

## Safety Data Sheet (SDS)

Preparation Date 2019/09/06

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## Section 1 – CHEMICALS AND COMPANY IDENTIFICATION

Chemical Identifier Arcofeliz PU-10  
 Product Code P12410-AA12024  
 Reference Number P1241011680-2  
 Company Name Nagase ChemteX Corporation  
 Address 236, Tatsunocho-nakai, Tatsuno, Hyogo, Japan  
 Company Contact Nagase ChemteX Corporation  
 Phone Number +81-791-63-9085  
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 Emergency Phone Number +81-791-62-0862

## Section 2 – HAZARDS IDENTIFICATION

GHS Classification

No classification standards applicable

## Section 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Distinction of Substance or Mixture Substance

Chemical Name or Generic Name	Concentration or Its Ranges	Formula	ENCS No./ISHL No.		CAS RN
			ENCS No.	ISHL No.	
Pullulan	> 94%	—	Not Registered	—	9057-02-7

Impurities and/or Stabilizing Additives which Contribute to the Classification

No information available

## Section 4 – FIRST AID MEASURES

Inhalation

If breathing is difficult, move affected person to the open air. Keep him or her at rest to allow easier breathing.

Skin Contact

Call a doctor if you feel unwell.  
 Call a doctor if you feel unwell.  
 Wash the skin with flowing water or shower.  
 If skin irritation or rash occurs, get medical advice and attention.

Eye Contact

When the ocular stimulation lasts, Seek medical treatment and advice.  
 Wash eyes carefully for several minutes with water. Take off contact lenses if easily removed, and continue to wash eyes afterwards.

Ingestion

Rinse a mouth. Don't make vomit by force.  
 Get medical treatment and advice.

## Section 5 – FIRE FIGHTING MEASURES

Extinguishing Media

Foam. Carbon dioxide. BCF (where regulations permit). Dry chemical powder. Dry sand.

Specific Fire Fighting

Move containers from fire area if you can do it without risk.  
 Cool containers with flooding quantities of water until well after fire is out.

Protection of Fire Fighter  
 Use extinguishing agent suitable for type of surrounding fire.  
 In fire fighting, wear respiratory protection and chemical protective clothing.

Section 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures  
 Do not touch or walk through spilled material.

Isolate the site as a leak area by providing a zone that has an appropriate width to all directions.  
 Keep unauthorized personnel away.  
 Stay upwind.  
 Wear appropriate personal protective equipment (Refer to "Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION") and avoid inhalation or contact with eyes and skin.  
 Keep out of low areas.  
 Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.  
 Do not release into the environment.

Environmental Precautions

Pay attention not to cause the influence on the environment by discharging into rivers.  
 All equipment used when handling the product must be grounded.

Methods and Equipment for Containment and Cleaning up

After removal, flush contaminated area thoroughly with water.  
 For small amount of spills, collect spillages into empty container which can be sealed after absorbing with waste cloth, dry sand, absorbent etc.  
 Large spills; prevent flowing out with a dike and collect it at a safe place.  
 Flush a floor fully. Neutralize rinsing water after rinsing, if needed.  
 Removes all ignition sources promptly. (Prohibition of smoking, sparks, and flames in the surrounding area).  
 Prevent flowing into drain, sewage, basement, and closed area.

Prevention Measures for Secondary Accidents

Section 7 – HANDLING AND STORAGE

Handling Technical Measures Provide ventilation system and use necessary personal protective equipment as described in "Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION".

Precautions for Safe Handling Prohibit use of heat, sparks, and fire in the surrounding area.  
 Wash hand thoroughly after handling.  
 Do not get in eyes, on skin or on clothing.  
 Do not breath mist, vapors, spray, dust or fume.  
 Do not swallow.

