PHACT

Revision Date: Nov. 12, 2025 Revision Number: 40

Safety Data Sheet
PHACT PHA resin

Section 1. Identification of the substance and the company/undertaking

1.1 Identification

Product name	: PHACT PHA resin
Trade name	: PHACT S1000P
CAS No.	: 125495-90-1

1.2 Product use

Product use	: Biopolymer (for industrial processing)

1.3 Supplier

Supplier	: CJ CHEILJEDANG CORPORATION 330, Dongho-ro, Jung-Gu, Seoul, Korea
Manufacturer	: PT. CHEILJEDANG INDONESIA Jl. Raya Arjosari Km. 9, Keeamatan Rejoso, Kabupaten Pasuruan, 67181 Jawa Timur, Indonesia
1.4 Emergency telephone number	: (HQ) +82-2-6740-3491 : (US Office) +1-617-909-2511

Section 2. Hazards identification

2.1 Classification of the substance or mixture

GHS classification	: Not considered hazardous according to OSHA.

2.2 GHS label elements

GHS labeling	: Not relevant as material in not a hazardous substance or mixture.

2.3 Other hazards

Other hazards	: No information available
2.4 Potential health effects	: No information available

Section 3. Composition/Information on ingredients

3.1 Substances

Substance type	Chemical name	CAS No.	Weight %
Polymers	Polyhydroxyalkanoate(P3HB4HB)	125495-90-1	≥ 98
Pellet may contain 0.5 to 2.0% mixture of fatty acid, protein and ash			

Section 4. Human Health and Environmental Hazard Statements

4.1 Hazard and precautionary statements

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes, lifting the upper and lower eyelids. Get medical aid.

Skin contact : Wash off with soap and water.

Ingestion : Get medical aid immediately. Do not induce vomiting without medical advice.

Inhalation : Heating the resin above 200 ° C (392 ° F) during the process may result in strong characteristic odor of PHA. But it does not make any toxic fumes. Remove the victim from exposure area to fresh air immediately. Give oxygen if breathing is difficult. Get medical aid. Give artificial respiration if not breathing.

4.2 Notes to physician : Treat symptomatically.

Section 5. Firefighting measure

5.1 Flammability

Flash point : 265 ℃ (509 ℉)

Auto-ignition temp : Not determined

5.2 Suitable (and unsuitable) extinguishing media

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

Unsuitable extinguishing media : None known

5.3. Specific hazards arising from the chemical

Reactivity in case of fire : Under fire conditions, hazardous fumes will be present: Carbon monoxide, Carbon dioxide.

5.4. Special protective equipment and precautions for fire-fighters

Protective equipment for firefighters : Wear a self-contained breathing apparatus in pressure-demand mode, MSHA/NIOSH (approved or equivalent), and full protective gear.

Firefighting instructions : Evacuate personnel to a safe area. Use water spray for cooling exposed containers.

Section 6. Accidental release measures

6.1 Personal precautions

For non-emergency personnel	: Wear recommended personal protective equipment. Evacuate unnecessary personnel. Ventilate spillage area. Avoid dust formation. Avoid contact with skin and eyes. Remove all sources of ignition.
For emergency responders	: Do not attempt to take action without suitable protective equipment.
6.2 Environmental precautions	: Do not flush into surface water or sanitary sewer system.
6.3 Methods for cleaning up	: Sweep up and shovel into suitable containers for disposal.

Section 7. Handling and storage

7.1 Handling	: Follow a good industrial practices in housekeeping and personal hygiene. Wear personal protective equipment. Maintain operating temperature within the recommended processing range. Avoid contact with molten material and provide adequate ventilation during processing. Keep only in original container. Protect from moisture. When mechanical energy is used to process or transfer, dust can be generated. Systems and procedures should be designed to minimize the generation and accumulation of dust from the handling and processing of PHA resin.
7.2 Storage	: Avoid extremes of temperature and humidity to prevent property deterioration. Resin should be stored in original shipping package. Keep the resin dry and sealed to exclude moisture. Store below 30 ℃ (86 ℉) to maximize product shelf life.

Section 8. Exposure controls /Personal protection

8.1 Control parameters

Exposure limits	: Not established
Engineering controls	: Provide appropriate exhaust ventilation at places

where the hot polymer may reside for long periods (leak areas, above the nozzle or die, in screen changers, in vent ports, etc.). Heating resin above recommended processing conditions will produce toxic fumes.

8.2 Personal protective equipment

Eye protection : Wear appropriate protective eyeglasses with side shields.

Skin and body protection : Personal protective equipment ("PPE") must be selected and used in accordance with the Occupational Safety and Health Administration (OSHA)'s requirements at 29 C.F.R. § § 1910.132, 1910.133, and 1910.138. Wear impervious clothing and insulated gloves which provides a barrier of Liquids and Gases to prevent dermal exposure. Gloves must be replaced at the end of each work shift during which they are exposed to the New Chemical Substance.

Respiratory protection : Wear respiratory protection if there is potential for exposure to dust or toxic fumes.

