SECTION 1 — IDENTIFICATION

Product Identifier	SABER Flex-1102
Synonyms	Biobased polylactide alloy resin; PLA-based thermoplastic pellets
Recommended Use	Thermoplastic resin for extrusion, injection molding, and compounding of rigid packaging, durable goods, filaments, and other biobased articles.
Restrictions on Use	For industrial and professional processing only. Not intended for direct consumer resale in pellet form.
Manufacturer	SABER Chemical, 1308 NE47th Street, Ankeny, IA 50021 USA
Telephone	+1 515-240-6139
E-mail	info@saberchemical.com

SECTION 2 — HAZARD(S) IDENTIFICATION

GHS Classification (OSHA HCS 29 CFR 1910.1200):
This product is a solid, article-like thermoplastic pellet. Based on available information for PLA resins and similar articles, it is **not classified as a hazardous substance or mixture** under GHS for normal handling and use.

Label Elements:
No GHS pictogram, signal word, or hazard statement is required for the product as supplied.

Hazards Not Otherwise Classified:

- Mechanical irritation of eyes or skin from pellets or dust.
- Hot or molten polymer can cause serious thermal burns.
- Finely divided dust may form combustible dust–air mixtures under certain conditions.
- Spilled pellets may create a slip hazard on floors.

Precautionary Statements (General Guidance):

- Avoid breathing dust or fumes from overheating/decomposition.
- Avoid contact of dust or pellets with eyes and prolonged contact with skin.
- Use with adequate ventilation, especially during drying and melt processing.
- Keep away from open flames and high-temperature sources.
- Maintain good housekeeping to minimize dust and prevent pellet accumulation.

SECTION 3 — COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture (polylactide-based polymer alloy with proprietary additives).

Chemical Description	Biobased polylactide thermoplastic matrix with proprietary impact-modifying and processing additives.
Hazardous Components	No components are present at levels requiring classification or disclosure as hazardous ingredients under OSHA HCS or comparable GHS-based regulations, based on current formulation information.

SECTION 4 — FIRST-AID MEASURES

General Advice:
Show this SDS to the healthcare provider. Move affected person away from exposure. Keep at rest and warm.

Inhalation	Move person to fresh air. If dust or decomposition fumes are inhaled and symptoms (coughing, shortness of breath, irritation) occur, obtain medical attention.
Skin Contact	Remove contaminated clothing. Wash exposed skin with soap and water. For contact with molten polymer, do **not** attempt to remove solidified material from skin; cool with water and seek immediate medical attention.
Eye Contact	Rinse cautiously with water for several minutes, holding eyelids apart. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.
Ingestion	Rinse mouth and drink water. Do not induce vomiting. Seek medical advice if large quantities are ingested or if symptoms occur.

Most Important Symptoms/Effects:
Mechanical irritation of eyes or skin; discomfort from dust inhalation; thermal burns from molten polymer.

Indication of Immediate Medical Attention:
Immediate medical care is recommended for significant burns, eye injuries, or respiratory distress.

SECTION 5 — FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:
Water spray, dry chemical, foam, or carbon dioxide. Use water spray to cool exposed containers and surrounding materials.

Specific Hazards Arising from the Chemical:
- Combustible solid; may burn if involved in fire.
- Thermal decomposition can produce carbon monoxide, carbon dioxide, and organic fumes.
- Fumes and smoke may be irritating.

Advice for Firefighters:
- Wear self-contained breathing apparatus and full protective clothing.
- Avoid breathing decomposition products; fight fire from upwind.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal Precautions:
- Avoid creating or inhaling dust.
- Spilled pellets can be very slippery; mark and control the affected area.
- Use suitable protective equipment (see Section 8).

Environmental Precautions:
- Prevent pellets and fines from entering drains, waterways, or soil where they may persist as microplastics.

Methods for Containment and Cleanup:
- Sweep, vacuum, or mechanically collect pellets and dust into suitable containers for reuse or disposal.
- Avoid high-speed sweeping that may generate dust; use industrial vacuum where possible.

SECTION 7 — HANDLING AND STORAGE

Handling:
- Handle bags and pellets to minimize dust generation and pellet loss.
- Use with adequate ventilation near dryers, extruders, and molding equipment.
- Avoid breathing fumes from overheating or decomposition.
- Use good industrial hygiene practices; wash hands after handling.
- Clean up spills promptly to prevent slips and environmental release.

Storage:
- Store in a cool, dry, well-ventilated area away from direct sunlight and sources of heat.
- Keep bags closed when not in use to minimize contamination and moisture uptake.
- Protect from temperatures above recommended drying/processing conditions for extended periods.

Specific End Use(s):
Biobased thermoplastic resin for extrusion, injection molding, and compounding; follow processing guidance in the product Technical Data Sheet.

SECTION 8 — EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters:
No specific occupational exposure limits are established for this polymer. Apply general particulate (nuisance dust) limits where applicable.

Engineering Controls:

- Provide local exhaust ventilation at points where dust or fumes may be generated.
- Enclose or isolate processing operations where feasible.
- Provide eyewash and safety shower in areas where molten polymer is handled.

