SAFETY DATA SHEET

According to Regulation (EC) No.1907/2006

KEXCELLED PLA K5Silk

Product code:	Revision Number：	Revision date:	MSDS No.:
PLA K5Silk	03	03/08/2021	KS005

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product name: kexcelled 3D printing filament

Product code: PLA K5Silk

Product Use: A filament to be used in 3D printing applications.

Supplier: NorthBridge New Material Technology(Suzhou) Co.,Ltd

Address: Building# B2, Chaoyang Industrial square, Caohu Industrial Park, Xiangcheng District, Suzhou. CN.

Responsible/issuing person: wilson@northbridge3d.com

Emergency telephone numbers: +86-(0512)-65801831

2. HAZARDS IDENTIFICATION

Health Effects: Prolonged and /or repeated contacts: Risk of skin sensitization.When handled at high temperatures, can cause serious burns.

Potential Health Effects: Eye contact: Contact with eyes may cause irritation.

Skin contact: Substance may cause an allergic skin irritation.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Inhalation: Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Low hazard for usual industrial or commercial handling.

Target organ effects: There were no target organ effects noted following ingestion or dermal exposure in animal studies.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name: Polylactic resin

CAS Number: 9051-89-2

Weight: >94%

OSHA Exposure Limits: None

ACGIH Exposure Limits: None

All ingredients in quantities > 1.0% (0.1% for carcinogens) that are potentially hazardous per OSHA definitions.

Other standards: This material can generate Particulates Not Otherwise Classifiable (PNOC).

The Occupational Safety and Health Administration (OSHA) PEL/TWA for PNOC is 15 mg/m3 for total dust and 5 mg/m3 for the respirable fraction. The American Conference of Governmental Industrial Hygienists (ACGIH) TLV/TWA for PNOC is 10 mg/m3 for inhalable particulates and 3 mg/m3 for respirable particulates.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Call a physician immediately.

Skin contact: Rinse immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Cool skin rapidly with cold water after contact with hot polymer.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Ingestion: Drink water as a precaution. Never give anything by mouth to an unconscious person. Do not induce vomiting without

medical advice. Call a physician immediately.

Notes to physician: Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable properties: Autoignition temperature: 388℃

Suitable extinguishing media : Foam. Water. Carbon dioxide (CO2). Dry chemical. Alcoholresistant foams are preferred if available. General-purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively.

Hazardous decomposition: Burning produces obnoxious and toxic fumes Aldehydes products Carbon monoxide (CO) carbon dioxide (CO2).

Special protective equipment: As in any fire, wear self-contained breathing apparatus for fire fighters pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Under fire conditions: Cool containers / tanks with spray water. Water mist may be used to cool closed containers.

Other information： Fine dust dispersed in air may ignite. Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. See Section 8. Remove all sources of ignition. Avoid dust formation. Avoid contact

with skin and eyes. Sweep up to prevent slipping hazard.

Environmental precautions： Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

Methods for cleaning up： Shovel into suitable container for disposal.

7. HANDLING AND STORAGE

Safe handling advice: Avoid contact with skin and eyes. Workers should be protected from the possibility of contact with molten material during fabrication. Low hazard for usual industrial or commercial handling. Use personal protective equipment.

Storage conditions: Store in cool place. Keep at temperatures below 50°C(122F). No special restrictions on storage with other products.

Precautions: No special precautions required.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye/face protection: Wear safety glasses for general purpose.

Hand protection: Wear gloves (product handled in molten state).

Skin and body protection: Wear protective clothing (product handled in molten state).

Respiratory protection: In case of dust formation, wear a dust mask.
In case of insufficient ventilation, wear suitable respiratory equipment.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance:	opaque, filaments. Solid at room temperature.
Color:	Opaque.
Odour:	Sweet.
pH:	Not applicable.
Vapor pressure:	Not determined.
Vapor density:	Not determined.
Evaporation rate:	Not determined.
Density:	>1.20g/cm3
Boilingpoint/range:	Not applicable. Decomposition temperature: 280 °C (536F). Melting point/range:155 – 185 °C.
Water solubility:	Insoluble.
Solubility in other solvents:	Noneknown.

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions. Conditions to avoid:Temperatures above 230°C (446F).
Materials to avoid:	Oxidizing agents. Strong bases.
Decomposition:	Burning produces obnoxious and toxic fumes. Aldehydes. Carbon monoxide (CO). Carbon dioxide (CO2).
Polymerization:	Not applicable.

11. TOXICOLOGICAL INFORMATION

See section 3 for potential health effects. For detailed toxicological data, write or call the address or emergency number shown in section 1.

12. ECOLOGICAL INFORMATION

Mobility: No data available

Bioaccumulation: Does not bioaccumulate. Inherently biodegradable

13. DISPOSAL CONSIDERATIONS

Controlled incineration or landfill according to local, state or national laws and regulations concerning health and pollution.

14. TRANSPORT INFORMATION

IMDG: Not regulated.

ICAO/ IATA： Not regulated

15. REGULATORY INFORMATION

(Not meant to be all inclusive—selected regulations represented).

NOTICE: The information herein is presented in good faith and believed to be accurate as of the print date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

WEEE/ROHS DIRECTIVE: CONFORMS

INVENTORIES: EINECS (EU): Conforms

TSCA (USA): Conforms

DSL (Canada): Conforms

AICS (Australia): Conforms

ECL (Korea): Conforms

16. OTHER INFORMATION

The information in this Material Safety Data Sheet (MSDS) is based on current knowledge and experience. No liability can be assumed for the accuracy and completeness of this information.