disposal
None
Other Hazards
Not identified

2. HAZARD IDENTIFICATION

Specific Concentration Limits
The values listed below represent the percentages of ingredients of unknown toxicity

Acute oral toxicity	<5%
Acute dermal toxicity	<5%
Acute inhalation toxicity	<5%
Acute aquatic toxicity	<5%

3. COMPOSITION / INFORMATION ON INGREDIENTS

This product is a mixture

Component	CAS Number	Concentration
Water	7732-18-5	94-98%
Potassium Chloride	7447-40-7	<2%
Sodium Benzoate	532-32-1	<1%
Potassium Sorbate	24634-61-5	<1%
Xanthan Gum	11138-66-2	<2%
Hydroxypropyl Methylcellulose	9904-65-3	<1%
Diutan Gum	125005-87-0	<1%
Triethanolamine-99%	102-71-6	<1%

4. FIRST-AID MEASURES

Description of necessary first-aid measures

Inhalation
No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of airborne aerosol mists, remove to fresh air. Seek medical attention if effects occur.

Eyes
Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if irritation persists.

Skin
Wash skin thoroughly with soap and water. Launder clothing before re-use.

4. FIRST-AID MEASURES

Ingestion
Swallowing less than an ounce is not expected to cause significant harm. For larger amounts, do not induce vomiting. Give milk or water. Never administer anything by mouth to an unconscious person. Seek medical attention.

Most important symptoms/effects, acute and delayed
Aside from the information found under Description of necessary first-aid measures (above) and indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed
None

Notes to Physicians
Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Product is not an extinguishing media. Use appropriate for surrounding materials.

Specific hazards arising from the chemical
None known

Specific protective actions for fire-fighters
None

6. ACCIDENTIAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
NOTE: Review FIRE-FIGHTING MEASURES and HANDLING (Personnel) sections before proceeding with clean-up. Use appropriate Personal Protective Equipment during clean-up. Exercise caution, surfaces may be slippery.

Environmental Precautions
Stop flow if possible. Dilute with water to meet existing water quality standards.
Flush area with water.

Methods and materials for containment and clean-up
Contain and absorb using appropriate inert materials and transfer into suitable containers for recovery or disposal in accordance with federal, state and local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with eyes, skin and clothing. Avoid ingestion or inhalation. Rinse skin and eyes thoroughly in case of contact. Review HAZARDS and FIRST-AID sections.

Conditions for safe storage
Store in original containers or tanks designed for product storage, between 35°F and 120°F (2°C and 49°C). Storage area should be cool, dry, under cover and out of direct sunlight.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

Appropriate engineering controls
Special ventilation is not required.

Individual protection measures - Respiratory Protection
Recommended exposure limits (OSHA-PEL and ACGIH-TLV) have not been determined for this material. The need for respiratory protection is not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical State	Liquid
Color	Water White
Odor	Bland
Odor Threshold	No data available
pH	6.6 – 8.0
Specific Gravity	1.00 – 1.02 @ 20 deg. C
Boiling Range/Point (°C/F)	84.4 C, 185 F
Melting Point	4.4 C, 24 F
Flash Point	n/a - water based liquid
Vapor Pressure	No data available
Evaporation Rate (BuAc=1)	<1
Solubility in Water	Soluble (100%) – requires physical agitation
Vapor Density (Air = 0)	n/a
VOC %	No data available
Partition coefficient (n-octanol/water)	No data available
Viscosity (centipoise)	200 – 8000 cps*
Auto-Ignition Temperature	n/a
Decomposition Temperature	No data available
Upper explosive limit	n/a
Lower explosive limit	n/a
Flammability (solid, gas)	n/a

* Non-Newtonian shear sensitive liquid. Viscosity varies with shear rate.

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical Stability
Stable

Possibility of Hazardous Reactions
Hazardous polymerization will not occur

Conditions to Avoid
Contact with incompatible materials

Incompatible Materials
Water reactive materials- burning metals – electrically energized equipment

Hazardous Decomposition Products
None

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Mammalian Toxicity – This product has not been tested as a whole for acute oral and inhalation toxicity, primary eye irritation, or primary skin irritation.

