Material Safety Data Sheet

According to REACH Regulation (EC) No. 1907/2006 and CLP Regulation (EC) No. 1272/2008

014002 PCR HDPE Regranulate Natural

Issue Date: 21.09.2026 Revision Date: 18.10.2026

SECTION 1: Identification of the substance/mixture and of the company/undertaking	
1.1 Product Identifier	
Trade name	014002 PCR HDPE Regranulate Natural
Product code	014002
Chemical Nature	High-Density Polyethylene
Components contributing to the hazard	Not relevant
CAS number	9002-88-4
EC number	Not applicable (polymer)
REACH Registration Number	This substance is exempt from REACH registration under Article 2 (9) of REACH
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Identified uses	Plastic processing, injection molding, extrusion
Uses advised against	Not suitable for medical implants, direct food contact without specific approval, or applications requiring high chemical resistance.
1.3 Details of the supplier of the safety data sheet	
Company	Sinox Polymers GmbH
Address	Grünenweg 5-7, 28195 Bremen, Germany
Telephone	+49 176 361 889 94
Email	inquiries@sinox-polymers.com
1.4 Emergency telephone number	

SECTION 1: Identification of the substance/mixture and of the company/undertaking	
General number for medical emergency	112
Poison Center GIZ-Nord (Göttingen)	+49 551 19 240

SECTION 2: Hazards identification	
2.1 Classification of the substance or mixture	
Classification	According to Regulation (EC) No. 1272/2008 (CLP), the product is not classified as hazardous.
2.2 Label elements	
Hazard pictograms	None
Signal word	None
Hazard statements	Not applicable
Precautionary statements	P261: Avoid breathing dust or fumes. P280: Wear protective gloves when handling molten material. P501: Dispose of contents/container in accordance with local regulations.
2.3 Other hazards	
Dust explosion risk	No dust explosion hazard. The product is supplied in granular form.
Thermal hazards	Vapors and fumes generated at high processing temperatures may cause irritation to eyes, nose, throat, and respiratory tract.

SECTION 3: Composition/information on ingredients	
3.1 Substances	
Substance name	High-Density Polyethylene
CAS number	9002-88-4
EC number	Not applicable (polymer)
Hazardous impurities	None known

SECTION 4: First-aid measures	
4.1 Description of first-aid measures	
Inhalation	When fumes of molten material have been inhaled: (1) Move person to fresh air as quickly as possible; (2) rest in half upright position; (3) loosen clothing; (4) keep warm. In case of respiratory problems move person to first aid station for medical treatment.

SECTION 4: First-aid measures	
Skin contact	Any molten material on the skin/burns should be cooled (off) as quickly as possible by means of cold water. Cover the wound with sterile cloth and move person to first aid station or hospital for medical treatment. Attention: never pull off the molten material from the wound.
Eye contact	Rinse eyes immediately with water for at least 15 minutes. If irritation persists, seek medical attention.
Ingestion	No danger of toxicity, this material is biologically inactive.
4.2 Most important symptoms and effects, both acute and delayed	
Symptoms	Inhalation of fumes may cause irritation, headache, nausea. Contact with molten polymer may cause burns.
4.3 Indication of any immediate medical attention and special treatment needed	
Treatment	No specific antidote known. Treat symptomatically.

SECTION 5: Fire-fighting measures	
5.1 Extinguishing media	
Suitable	Water spray, foam, CO_2, dry chemical powder
Unsuitable	High-pressure water jet
5.2 Special hazards arising from the substance or mixture	
Hazards	Combustible solid; burns with dripping. Hazardous decomposition products: Carbon monoxide, carbon dioxide, and low levels of aldehydes and volatile hydrocarbons.
5.3 Advice for firefighters	
Advice	Use self-contained breathing apparatus (SCBA) and full protective gear.