Personal Protective Equipment (PPE):

- *Eye/Face Protection:* Safety glasses with side shields; chemical splash goggles or a face shield if handling molten material or if dust may enter eyes.
- *Skin Protection:* Work gloves and suitable protective clothing to avoid repeated skin contact; heat-resistant gloves for hot material.
- *Respiratory Protection:* Normally not required for solid pellets under adequate ventilation. If dust or fumes may be generated and ventilation is insufficient, use an approved particulate/organic vapor respirator.
- *Hygiene Measures:* Remove contaminated clothing and wash before reuse. Wash hands and exposed skin after handling and before eating, drinking, or smoking.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light-colored pellets
Odor	Mild, slightly polymeric
Odor Threshold	Not determined
pH	Not applicable (non-aqueous solid)
Glass Transition Temperature	Approx. 55–65 °C (softening range)
Melting Range	Approx. 150–180 °C (typical PLA alloy range)
Boiling Point	Not applicable (decomposes before boiling)
Flash Point	Not determined (solid polymer; will burn if involved in fire)
Flammability	Combustible solid; can burn in a fire situation
Vapor Pressure	Negligible at ambient temperature
Relative Density	Approx. 1.1–1.3 (polymeric solid)
Solubility	Insoluble in water; soluble in some organic solvents
Partition Coefficient (n-octanol/water)	Not determined (high-molecular-weight polymer)
Auto-ignition Temperature	Not determined
Decomposition Temperature	Above recommended processing temperatures; thermal decomposition may occur if overheated
Viscosity	Not applicable (solid pellets)
Explosive Properties	Not explosive as supplied; dust may form explosive mixtures with air.

SECTION 10 — STABILITY AND REACTIVITY

Reactivity:
No specific reactivity hazards expected under normal conditions of storage and use.

Chemical Stability:
Stable at ambient temperatures under recommended storage conditions. Thermal decomposition may occur at elevated temperatures.

Possibility of Hazardous Reactions:
Hazardous reactions are not expected under normal conditions. Dust may form explosive mixtures in air when dispersed and ignited.

Conditions to Avoid:
Excessive heat, open flames, hot surfaces, and generation of excessive dust.

Incompatible Materials:
Strong oxidizing agents; very strong acids or bases may affect the polymer under elevated temperatures.

Hazardous Decomposition Products:
Carbon monoxide, carbon dioxide, and other organic decomposition products if burned or overheated.

SECTION 11 — TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:
Skin and eye contact with pellets or dust; inhalation of dust or fumes from overheated material; ingestion (accidental).

Acute Effects:

- *Skin:* Prolonged or repeated contact may cause mechanical irritation or dryness. Hot material can cause severe thermal burns.
- *Eyes:* Dust or pellets may cause mechanical irritation, redness, or discomfort.
- *Inhalation:* High concentrations of dust or thermal decomposition fumes may cause respiratory irritation.
- *Ingestion:* Low acute toxicity is expected; large amounts may cause gastrointestinal discomfort.

Chronic Effects:
No significant chronic toxicity is expected for high-molecular-weight polymer pellets in normal use. Repeated excessive exposure to dust may cause chronic respiratory irritation.

Sensitization:
Not expected to cause skin or respiratory sensitization based on available information for PLA-type polymers.

Carcinogenicity / Mutagenicity / Reproductive Toxicity:
No components are known to be listed as carcinogenic (IARC, NTP, OSHA) at typical concentrations. The finished polymer is not expected to present mutagenic or reproductive hazards under normal use.

STOT (Single/Repeated Exposure):
High levels of dust or decomposition fumes may cause transient respiratory tract irritation.

SECTION 12 — ECOLOGICAL INFORMATION

Ecotoxicity:
No acute toxicity is expected for the solid polymer in pellet form. Pellets may pose a physical hazard to aquatic or terrestrial organisms if ingested.

Persistence and Degradability:
Polylactide polymers are designed to be biodegradable under specific industrial composting or controlled conditions, but may persist for extended periods in soil or natural waters if released.

Bioaccumulative Potential:
Low bioavailability is expected due to high molecular weight and low solubility in water.

Mobility in Soil:
Pellets are not highly mobile; may accumulate in soils or sediments as solid particles.

Other Adverse Effects:
Avoid uncontrolled release to the environment to prevent accumulation of plastic particles.

SECTION 13 — DISPOSAL CONSIDERATIONS

Dispose of material in accordance with local, regional, and national regulations. Where feasible, recycle or recover material through appropriate plastic recycling or energy recovery processes. Do not discharge pellets into drains, surface waters, or soil.
Contaminated packaging should be emptied as far as possible and disposed of in the same way as the product.

SECTION 14 — TRANSPORT INFORMATION

UN Number	Not regulated as a dangerous good by DOT, IMDG, or IATA for the product as supplied.
Proper Shipping Name	Not applicable / Not regulated.
Transport Hazard Class	Not applicable.
Packing Group	Not applicable.
Environmental Hazards	Not classified as a marine pollutant; avoid uncontrolled release of pellets to the environment.

SECTION 15 — REGULATORY INFORMATION

This product is supplied as a polymeric article-like material. Based on available information for PLA resins and similar products, it is generally not classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200) or comparable GHS-based regulations when handled as recommended.
Polymer components are expected to be listed or exempt under major chemical inventories for plastic resins. Users are responsible for verifying regulatory status for their specific jurisdiction and application.

SECTION 16 — OTHER INFORMATION

Revision Date: 18th November 2025
Version: 1.0

This Safety Data Sheet is provided as a support document for SABER Flex-1101 in typical industrial applications. The information reflects SABER Chemical's best knowledge at the time of preparation but may not be exhaustive. End users are responsible for ensuring safe handling, appropriate risk assessment, and compliance with applicable legislation in their specific processes and locations.

This Safety Data Sheet (SDS) is based on information believed to be reliable as of the revision date but does not constitute a warranty or specification. Users are responsible for ensuring suitability and compliance with applicable regulations for their specific use. SABER Flex-1101™ is a trademark of SABER Chemical.