

Section 1 - Product and Company Identification

Manufacturer: Foresight Biosciences, Inc.
Address: 601 Genome Way Huntsville, AL 35806

Phone: 256-327-9405
Fax: 256-270-0778

Product/Chemical Name: Protein/Enzyme
Common Name/Product Name: See Detailed List Below

Product Name	Product Number	CAS Number	EC Number
α (2-3,6)-Neuraminidase	FSB0001	9001-67-6	3.2.1.18
α (2-3)-Neuraminidase	FSB0034	9001-67-6	3.2.1.18
PNGase F	FSB0002	83534-39-8	3.5.1.52
β (1,4)-Galactosidase	FSB5001	9031-11-2	3.2.1.23
Galactose Oxidase	FSB0008	9028-79-9	1.1.3.9
Glucose Oxidase	FSB5002	9001-37-0	1.1.3.4
Ovalbumin	FSB1001	9006-59-1	N/A
Ovotransferrin	FSB1002	1391-06-6	215-727-0
Horseradish Peroxidase	FSB1003	71-36-3	1.11.1.7
Riboflavin-binding protein	FSB1004	91386-80-0	N/A
Lysozyme	FSB1005	12650-88-3	3.2.1.17

Section 2 – Information on Ingredients

Ingredient Name(s): Refer to Section 1 (above)
Principal Hazardous Component(s): N/A
Biologic Activity: Varies (%)

CAS Number(s): Refer to Section 1 (above)
Chemical & common name(s): Enzymes, Proteins
EC Number(s): Refer to Section 1 (above)

Section 3 - Hazards Identification

Emergency Overview

Potential Health Effects

Primary Entry Routes: Inhalation, eyes, skin.

Target Organs: Kidney

Acute Effects

Inhalation: Prolonged exposure may result in irritation of the mouth and throat.

Eye: Prolonged exposure may result in irritation or injury.

Skin: Prolonged contact may result in irritation.

Ingestion: May be harmful if swallowed.

Carcinogenicity: None known.

Medical Conditions Aggravated by Long-Term Exposure:

Chronic Effects: Overexposure can cause allergic reactions in certain sensitive individuals.

HMIS	
H	0
F	0
R	0
PPE	

Section 4 - First Aid Measures

Inhalation: Remove to fresh air. Get medical attention if irritation persists.

Eye Contact: Flush eyes with large amounts of water for 15 minutes or until irritation subsides. Remove contact lenses. Hold eyelids apart to ensure thorough cleansing. Get medical attention.

Skin Contact: Flush exposed areas thoroughly with soap and water until all chemical is removed. Remove contaminated clothing and launder before reuse. If irritation persists, get medical attention.

Ingestion: If individual is conscious, give large quantities of water to dilute stomach contents. Do not induce vomiting. Do not attempt to give anything by mouth to a drowsy or unconscious person. Keep warm and quiet. Get prompt medical attention. After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5 - Fire-Fighting Measures

Flash Point: N/A

Flash Point Method: N/A

Autoignition Temperature: N/A

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unusual Fire or Explosion Hazards: None

Fire-Fighting Instructions: Treat as a flammable liquid. Use water spray to keep fire-exposed containers cool. Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

Section 6 - Accidental Release Measures

Spill /Leak Procedures:

Spills: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Regulatory Requirements: N/A

Section 7 - Handling and Storage

Handling Precautions: Wear appropriate protective equipment when handling material.

Storage Requirements: Refer to specific product label for the appropriate storage requirements.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: Local exhaust ventilation is advisable.

Respiratory Protection: Not necessary under general use. If concerned seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment: Wear chemically protective gloves to prevent skin contact. Boots, aprons, and gauntlets are recommended for sensitive individuals to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Section 9 - Physical and Chemical Properties

Appearance and Odor: White to tan/brown, with typical enzyme odor.

Vapor Pressure: N/A

Vapor Density (Air=1): N/A

Specific Gravity (H₂O=1): Varies

Boiling Point: Decomposes

Melting Point: N/A

Flash Point: N/A

Evaporation Rate(butyl acetate=1): N/A

Solubility in Water: Powder-Appreciable
Liquids readily miscible in water

Section 10 - Stability and Reactivity

Stability: Any degradation products are not hazardous

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: N/A

Conditions to Avoid: None

Hazardous Decomposition Products: Not known.

Section 11 - Toxicological Information

Refer to Section 3 for potential health effects information. The toxicological properties of this material have not been fully investigated.

Please remember to always follow good laboratory practices and wear proper personal protective clothing, chemical resistant gloves and lab safety glasses when handling chemicals. May cause irritation and/or allergic reaction(s.)

Section 12 - Ecological Information

Ecotoxicity: N/A

Environmental Fate: N/A

Environmental Transport: N/A

Environmental Degradation: N/A

Section 13 - Disposal Considerations

Dispose of in accordance with all federal, state and local regulations.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Not Regulated	Packaging Authorizations
Hazard Class: N/A	a) Exceptions: N/A
ID No.: N/A	b) Non-bulk Packaging: N/A
Packing Group: N/A	c) Bulk Packaging: Not regulated
Label: N/A	
Special Provisions (172.102): None	

Section 15 - Regulatory Information

EPA Regulations:

SARA 311/312 Codes: Not available

SARA Toxic Chemicals(40 CFR 372.65): None

SARA EHS(Extremely Hazardous Substance)(40 CFR 355): Not listed, Threshold Planning Quantity(TPQ)

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

OSHA Specifically Regulated Substance (29CFR 1910): Not listed

State Regulations: None

Section 16 - Other Information

Prepared By: Randall Wilson, PhD

Revision Notes: July 2013

Additional Hazard Rating Systems: None

Disclaimer: The information given and the recommendations made herein apply to our product(s) alone and not combined with other product(s). Such are based on our research and on data from other reliable sources and are believed to be accurate. No guarantee of accuracy is made. Foresight Biosciences, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product(s). Therefore, it is the purchaser's responsibility before using any product to verify this data under their own operating conditions and to determine whether the product is suitable for their purposes.