SECTION 1: Identification

Product identifier	SE7B
Other means of identification	Estolide (biobased ester) Fatty acids, C8-18 and C18 unsaturated, reaction products with isomerized oleic acid homopolymer 2-ethylhexyl ester, hydrogenated. REACH registration number 01-2119996674-17-0000
Relevant identified uses of the substance or mixture and uses advised against	Biodegradable biobased ester; base oil. Uses advised against: not available.
Details of the supplier of the safety data sheet	Biosynthetic Technologies, LLC 2 Park Plaza, Suite 200, Irvine, CA 92614 +1 (949) 390-5910
Emergency Telephone Number	+1 (949) 390-5915 (US business hours).
Emergency Email Address	jakeb@biosynthetic.com

SECTION 2: Hazard Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008; UN GHS; US OSHA; HCS2012; WHMIS 2015; Australian WHS Regulations	This product does not meet the criteria for classification in any hazard class.

Label elements:

Pictogram	None.
Signal word	None.
Hazard statements	None.
Precautionary statements	None.
Supplemental information	Not available.

Other hazards: Not available.

SECTION 3: Composition

Substances:

Declarable components	*Conc. (wt%)*	*EC No.*	*CAS No.*

Other components			
Estolide (biobased ester)	>95	NA	1365345-64-7

[a] NA: not available.

SECTION 4: First Aid Measures

Description of first aid measures:

Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms, call a doctor.
Skin	Wash off well with soap and water. If skin irritation or rash occurs, get medical attention. Launder clothing before re-use.
Eye	Rinse cautiously with room-temperature water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.
Ingestion	Rinse mouth with water, and give milk or water to drink. Call a poison center or doctor if you feel unwell. Do not induce vomiting, unless instructed by medical personnel.
Most important symptoms and effects, both acute and delayed	Not available.
Indication of any immediate medical attention and special treatment needed	Treat symptoms as they occur.

SECTION 5: Fire and Explosion Data

Extinguishing media:

Suitable	Small fire: carbon dioxide, dry chemical powder, water spray, or foam. Large fire: water spray, foam.
Unsuitable	Water jet is not recommended. Water spray may cause spattering of liquid and spreading of fire.
Special hazards arising from the substance or mixture	Not classified as flammable, but is a combustible liquid, which will burn during a fire to produce strong heat, black smoke, and harmful gases.
Advice for firefighters	Remove containers from fire or cool them with water spray. Firefighters should wear an approved self-contained breathing apparatus and full protective clothing.

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	For large spills, wear full personal protection. Keep unauthorized personnel from the spillage area. The product is greasy and will cause slip hazard. Ventilate area. Extinguish sources of ignition. Follow prescribed procedures for responding to large spills and reporting to authorities.
Environmental precautions	Prevent product from entering water courses or drainage system.

Methods and material for containment and cleaning up	Stop the source of leak or release. Clean up spill as soon as possible. For small quantities, wipe off with cloth or paper. For large quantities, recover by using techniques such as pumping, or absorption with an inert material such as dry sand. Wash contaminated surfaces with water and detergent, or solvent, to remove oily film, and collect waste, washings, and contaminated materials for safe disposal. Place waste in a container for disposal.
Reference to other sections	For recommended personal protective equipment, see Section 8. For disposal considerations, see Section 13.

SECTION 7: Handling and Storage

Precautions for safe handling	Avoid skin and eye contact. Use protective measures described in Section 8. Use only in a well-ventilated area. Wash hands after use. Keep away from sources of ignition.
Conditions for safe storage, including any incompatibilities	Store containers in a cool, dry, well ventilated place away from direct sunlight and sources of ignition.
Specific end use(s)	Not available.

SECTION 8: Exposure Controls/Personal Protection

Control parameters:

EU, UK, US, Canadian, and Australian limit values	None
Monitoring procedure	BS EN 14042:2003; Workplace Atmospheres; Guide for the Application and Use of Procedures for the Assessment of Exposure to Chemical and Biological Agents, or specific national equivalent.
Other: human health (DNELs, DMELs, PELs, TLVs)	Not available.
Other: environmental (PNEC)	Not available.

Exposure controls:

Engineering controls	Good general ventilation is recommended for handling the product. For processing, where mist or vapor might be formed, local exhaust ventilation or use in a closed system is recommended.
Personal protective equipment	The need for personal protective equipment should be based on a workplace risk assessment for the particular use. Avoid skin and eye contact by wearing chemical resistant gloves (neoprene, latex, or rubber are recommended) and eye protection. Where more extensive contact may occur, wear protective clothing (e.g. apron, overalls).

	If exposure to vapors or spray is possible, wear respiratory protection. PPE should be to national standards. Consult manufacturers concerning breakthrough times.
Environmental exposure controls	Not available.

SECTION 9: Physical and Chemical Properties

Appearance		Pale yellow liquid
Odor		Slight to none
Odor threshold		Not available
pH		6 to 8
Melting/freezing point	ASTM D97	< -10°C
Initial boiling point/range		Not available
Flash point	ASTM D93	>200 °C
Evaporation rate		Not available
Flammability (solid, gas)		Not available
Flamm. or expl. limits		Not available
Vapor pressure		13.7 Pa at 20 °C
Vapor density		Not available
Relative density		0.89
Solubilities		Water: negligible
Partition coeff. (log K_{ow})	OECD 117	>7.11
Auto-ignition temp.	ASTM E659	>377 °C
Decomposition temp.		Not available
Viscosity		26- 36 cSt at 40 °C 5-8 cSt at 100 °C Viscosity index ≥160
Explosive properties		Not available
Oxidizing properties		Not available
Volatiles (%):		Negligible

SECTION 10: Stability and Reactivity Data

Reactivity	Not know to have hazardous reactivity
Chemical stability	Stable under ambient conditions.
Possibility of hazardous reactions	No hazardous polymerization.

Conditions to avoid	High temperatures, sources of ignition, and strong sunlight.
Incompatible materials	Strong acids, alkalis, or oxidizing agents.
Hazardous decomposition products	No known hazardous decomposition products

SECTION 11: Toxicological Information

Acute toxicity	Based on available data, the classification criteria are not met. LD_{50} (oral; Method OECD 423), >2000 mg/kg; LD_{50} (dermal; Method OECD 402), >2000 mg/kg.
Skin corrosion/irritation	Based on available data, the classification criteria are not met. 98.8% viability @ 60 min (Corrosion, Method OECD 431)
Serious eye damage/irritation	Not classified as inducing serious eye damage (bovine corneal, Method OECD 437) IVIS = 1.34
Respiratory or skin sensitization	Respiratory sensitization: not classified due to lack of data. Skin sensitization: no Indication of allergic contact sensitization (human repeat-insult patch test, HRIPT).
Germ cell mutagenicity	Based on available data, the classification criteria are not met. No mutations induced at 5 µL (Method OECD 437) No Mutations induced at 5 µL (Method OECD 476)
Carcinogenicity	Not classified due to lack of data.
Reproductive toxicity	Not classified due to lack of data.
STOT-single exposure	Not classified due to lack of data.
STOT-repeated exposure	Not classified due to lack of data.
Aspiration hazard	Based on available data, the classification criteria are not met. LC50 (inhalation; Method OECD 436), > 5.07 mg/L air

SECTION 12: Ecological Information

Toxicity	Based on available data, the classification criteria are not met. LL_{50} (fish, Method OECD 203), >1000 mg/L; EC_{50} (Daphnia magna, Method OECD 202), >10 000 mg/L; EL_{50} (algae, Method OECD 201), >5000 mg/L.
Persistence and degradability	Rapidly biodegradable, 89.5% after 28 days. Hazardous short term degradation products are not likely. The product and its degradation products are not classified for aquatic toxicity.
Bioaccumulative potential	Not bioaccumulative.
Mobility in soil	Not available.
Results of PBT and vPvB assessment	Not available.
Other adverse effects	Not available.

SECTION 13: Disposal Considerations

Waste treatment methods	Incineration or landfill may be suitable for this product. Disposal via the drains is not recommended. Disposal must be in accordance with current national and local regulations. Chemical residues generally count as special waste. General EU requirements are given in Directive 2008/98/EC. Check legislation for requirements in your region.

SECTION 14: Transportation Information

Harmonized Tariff Code	3824.90.4140; Fatty substances of animal or vegetable origin and mixtures thereof; mixtures of fatty acid esters
UN Number	Not classified as dangerous goods for transport. Not regulated by IATA, DOT, or IMDG.
UN proper shipping name	Not applicable. Not regulated by IATA, DOT, or IMDG.
Transport hazard class(es)	Not applicable. Not regulated by IATA, DOT, or IMDG.
Packing group	Not applicable. Not regulated by IATA, DOT, or IMDG.
Environmental hazards	Not classified as marine pollutant/environmentally hazardous.
Special precautions for user	Not available.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

SECTION 15: Other Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture	*UK*: Workplace Exposure Limits EH40/2005, with 2007 supplement, Health and Safety Executive; Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended. *EU*: This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No. 1272/2008. *US*: TSCA 8(b) inventory: Fatty acids, C8-18 and C18 unsaturated, reaction products with isomerized oleic acid homopolymer 2-ethylhexyl ester, hydrogenated. Not hazardous according to the OSHA Hazard Communication Standard 2012. *Canada*: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by those Regulations. WHMIS and WHMIS 2015: product does not meet the criteria for classification. *Australia*: Classification according to: Preparation of Safety Data Sheets for Hazardous Chemicals Code Of Practice; Safe Work Australia; December 2011; product does not meet the criteria for classification.
Chemical safety assessment	Not available.

SECTION 16: Other Information

Revisions	This SDS is the second version in EU format up to date as of the latest version of Annex II (Annex of Regulation Eu 2015/830), incorporating information for various world regions, using classification according to the UN GHS Regulation. Changes from last version include adding Reach Registration number, listing US OSHA under hazard classification regulations, adding relevant test methods to section 9, and adding OECD 436 to section10.
Abbreviations	DNEL, derived no-effect level; DMEL, derived minimum effect level; EC, effect concentration; EL, effect level; LC, lethal concentration; LD, lethal dose; LL, lethal loading; PBT, persistent, bioaccumulative, and toxic; STOT, specific target organ toxicity; vPvB, very persistent, very bioaccumulative.
References	Information on Registered Substances; Chemical Substance Search; European Chemicals Agency (ECHA), available at the ECHA website: http://echa.europa.eu. Supplier safety data sheet.
Basis of classification	The mixture is self-classified on the basis of available information.
List of R-phrases	None.
List of hazard statements	None.

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