

Material Safety Data Sheet Version No.: 1.0(Revision 2012-11-30)

S. cerevisiae VN-Fusion Library

1. Chemical Product and Company Identification

Product Name

S. cerevisiae VN-Fusion Library, Active Plasmid

Company Name & Address Bioneer Corporation 49-3, Munpyeong-dong, Daedeok-gu, Daejeon 306-220 Korea Tel.: +82-42-930-8508 Fax: +82-42-930-8600

NOTE : If this product is a kit or is supplied with more than one material, please refer to the MSDS for each component for hazard information.

Product USE :

This products are for laboratory research use only and are not intended for human or animal diagnostics, therapeutic, or other clinical use

2. Hazards Identification

<Emergency Overview>

Occupational exposure presents little or no health hazard Potential Health Effects: Eye : May cause irritation of the eye. Skin: May cause skin irritation. Inhalation: No toxicity expected from inhalation. Ingestion: Mildly irritating to mouth, throat, and stomach. Can cause abdominal discomfort. Chronic: No data on cancer. kin or eye contact from splashes

3. Composition/Information on Ingredients



The following list shows components of this product classified as hazardous based on physical properties and health effects :

CAS NO.

Component

Percent

No hazardous componentsach product packages: 2ml tubes

4. First-Aid Measures

Eye:

Fluse with water in an eyewash for at least 15minutes, holding eyelids open. Remove contact lenses, clean before reuse. Obtain medical attention if symptoms develop(redness, itching, etc.)

Skin:

Wash with plenty of soap and water. Obtain medical attention if symptoms develop(redness, itching, etc.). Remove contaminated Clothes, wash before re-use.

Inhalation:

Remove person to fresh air. Obtain medical attention unless effects are mild and temporary.

Ingestion:

Give plenty of water, if conscious. If vomiting coours naturally, wash mouth out. Be prepared to induce vomiting upon a physician's advice. Obtain medical attention if symptoms develop.

Note to Physicain: Treat symptomatically.

5. Fire-Fighting Measures

GFlashpoint Deg C:	Not Available
Upper Flammable Limit %:	Not Available
Lower Flammable Limit %:	Not Available
Autoignition Temperature Deg C:	Not Available

Extinguishing Media : Use means appropriate for surrounding materials. Firefighting Techniques / Equipment : Standard turnout gear("bunker gear'). Positive-pressure self-contained Breathing apparatus.

Hazardous Combustion Products: Includes carbon dioxide, carbon monoxide, dense somke

6. Accidental Release Measures

UAccidental releases may be subject to special reporting requirements and other regulatory mandates. Refer to section 8 personal protection equipment recommendations.

Spill Cleanup:

Absorb spill : Common absorbent materials should be effective. Deposit in appropriate containers for removal and disposal.

7. Handling and Storage

Storage of some material is regulated by federal, state, and /or local laws. Storage pressure: Ambient Handling Precedures: Keep closed or covered when not in use. Storage Procedures : Suitable for most general chemical storage areas.

8. Exposure Controls and Personal Protection

Exposure limits OSHA PEL AGCIH TWA Component No Hazardous components (ppm) (ppm) **Engineering Controls:** Area ventilation is generally adequate. Personal Protective Equipment Eye: Safety goggles (glasses). Skin : Protective gloves, a lab coat. Respiratory : No respiratory protection will be needed under normal industrial operating conditions.

9. Physical and Chemical Properties

Apperance / physical state	Liquid solution / suspension
Odor: No odor	
Not established.	
Not established.	
	Not established.
Specific Gravity / Density :	1.00
Octanol / water partition coeff: Not established.	
Volatiles :	Not established.
Evaporation Rate :	0.3 (BUTYLY Acetate = 1.0)
Viscosity:	0.98 cp at 20C

10. Stability and Reactivity

StabilityStable under ordinary conditions of use and storage.Conditions to Avoid: Strong oxidizers.Hazardous Decomposition Prodects:Carbon monoxide. Carbon dioxide.Harzardous Polymerization: Not expected to occur.

11. Toxicological Information

Acute Toxicity : Dermal/Skin : Not determined. Inhalation/Respiratory : Not determined. Oral / Ingestion: Not determined. Target Organs : No data found. Carcinogenicity :



NTP : Not tested IARC : Not listed OSHA : Not regulated. Other Toxicological Information

12. Ecological Information

No data available.

13. Disposal Consideration

Burn the material in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal state and local environmental regulations.

14. Trnasport Information

Not regulated.

15. Regulatory Information

UNITED STATES : TSCA :

This product is solely for research and development purpose only and may not be used, processed of distributed for a commercial purpose. It may only be handled by technically qualified individuals.

Prop 65 Listed Chemicals : PROP 65 PERCENT No Prop 65 Chemicals. No 313 Chemicals. CANADA DSL/NDSL: Not determined. Component WHMIS Classification No Hazardous components EUROPEAN UNION: Product risk phrases: None assigned. Product safety phrases : Not applicable. Product Classification : Not Classification as hazardous Component EINECS Number No hazardous components

16. Other Information

HMIS Rating 0-4 : Fire : Not Determined Health : Not Determined Reactivity : Not Determined

Abbreviations N/A – Data is not applicable or not available SARA – Superfund and Reauthorization Act



HMIS – Hazard Material Information System WHMIS – Workplace Hazard Material Information System NTP – National Toxicology Program OSHA – Occupational Agency for Research on Cancer IARC – International Agency for Drinking Water and Toxic Enforcement Act of 1986 PROP 65– California Inventory of Existing Commercial Chemical Substances

This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features. BIONEER is not held liable for any damage resulting from handling or from contact with the above p handling or from contact with the above product.