SECTION 6: Accidental release measures	
6.1 Personal precautions, protective equipment, and emergency procedures	
Precautions	Avoid dust formation. Ensure adequate ventilation.
6.2 Environmental precautions	
Precautions	Prevent material from entering drains or watercourses.
6.3 Methods and material for containment and cleaning up	
Methods	Sweep up and place in suitable containers for disposal or recycling.
6.4 Reference to other sections	

SECTION 6: Accidental release measures	
References	See Section 8 for exposure controls and personal protection. See Section 13 for disposal considerations.

SECTION 7: Handling and storage	
7.1 Precautions for safe handling	
Handling	Provide local exhaust ventilation during processing. Avoid dust generation. Keep away from heat, sparks, and open flames.
7.2 Conditions for safe storage, including any incompatibilities	
Storage	Store in a cool, dry, well-ventilated area away from direct sunlight and heat sources. Keep containers closed when not in use. Store away from strong oxidizing agents.
7.3 Specific end use(s)	
End uses	Intended for industrial plastic processing (injection molding, extrusion). No specific recommendations beyond the measures stated in this SDS.

SECTION 8: Exposure controls/personal protection	
8.1 Control parameters	
Dust exposure limits	General dust exposure limits: 10 mg/m³ (total dust), 5 mg/m³ (respirable dust).
8.2 Exposure controls	
Respiratory protection	Use dust masks when exceeding exposure limits.
Hand protection	Heat-resistant gloves when handling hot material.
Eye protection	Safety glasses with side shields.
Skin protection	Protective clothing as needed.

SECTION 9: Physical and chemical properties	
9.1 Information on basic physical and chemical properties	
Physical state	Solid at 20°C
Odor	Slight waxy
Odor threshold	Not applicable
pH	Not applicable (insoluble in water)
Flashpoint	>340°C

SECTION 9: Physical and chemical properties	
Color	Natural
Form	Regranulate
Melt point	130–137°C
Boiling point	Not applicable (decomposes before boiling)
Evaporation rate	Not applicable
Flammability (solid, gas)	Combustible solid; burns with dripping
Upper/lower flammability limits	Not determined for solid form
Vapor pressure	Not applicable at ambient temperature
Vapor density	Not applicable
Relative density	0.94–0.96 g/cm^3
Auto Ignition Temp.	>350°C
Decomposition temperature	>300°C
Solubility in water	Insoluble
Solubility in other solvents	Partially soluble in xylene, toluene at elevated temperatures
Partition coefficient (n-octanol/water)	Not applicable (polymer)
Viscosity	Not applicable in solid state; melt flow index dependent on grade
Dust explosive properties	Not applicable – no dust explosion hazard. The product is supplied in granular form.
Minimum ignition temperature	410°C
9.2 Other information	
Other information	No additional relevant physical or chemical data available.

SECTION 10: Stability and reactivity	
10.1 Reactivity	
Reactivity	Stable under normal conditions. No dangerous reactions known under normal use.
10.2 Chemical stability	
Chemical stability	Stable under recommended storage conditions.

SECTION 10: Stability and reactivity	
10.3 Possibility of hazardous reactions	
Hazardous reactions	No hazardous polymerization will occur. No dangerous reactions known under normal use.
10.4 Conditions to avoid	
Conditions to avoid	Temperatures above 300°C, open flames, strong heat sources.
10.5 Incompatible materials	
Incompatible materials	Strong oxidizing agents.
10.6 Hazardous decomposition products	
Hazardous decomposition products	At high temperatures (>300°C): Carbon monoxide, carbon dioxide, and low levels of aldehydes and volatile hydrocarbons.

SECTION 11: Toxicological information	
11.1 Information on hazard classes as defined in Regulation (EC) No. 1272/2008	
Acute toxicity	None (LD50 oral rat >5000 mg/kg)
Skin corrosion/irritation	Not classified as irritating.
Serious eye damage/irritation	Not classified as irritating.
Respiratory or skin sensitization	No data available. Not expected to be a sensitizer.
Germ cell mutagenicity	No data available. Not expected to be mutagenic.
Carcinogenicity	No evidence of carcinogenicity (not listed by IARC, NTP, or OSHA).
Reproductive toxicity	No data available. Not expected to be a reproductive toxicant.
STOT – single exposure	Exposure to decomposition fumes may cause respiratory irritation in sensitive individuals.
STOT – repeated exposure	No data available. Not expected to cause organ damage from repeated exposure.
Aspiration hazard	Not applicable (solid material).
11.2 Information on other hazards	
Endocrine disrupting properties	High-Density Polyethylene is not known to have endocrine disrupting properties.
Other information	Contact with molten polymer may cause thermal burns.

