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MATERIAL SAFETY DATA SHEET

Prepared according to the EEC-Regulation 91/155/EEC Issue date: 13/04/2021

Product name: myMATRIX iPSC
Product IDs: C0105, C0505

SECTION 1: PRODUCT IDENTIFICATION

Extracellular matrix mimetic material was coated in each well of the different well plate formats or inside the cell culture flasks of different format. The product would enable the researcher to culture mesenchymal stromal cells. The products have a clear bottom made of poly(styrene) (PS) to enable high quality microscopic evaluation.

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients: The product is prepared by coating the mimetic material, which is an optimized mixture of a polysaccharide and a peptide-poly(ethylene glycol) (PEG) conjugate, in cell culture ware made of PS. The composition is listed below:

1. Cell culture well plates are made of PS and have a lid with condensation rings. Cell culture flasks are made of PS and have a filter cap. All products are sterile manufactured.

2. The polysaccharide is:

   Dextran sulfate CAS No.: 9011-18-1

3. The peptide-PEG conjugate contains a peptide sequence and conjugated to PEG:

   PEG CAS No.: 25322-68-3

The average molecular weight of the peptide-PEG conjugates is ~ 23,000 Da.

Chemical Structure:

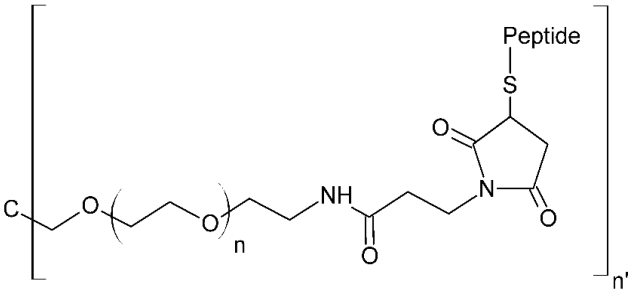

Figure 1. Chemical structure of peptide-PEG conjugate.

HAZARDOUS: Contains no substance classified as hazardous in concentrations, which should be taken into account according to Regulation (EC) No 1272/2008 directives.

SECTION 3: HAZARDS IDENTIFICATION

This product does not present any particular risk, provided it is handled in accordance with good safety practice. As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substances. In the case of accidental exposure, ensure prompt removal from skin, eyes and clothing.

SECTION 4: FIRST AID MEASURES

ROUTE OF EXPOSURE

Inhalation	: Not anticipated under recommended usage conditions. After inhalation of decomposed products, remove the affected person to a source of fresh air and keep calm. Provide medical aid.
Ingestion	: Not anticipated under recommended usage conditions.
Skin contact	: Not anticipated under recommended usage conditions. Areas affected by molten material should be quickly placed under cold running water
Eye contact	: Not anticipated under recommended usage conditions. In case of contact with decomposed products, flush eyes with plenty of water. Get medical advice if irritation develops.

Note to physician: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: FIRE FIGHTING MEASURES

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Nature of decomposition products are not known.

Suitable extinguishing media:	Water, dry extinguishing media, foam
Specific hazards:	Principal toxicant in the smoke is carbon dioxide, carbon monoxide.
Special protective equipment:	For firefighters: wear suitable breathing equipment, in case of risk of exposure to vapor or fumes.
Further information:	Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Suck or sweep up any spills from liquids added to the test plates. All spilled material must be removed immediately to prevent slipping accidents. Dispose waste in accordance with local or national

regulations. Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment.

Solid Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

Liquid Spills: Absorb with vermiculite, dry sand, earth or similar material and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer.

SECTION 7: HANDLING AND STORAGE

Protect against moisture. Protect against physical damage. Do not freeze either. Do not autoclave. To prevent fire related hazards protect the product from heat and fire. Keep the product unopened, sealed away from light for long time storage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Observe the appropriate Maximum Concentrations at the Workplace – MAK value and the Technical Rules for Hazardous Substances TRGS 900. Wear appropriate personal protective equipment and safety glasses for eye protection.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Form	: Cell culture plates and flasks, clear bottom, with lid or cap
Coating Color	: Colorless, clear to slightly structured
Odor	: Faint
Softening temperature	: > 60 °C (DIN/EN/ISO 306:2013)
Ignition temperature	: > 400 °C

SECTION 10: STABILITY AND REACTIVITY

The product is prepared using a stable thermoplastic, with no chemical reactivity.

Stability:	Stable under ordinary conditions of use and storage. Thermal decomposition may occur above 60 °C. In order to avoid thermal decomposition, do not heat.
Hazardous decomposition products:	Carbon dioxide and carbon monoxide may form when heated due to decomposition.
Hazardous polymerization:	not tested
Incompatibilities:	Incompatible with polymerization catalysts (peroxides, persulfates) and accelerators, strong oxidizers, strong bases and strong acids.

Conditions to avoid : Incompatibles and heat

SECTION 11: TOXICOLOGICAL INFORMATION

For this product a chemical safety assessment was not carried out. However, the product is not classified as dangerous preparation according to Directive 1999/45/EC. The toxicity of the individual components used for the coating are described in the following text. The oral rat LD50 poly(ethylene glycol) used in the coating is 31.6 g/kg. The oral rat LD50 of dextran sulfate used in the coating is 20.6 mg/kg (comments: acute toxicity, behavior – somnolence, ataxia and diarrhea).

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, if used as intended.

SECTION 12: ECOLOGICAL INFORMATION

Environmental fate: No information
Environmental toxicity: No information

SECTION 13: DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. Do not discharge the product or any contents into the environment. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14: TRANSPORT INFORMATION

No restrictions for transport (ADR/RID, IMDG or ICAO/ATA)

SECTION 15: REGULATORY INFORMATION

Not classified under the Annex I, Directive 67/548/EEC as dangerous substances
Not classified under the Directive 1999/45/EC as dangerous preparations.
Contains no REACH substances with Annex XVII restrictions.
Contains no substances on the REACH candidate list.
Contains no REACH Annex XIV substances.

SECTION 16: OTHER INFORMATION

The product is intended for research purposes only as a laboratory consumable for cell culture. The information contained herein is based on the present state of our knowledge and does not therefore guarantee certain properties. The information contained herein is provided in good faith and is as accurate as possible, but makes no representation as to its comprehensiveness or accuracy. However, neither denovoMATRIX GmbH, nor any other supplier of the products assumes any liability what so

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This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Recipients of our product must take responsibility for observing existing laws and regulations. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that this is the entire list of possible endangering that might arise. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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