8.3 Other information : Avoid contact with skin, eyes and clothing. Wash hands after handling the product. Use good housekeeping practices during storage, transfer, handling to avoid excessive dust accumulation.

Section 9. Physical and chemical properties

9.1 Information of physical and chemical properties

Physical state : Solid

Appearance : pale yellow opaque pellets

Odor : Mild

pH : Not applicable

Melting Point : 120-180 ℃ (284-356 ℉)

Freezing Point : Not applicable

Boiling Point : Not applicable

Flash Point : 265 ℃ (509 ℉)

Evaporation rate : Not determined

Vapor Pressure	: Not determined
Vapor Density	: Not determined
Viscosity	: Not available
Flammability	: Not available
Density	: 1.1-1.3 g/cm^3
Solubility	: Soluble in chloroform, methylene chloride
Partition coefficient	: Not determined
Auto-ignition Temperature	: Not determined
Decomposition Temperature	: 〉275 ℃ (527 ℉)
Molecular Weight	: Approximately 〉100,000 (by GPC)

Section 10. Stability and reactivity

10.1 Reactivity	: Non-reactive under normal conditions
10.2 Chemical Stability	: Stable under recommended storage conditions.
10.3 Possibility of Hazardous Reaction	: Hazardous polymerization will not occur.
10.4 Conditions to Avoid	: High humidity environment
10.5 Incompatible materials	: Strong oxidizing agents
10.6 Hazardous Decomposition	: None under normal use conditions

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral)	: No information available
Acute toxicity (dermal)	: No information available
Acute toxicity (inhalation)	: No information available
Skin sensitization	: No information available
Serious eye damage/irritation	: No information available
Respiratory sensitization	: No information available
Germ cell mutagenicity	: No information available
Carcinogenicity	: No information available
Repeated dose toxicity	: No information available
STOT-single exposure	: No information available
STOT-repeated exposure	: No information available
Reproductive toxicity	: No information available

Section 12. Ecological information

12.1 Ecological Toxicity

: Not considered toxic in marine, fresh water, soil environment.

12.2 Persistence, degradability, and bio-based products

: The product has the following certifications for biodegradability and bio-based products

TUV AUSTRIA	: OK compost Industrial
	: OK biodegradable Soil
	: OK compost Home
	: OK biodegradable Marine
	: OK biobased (Class4)
DIN CERTCO	: Industrial compostable products
	: DIN-Gepruft biobased
BPI	: Commercially Compostable product
USDA	: BioPreferred Program
JBPA	: BiodegradablePla, Marine BiodegradablePla
	: BiomassPla
12.3 Bioaccumulation	: Not expected to bioaccumulate.
12.4 Mobility in soil	: Inherently biodegradable in soil.

Section 13. Disposable considerations

13.1 Disposal methods

Waste treatment methods	: There are no special requirements. In accordance with local and national regulations. Non-hazardous, biobased and biodegradable PHACT biopolymer resin is not designed to biodegrade in conventional landfills and is not part of the conventional plastics recycling stream.

Section 14. Transport information

14.1 Department of Transportation	: Not regulated.
14.2 Transportation of Dangerous Goods	: Not regulated.
14.3 IMDG	: Not regulated.
14.4 ICAO/IATA	: Not regulated.

Section 15. Regulatory information

15.1 US regulations

TSCA List	: Listed
Food contact Substance	: FCN 2330
SARA 313	: Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals required to be reported under this Act or Title 40, Code of Federal Regulations, Part 372
SARA 311/312 Hazard/Risk Category	
Acute Health Hazards	: None
Chronic Health Hazards	: None
Fire Hazards	: None
Sudden Pressure Release Hazard	: None
Reactive Hazards/Risks	: None

15.2 EU regulations

EU REACH	: Exemption
REACH Annex XVII	: Not Listed
REACH Candidate list	: Not Listed
REACH Annex XIV (Authorization list)	: Not Listed
REACH Annex PIC list (EU 649/2012)	: Not Listed
REACH Annex POP list (EU 2019/1021)	: Not Listed
Other information, restriction and prohibition regulations	: No registration number is given for this substance because it is a polymer exempted from registration according to the provision of Article 2(9) of REACH
FCM Union list Annex I (EU 10/2011)	: Not Listed

15.3 China regulations

IECSC	: Listed
GB4806.7-2023	: Listed

15.4 Japan regulations

ENCS	: Listed
Food contact Positive list	: Not Listed

15.5 Korea regulations

Korea REACH	: Exemption
Food Sanitation Act	: Listed

15.6 Other regulations

DSL (Canada)	: Listed
Food contact (Health Canada, Division 23)	: Approved
NZioC (New Zealand)	: Not Listed (Compliant-certified exempt)
AICIS (Australia)	: Not Listed (Compliant-certified exempt)
TCSCA (Taiwan)	: PLC approval, Small quantity registration

Section 16. Other Information

16.1 Revision date	: 12/11/2025
16.2 Recommended restrictions	: None