Specific Target Organ Toxicity (STOT) – single exposure
No data available

Specific Target Organ Toxicity (STOT) – repeat exposure
No data available

Serious Eye Damage/Irritation
No data available

Respiratory or Skin Sensitization
No data available

Carcinogenicity
No data available

Germ Cell Mutagenicity
No data available

Reproductive Toxicity
No data available

Aspiration Hazard
No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity
See Ecotoxicological Information Aquatic Toxicity below.

Mobility in Soil
No relevant studies identified

Persistence/Degradability
See Environmental Fate below

No relevant studies identified
Bioaccumulative Potential

Other Adverse Effects
No relevant studies identified

Ecotoxicological Information Aquatic Toxicity
The acute toxicity of Planit Safe™ 3SFF - ARK Surrogate Test Liquid has been studied and determined to have no adverse effects when evaluated in a 96-hour dilution series test using Fathead Minnows, *Pimephales promelas*, as a test specimen. This testing protocol was performed in accordance with EPA Method 2000.0. The 96-hour EC_{50}/LC_{50} was determined to be >66,000 mg/L. This was the highest concentration tested in the dilution series, and it is unlikely that Planit Safe in the environment would approach this concentration.

Environmental Fate

	Method	As shipped (mg/L)	As proportioned (diluted) at 3% with water (mg/L)	At 6% with water (mg/L)
BOD_5	SM 5210 B	13,933	418	836
COD	EPA 410.4	25,433	763	1,526

13. DISPOSAL CONSIDERATIONS

Planit Safe™ 3SFF- ARK Surrogate Test Liquid Concentrate, as sold, is not a RCRA-listed waste or hazardous waste as characterized by 40 CFR 261. However, state and local requirements for waste disposal may be more restrictive or otherwise different from Federal regulations. Proper clean-up and disposal of this material into drains, sewers, or waterways is not expected to cause an environmental impact, however, consult with state and local authorities having jurisdiction regarding the proper regulations or concerns encompassed within your site disposal plan.

Planit Safe™ 3SFF- ARK Surrogate Test Liquid Concentrate can be treated by wastewater treatment facilities. Discharge into biological sewer treatment facilities may be done with prior approval. Specific concerns are high BOD load. Dilution will reduce BOD and COD factors proportionately. Low dosage flow rate to the treatment plant may be helpful. Disposal should be made in accordance with federal, state and local regulations. **This material is non-foaming**.

14. TRANSPORT INFORMATION

Shipping information
Proper Shipping Name: Not a DOT-Hazardous Substance
Hazard Class: Not Regulated
UN Number: None

This information is not intended to convey all transportation classifications that may apply to this product. Classifications may vary by container volume and by regional regulations. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules when transporting this material.

15. REGULATORY INFORMATION

U.S. Federal Regulations

Toxic Substances Control Act (TCSA)
All components of this product are listed in the TSCA inventory.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III

SARA Title III Sect. 302/304
There are no components of this material with known CAS numbers that are on the Extremely Hazardous Substances (EHS) list.

SARA Title III Sect. 311/312 Categorization
This material does not contain any components subject to Sections 311 and 312 reporting requirements.

SARA Title III Sect. 313
This material does not contain any components subject to Sections 313 reporting requirements.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
This material does not contain any components that are subject to the reporting requirements of the CERCLA.

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Health - 0

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards – None

16. OTHER INFORMATION

State Regulations

Pennsylvania Right-To-Know Hazardous Substance List

PA Hazardous Substance present at levels greater than 1%
None

Legend

ACGIH: American Conference of Governmental Industrial Hygienists
BOD5: Biochemical Oxygen Demand (5 day)
CAS#: Chemical Abstracts Service Number
COD: Chemical Oxygen Demand
EC50: Effect Concentration 50%
IARC: International Agency for Research on Cancer
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
N/A: Denotes no applicable information found or available
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
RQ: Reportable Quantity
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

Release Date: Nov. 17, 2022
Latest Revision Date: A
Changes made: Updated to include most recent environmental fate (BOD_5 and COD) data.

Information Source and References

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