



SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY INFORMATION

Product Name: BioXpresS[®]-INJ4
Product Description: Biopolymer which can be used for injection molding and extrusion.
Supplier: Polymer Processing Tech, LLC
PO Box 3117
Galveston, TX 77552
USA
Telephone No.: 409-770-9809
Polymer Processing Tech, LLC
811 14th St.
Galveston, TX 77550
USA
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SECTION 2. HAZARDS IDENTIFICATION INFORMATION

Classification of the substance or mixture:

This product is NOT classified according to 29 CFR 1910.1200 Hazard Communication Standard 2012.

Signal word: None
Hazard statements: None
Precautionary statements: None
Pictogram: None

Potential health effects: See Section 11

Environmental precautions: See Section 12

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Proprietary Blend

Chemical Name	CAS No.
Polyhydroxyalkanoate resin	1262215-27-9
Poly lactide resin	9051-89-2
Oxidized Polyethylene	68441-17-8
Methacrylate, Styrene Copolymer	25034-86-0

SECTION 4. FIRST AID MEASURES

Inhalation: Remove to fresh air. Call physician immediately.

Skin Contact: Wash off with soap and water. Call a physician if irritation develops or persists. Cool skin with cold water after contact with molten material. Do not peel solidified product off the skin. Call a physician immediately.

Eye Contact: Rinse with plenty of water for at least 15 minutes. Call a physician immediately.

Ingestion: Unlikely route of exposure. If swallowed, rinse mouth with water (only if the person is conscience). Never give anything by mouth to an unconscious person. Do **NOT** induce vomiting. Consult a physician if necessary.

Note to physician: Treat symptomatically



SECTION 5. FIRE-FIGHTING MEASURES

Flammability Limits in Air:

Flammable limits in air – lower (%): Not applicable

Flammable limits in air – upper (%): Not applicable

Suitable Extinguishing Media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Water mist

Dry chemical

Carbon Dioxide (CO₂)

Alcohol resistant foam

Unsuitable extinguishing media:

None known

Special Protective Equipment for Firefighters:

In the event of fire and/or explosion do not breathe fumes. Wear MSHA/NIOSH self-contained breathing apparatus pressure-demand and full protective gear.

Specific Hazards:

Cool closed containers with water spray. Watch footing on floors and stairs because of possible spreading of molten material.

Material can create slippery conditions.

In case of fire hazardous decomposition products may be produced such as:

Carbon monoxide

Carbon dioxides (CO₂)

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Wear personal protective equipment.

Evacuate personnel to safe areas.

Provide adequate ventilation.

Eliminate all ignition sources if safe to do so.

Do not swallow.

Avoid contact with skin, eyes and clothing.

Environmental Precautions:

Should not be released into the environment.

Prevent product from entering drains.

Clean Up:

Sweep up or vacuum up spillage and collect in suitable container for disposal. Dispose of in accordance with local regulations.

For molten products:

If material is molten, allow to cool. Use caution, as material may still be hot after solidification. Spilled material will solidify. Allow to solidify. Scrape up. Shovel into suitable container for disposal. Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE

Handling:

Ensure adequate ventilation. Wear personal protective equipment. Keep away from open flames, hot surfaces and sources of ignition. Take precaution to avoid incompatible materials, see section 10. Material can create slippery conditions. Do not swallow. Avoid contact with skin, eyes and clothing.



Storage: Keep containers tightly closed in a dry, cool, and well ventilated place. Keep away from heat and sources of ignition. Keep away from direct sunlight. Protect from physical damage. Store away from incompatible substances, see section 10.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Control:

Engineering measures: Use only in area provided with appropriate exhaust ventilation. Organizational measures to prevent/limit releases, dispersion and exposure.

Exposure Limits: None established

Environmental: Do not flush into surface water or sanitary sewer system. Comply with applicable community environmental protection legislation.

Personal Protective Equipment:

Eye protection: Safety glasses with side-shields. Goggles.

Skin and body protection: Wear suitable protective impervious clothing. Safety shoes.

Respiratory protection: In case of insufficient ventilation wear suitable respiratory equipment.

Hand protection: Preventive skin protection.

Hygiene measures: Avoid contact with skin, eyes and clothing.

Special hazard: Workers should be protected from the possibility of contact with molten material.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid

Appearance: pellets

Color: cream, white

Odor: sweet

pH: Note: not applicable

Melting point/freezing point: 176 – 356°F (80 - 180°C)

Boiling point/boiling range: Note: not determined

Flash point: No data available.

Flammability: Not fulfilling criteria for hazard class “Flammable Solid”

Lower flammability limit: Note: not applicable

Upper flammability limit: Note: not applicable

Vapor pressure: Note: not applicable

Vapor density: Note: not applicable, (Air=1.0)

Density: 1.1 – 1.3 g/cm³

Water solubility: Note: negligible

Partition coefficient: Note: no data available

n-octanol/water:

Ignition temperature: Note: not determined

SECTION 10. STABILITY AND REACTIVITY

Reactivity: None expected under conditions of normal use.

Chemical stability: Stable under recommended storage conditions.

Conditions to Avoid: Heat, open flames, hot surfaces and sources of ignition. Keep away from direct sunlight. Exposure to moisture. Avoid keeping resin molten for excessive periods of time at elevated temperatures. Prolonged exposure will cause polymer degradation. Avoid exposure to temperatures exceeding recommended processing conditions.



Incompatible Materials to Avoid: Oxidizing agents, Strong acids, Strong bases

Hazardous Decomposition Burning produces obnoxious and toxic fumes. In case of fire hazardous decomposition products

Products: may be produced such as: Carbon monoxide (CO), Carbon dioxide (CO₂), Aldehydes, Organic acids, Alcohols.

SECTION 11. TOXICOLOGICAL INFORMATION

Principle routes of exposure:	Eye contact, Skin contact, Inhalation, Ingestion.
Acute Toxicity:	Not classified.
Local effects:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Specific effects:	May cause skin irritation and/or dermatitis. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Burning produces irritant fumes.
Long term toxicity:	Not classified.
Mutagenic effects:	Not mutagenic in AMES test.
Reproductive toxicity:	Not classified.
Carcinogenic effects:	None of the components of this product are listed as carcinogens by IARC, NTP, or OSHA.
Target organ effects:	Not classified.
Ingestion:	LD/50/oral/rat > 2000 mg/kg
Further information:	Note: Thermal decomposition can lead to release of irritating gases and vapors. The molten product can cause serious burns.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects:	Ecological injuries are not known or expected under normal use.
Persistence and degradability:	Inherently biodegradable
Bioaccumulation:	No data available.
Mobility:	No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from residues/unused products:	Observe all Federal, State, and Local Environmental regulations. Should not be release into the environment. Do not contaminate ponds, waterways or ditches with chemical or used container.
Contaminated packaging:	Empty remaining contents. Do not re-use empty containers. Empty containers should be transported/delivered using a registered waste carrier to local recyclers for disposal.

THE COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION.

SECTION 14. TRANSPORT INFORMATION

DOT	Not regulated
IATA	Not regulated
IMDG	Not regulated



SECTION 15. REGULATORY INFORMATION

Inventories:

U.S. Toxic Substances Control Act:	On the inventory, or in compliance with the inventory
REACH:	Components are in compliance with and/or are listed.
Japan. (ECL):	Listed

National regulatory information

SARA 313 Title III:	Not listed.
California Prop. 65:	Not listed.

SECTION 16. OTHER INFORMATION

Further information

The information provided in the Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. The information should not constitute a guarantee for any specific product properties.

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End of Safety Data Sheet