Material Safety Data Sheet

innoregen

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product code : IR-201
Trade name : PolyInks®-PCL
Chemical family : Caprolactone-containing polymer

1.2 Application of the substance/the mixture

Identified uses : For Research Use Only.
Not intended for use in human diagnostic or therapeutic procedures.

1.3 Details of the supplier

Company : InnoRegen, Inc.,
604,88 Dongnae-Ro, Dong-Gu, Daegu
Republic of Korea,

Telephone : +82-53-745-5447
Fax : +82-53-311-5447
E-mail address : info@innoregen.com

1.4 Emergency telephone number

Emergency Phone # : +82 53-745-5447

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

The product is not classified as hazardous according to the Globally Harmonized System (GHS).

2.2 Label elements

None required

2.3 Other hazards– Direct contact may cause reversible skin, eye, or mucous membrane irritation.

2.4 US Signal word– None required

2.5 US Hazard overview– Product not considered to be hazardous under US OSHA hazard communication.

SECTION 3: Composition/information on ingredients

Ingredient	CAS#	EINECS/ELINCS#	Amount
Poly(ε-caprolactone), PCL	N/A	N/A	~100%

SECTION 4: First aid measures

4.1 Description of first aid measures

In case of skin contact
Rinse cautiously with water for several minutes. Immediate medical attention is not required.

In case of eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

If inhaled
Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.

If swallowed
Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed

N/A

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No information identified.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas.

6.2 Environmental precautions

Do not empty into drains. Avoid release to the environment.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Keep in a dry place.

7.3 Specific end uses

N/A

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2 Engineering measures

Ensure adequate ventilation, especially in confined areas.

8.3 Personal protective equipment

Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

Eye protection	Wear safety glasses with side shields (or goggles).
Hand protection	Impervious gloves
Skin and Body Protection	Lightweight protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice

8.4 Environmental exposure controls

No special environmental precautions required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: Granules or filaments Color: White
b) Odor	No information identified
c) Odor Threshold	No information identified
d) pH	No information identified
e) Melting point/freezing point	No information identified
f) Initial boiling point and boiling range	No information identified
g) Flash point	No information identified
h) Evaporation rate	No information identified
i) Flammability (solid, gas)	No information identified
j) Upper/lower flammability or explosive limits	No information identified
k) Vapor pressure	No information identified
l) Vapor density	No information identified
m) Relative density	No information identified
n) Water solubility	No information identified
o) Partition coefficient: n-octanol/water	No information identified
p) Autoignition temperature	No information identified
q) Decomposition temperature	No information identified
r) Viscosity	No information identified
s) Explosive properties	No information identified
t) Oxidizing properties	No information identified

9.2 Other safety information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No relevant information available.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
No dangerous reactions known.

10.4 Conditions to avoid
Exposure to high temperature may affect product quality.

10.5 Incompatible materials
No further relevant information available.

10.6 Hazardous decomposition products
No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	No information identified
Skin corrosion/irritation	No information identified
Serious eye damage/eye irritation	No information identified
Respiratory or skin sensitization	No information identified
Germ cell mutagenicity	No information identified
Carcinogenicity	No information identified
Reproductive toxicity	No information identified
Specific target organ toxicity - single exposure	No information identified
Specific target organ toxicity - repeated exposure	No information identified
Aspiration hazard	No information identified

11.2 Principle routes of exposure Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

SECTION 12: Ecological information

12.1 Ecotoxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

12.2 Persistence and degradability

No information identified

12.3 Bioaccumulative potential

Not known

12.4 Mobility in soil

No relevant information available.

12.5 Results of PBT and vPvB assessment

N/A

12.6 Other adverse effects

No relevant information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

13.2 Uncleaned packagings

Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14: Transport information

IATA

Proper Shipping Name	No dangerous good in sense of these transport regulations
Hazard Class	None
Subsidiary class	None
Packing group	None
UN-No	None
Environmental hazards	None

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

N/A

15.2 Chemical Safety Assessment

N/A

SECTION 16: Other Information

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all-inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein.

The information in this MSDS does not constitute a warranty, expressed or implied, including any implied warranty of merchantability or fitness for any particular purpose.

Department issuing DSDS:
InnoRegen, Inc.

Date of preparation / last revision: Nov 24th 2016 / Sep 23th 2020

Abbreviations and acronyms:
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
ELINCS - European List of Notified Chemical Substances

OSHA - Occupational Safety and Health Administration
IATA: International Air Transport Association
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative