

1. Chemical product and company identification

Substance name : Membrane for exosome purification
 SDS Reference Number : 2543F

Recommended use of the chemical and restrictions on use

Recommended use : Separation and purification of biological samples containing extracellular vesicles
 Restrictions on use : Seek expert judgment if the intended use is different from the recommended use

Company information

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2. Hazards identification

GHS classification

Physical hazards	Explosives	classification not possible	
	Flammable gases	No classification	
	Aerosol	classification not possible	
	Oxidizing gases	No classification	
	Gases under pressure	No classification	
	Flammable liquids	No classification	
	Flammable solids	No classification	
	Self-reactive substances and mixtures	classification not possible	
	Pyrophoric liquids	No classification	
	Pyrophoric solids	No classification	
	Self-heating substances and mixtures	classification not possible	
	Substances and mixtures which in contact with water emit flammable gases	classification not possible	
	Oxidizing liquids	No classification	
	Oxidizing solids	No classification	
	Organic peroxides	classification not possible	
	Corrosive to metals	classification not possible	
	Desensitized explosives	classification not possible	
	Health hazards	Acute toxicity (oral)	classification not possible
		Acute toxicity (dermal)	classification not possible
		Acute toxicity (inhalation:gas)	No classification
Acute toxicity (inhalation:vapours)		No classification	
Acute toxicity (inhalation:dust/mist)		No classification	
Skin corrosion/irritation		classification not possible	
Serious eye damage/eye irritation		classification not possible	
Respiratory sensitization		classification not possible	
Skin sensitization		classification not possible	
Germ cell mutagenicity		classification not possible	
Carcinogenicity		classification not possible	
Reproductive toxicity	classification not possible		
Specific target organ toxicity (single exposure)	classification not possible		
Specific target organ toxicity (repeated exposure)	classification not possible		
Aspiration hazard	classification not possible		

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Environmental hazards Hazardous to the aquatic environment, short-term (acute) No classification
Hazardous to the aquatic environment, long-term (chronic) No classification
Hazardous to the ozone layer classification not possible

3. Composition/information on ingredients

Distinction of substance or mixture : Article

Name	Concentration (%)	Reference number in the gazette list		CAS-No.
		CSCL No.	ISHL No.	
1,2,3-Propanetriol	25 - 45	(2)-242	Existing Chemical Substance	56-81-5
Amine-modified cellulose	55 - 75	-	-	-

4. First aid measures

First aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.
Self protection of the first-aiders : First aid workers will be equipped with suitable personal protective equipment.

Most Important Symptoms/Effects

Symptoms/effects after inhalation : None under normal conditions.
Dust of the product, if present, may cause respiratory irritation after excessive inhalation exposure.
Symptoms/effects after skin contact : None under normal conditions.
Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact : None under normal conditions.
Dust from this product may cause eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

Notes to physician

Other medical advice or treatment : Treat symptomatically.

5. Fire fighting measures

Suitable extinguishing media : Water spray, Dry powder, Foam
Unsuitable extinguishing media : Do not use a heavy water stream
Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released

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- Firefighting instructions : Fight fire from safe distance and protected location.
Do not enter fire area without proper protective equipment, including respiratory protection.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment.
Self-contained breathing apparatus.
Complete protective clothing.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

- General measures : Notify authorities if product enters sewers or public waters.
Absorb spillage to prevent material damage.

For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment.
- Emergency procedures : Ventilate spillage area.

For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment.
For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel.

Environmental precautions

- Environmental precautions : Avoid release to the environment.

Methods and Equipment for Containment and Cleaning up

- For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.
- Methods for cleaning up : Mechanically recover the product.

7. Handling and storage

Handling

- Technical measures : No data available
- Precautions for safe handling : Ensure good ventilation of the work station.
Wear personal protective equipment.
- Prevents handling of incompatible substances or mixtures : No data available
- Hygiene measures : Do not eat, drink or smoke when using this product.
Always wash hands after handling the product.

Storage

- Storage conditions : Store at a refrigerator.
- Material used in packaging/containers : No data available
- Packaging materials : Always store product in container of same material as original container.

8. Exposure controls / Personal protection equipment

- Appropriate engineering controls : Ensure good ventilation of the work station.
- ### Protective equipment
- Personal protective equipment : Wear recommended personal protective equipment
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment
- Hand protection : Protective gloves
- Eye protection : Safety glasses

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Skin and body protection : Wear suitable protective clothing
Environmental exposure controls : Avoid release to the environment.

9. Physical and chemical properties

Physical state : Solid
Colour : white
Odour : odourless
pH : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability : No data available
Vapour pressure : No data available
Relative density : No data available
Density : No data available
Relative gas density : No data available
Solubility : No data available
Partition coefficient n-octanol/water (Log Pow) : No data available
Explosive limits (vol %) : No data available
Viscosity, kinematic : No data available
Particle characteristics : No data available

10. Stability and reactivity

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use.
Conditions to avoid : None under recommended storage and handling conditions (see section 7).
Incompatible materials : No data available
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Acute toxicity (oral) : classification not possible
Acute toxicity (dermal) : classification not possible
Acute toxicity (inhalation) : Not applicable (gas)
Not applicable (Vapour)
Not applicable (dust, mist)
Skin corrosion/irritation : classification not possible
Serious eye damage/irritation : classification not possible
Respiratory sensitization : classification not possible
Skin sensitization : classification not possible
Germ cell mutagenicity : classification not possible
Carcinogenicity : classification not possible
Reproductive toxicity : classification not possible
STOT-single exposure : classification not possible
STOT-repeated exposure : classification not possible

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Aspiration hazard : classification not possible

12. Ecological information

Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Persistence and degradability

Membrane for exosome purification	
Persistence and degradability	Not rapidly degradable
1,2,3-Propanetriol (56-81-5)	
Persistence and degradability	Not rapidly degradable
Amine-modified cellulose	
Persistence and degradability	Not rapidly degradable

Bioaccumulative potential

Membrane for exosome purification	
Bioaccumulative potential	No data available

Mobility in soil

Membrane for exosome purification	
Mobility in soil	No data available

Hazardous to the ozone layer

Hazardous to the ozone layer : classification not possible

13. Disposal considerations

Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Regional waste regulation : Disposal must be done according to official regulations.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

14. Transport information

In accordance with UN RTDG

International Regulations

United Nations Recommendations on the Transport of Dangerous Goods(UN RTDG)

UN-No. (UN RTDG) : Not applicable

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Proper Shipping Name (UN RTDG) : Not applicable
Packing group (UN RTDG) : Not applicable
Transport hazard class(es) (UN RTDG) : Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Regulations in Japan

Other information : If storage temperature is specified in Section 7, the same temperature conditions must be maintained during transportation.

15. Regulatory information

It is user's liabilities to take all necessary measures to meet local required laws and regulations

Other regulatory Information

Other information, restriction and prohibition : Follow all of the laws and regulations in your country.
regulations

16. Other information

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