Storage Precautionary Statements	Prevents Handling of Incompatible Substances or Mixtures	Refer to "Section 10 – STABILITY AND REACTIVITY".
	Specific Hygiene Measures	Wash hand thoroughly after handling.
	Conditions for Safe Storage	Storage may be subjected to national, state, or local laws. Refer to "Section 10 – STABILITY AND REACTIVITY". Keep away from direct sunlight, high temperature and high humidity. Keep in a well-ventilated place. Keep container tightly closed. Keep in a cool place or at the designated storage temperature. Keep in a dark place. 《Specified storage temperature : below 10°C by refrigeration》
	Material Used in Packaging/Container	Follow all regulations in your country. Keep only in the original container.

**Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION**

Engineering Controls		Facilities storing or utilizing this product should be equipped with an eyewash facility and safety shower. Handle at the workplace in which the suitable ventilator was installed.
Personal Protective Equipment	Respiratory Protection	Wear an adequate protective apparatus for respiratory organs.
	Hand Protection	Wear protective gloves.
	Eye Protection	Wear eye protection. Goggles (ordinary glass type with side shields, and goggle type)
	Skin and Body Protection	Wear suitable protective clothing.  Use impervious protective clothing(e.g. apron, rubber boots etc.) if needed.

**Section 9 – PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	Form	solid (crude crushed)
	Colour	almost white
Odour		almost odorless
Odour threshold		no data available
pH		4.5–6.5(10w/v%dilution)
Melting Point/Freezing Point		no data available
Initial Boiling Point and Boiling Ranges		no data available
Flash Point		Not ignited
Evaporation Rate		no data available
Flammability (solid, gas)		no data available
Flammability or Explosive Limits	Lower Limit	no data available
	Upper Limit	no data available
Vapour Pressure		no data available
Vapour Density		no data available
Specific Gravity (Density)		no data available

Solubility	Easily soluble in water, and very slightly soluble in ethanol
Partition Coefficient : n-Octanol/Water	no data available
Auto-Ignition Temperature	no data available
Decomposition Temperature	no data available
Viscosity	no data available

**Section 10 – STABILITY AND REACTIVITY**

Chemical stability and Reactivity	The material is stable under storage and handling conditions comprised with the regulations.
Possibility of Hazardous Reaction	No data available
Conditions to Avoid	Water leak. High-temperature material. Spark. Naked flame.
Hazardous Decomposition Products	Carbon monoxide, harmful gas

**Section 11 – TOXICOLOGICAL INFORMATION**

Acute Toxicity	No information available
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**Section 12 – ECOLOGICAL INFORMATION**

Ecotoxicity	No information available
Persistence	Biodegradable
Hazardous to the ozone layer	No information available

**Section 13 – DISPOSAL CONSIDERATIONS**

Residual Waste	Incinerate in small portions with an incinerator or entrust to an industrial waste disposal company approved by the local authority. Discharge, treatment, or disposal may be subjected to national, state, or local laws. When destroying by fire, burn the waste in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated Container and Packaging	If possible, clean up and recycle. Or perform suitable processing in accordance with regulation. Remove residual contents completely before an empty container is discarded.

**Section 14 – TRANSPORT INFORMATION**

International Regulations	Regulatory Information by Sea	Not applicable
	Transport in bulk according to MARPOL 73/78, Annex II, and the IBC code	Not applicable
	Regulatory Information by Air	Not applicable
Specific Safety Measures		Check the container for any leaks and breakages. Load up carefully to prevent a fall, a overturning and a breakage. Carry out prevention to unpiling of cargo. Do not wet container. Do not handle roughly.

## Section 15 – REGULATORY INFORMATION

Follow all regulations in your country.

## Section 16 – OTHER INFORMATION

Information Contact

See “Section 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION”.

Literature References

- GHS LOGIST (MSDS Authoring Systems) / Japan Chemical Database Ltd.
- Chemical Risk Information Platform (CHRIP) / National Institute of Technology and Evaluation (NITE)
- Online SDS Information / Ministry of Health, Labour and Welfare (JAPAN)
- ezADVANCE / Japan Chemical Database Ltd.
- ChemWatch online ChemGold
- SDS information of raw materials

Other Property

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.

The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. And is not to be considered a warranty or quality specification.