SECTION 12: Ecological information

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12.1 Toxicity	
Ecotoxicity	No indication that this material poses a risk to the environment. Insoluble, non-toxic solid material. Water Hazard Class (Germany): nwg – nicht wassergefährdend (classification per AwSV).
Aquatic toxicity	No known effects on aquatic organisms. Not classified as hazardous to the aquatic environment.
12.2 Persistence and degradability	
Persistence/degradability	Very low UV degradability. High-Density Polyethylene is generally considered non-biodegradable.
12.3 Bioaccumulative potential	
Bioaccumulative potential	Low tendency for bioaccumulation due to high molecular weight and insolubility in water.
12.4 Mobility in soil	
Mobility in soil	Low mobility. Solid material will remain on the surface.
12.5 Results of PBT and vPvB assessment	
PBT/vPvB assessment	This substance/mixture does not meet the PBT criteria of REACH Regulation, Annex XIII. This substance/mixture does not meet the vPvB criteria of REACH Regulation, Annex XIII.
12.6 Endocrine disrupting properties	
Endocrine disrupting properties	High-Density Polyethylene is not known to have endocrine disrupting properties. Assessment per Regulation (EU) 2017/2100 and Commission Delegated Regulation (EU) 2020/217.
12.7 Other adverse effects	
Other adverse effects	No other known adverse environmental effects. Prevent large quantities from entering waterways as physical pollution.

SECTION 13: Disposal considerations	
13.1 Waste treatment methods	
Product disposal	Dispose of in accordance with local, national, and international regulations. Recycling is recommended where possible. European Waste Code (EWC): 07 02 13 (waste plastic).
Packaging disposal	Empty packaging may be recycled. Dispose of contaminated packaging as per local regulations.
Special precautions	Do not burn in open fires. Incineration should be carried out in approved facilities with proper emission controls.

SECTION 14: Transport information	
14.1 UN number or ID number	
UN number	Not applicable – not classified as dangerous goods.
14.2 UN proper shipping name	
Proper shipping name	Not applicable
14.3 Transport hazard class(es)	
Transport hazard class	Not regulated under ADR/RID/IMDG/IATA.
14.4 Packing group	
Packing group	Not applicable
14.5 Environmental hazards	
Environmental hazards	Not classified as environmentally hazardous under transport regulations.
14.6 Special precautions for user	
Special precautions	No special precautions required. Handle with normal care to prevent spillage.
14.7 Maritime transport in bulk according to IMO instruments	
Maritime bulk transport	Not applicable. Product is typically transported in packaged form (bags, octabins, containers).

SECTION 15: Regulatory information	
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
EU Regulations	This product is not classified as hazardous under CLP Regulation (EC) No. 1272/2008.
REACH	Polymers are exempt from REACH registration under Article 2(9) of Regulation (EC) No. 1907/2006. Not listed on the REACH SVHC candidate list (Substances of Very High Concern).
Seveso III Directive	Not covered by Directive 2012/18/EU (Seveso III).
National regulations	Water Hazard Class (Germany): nwg – nicht wassergefährdend – classification per AwSV (Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen). Additional national regulations may apply to recycled plastics in specific applications (e.g., food contact materials under Regulation (EU) No. 10/2011).
15.2 Chemical safety assessment	

SECTION 15: Regulatory information	
Chemical safety assessment	A chemical safety assessment has not been carried out for this substance, as it is exempt from REACH registration.

SECTION 16: Other information	
Version	1.1
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Revision history	Version 1.1 – Revision (18.10.2026). Version 1.0 – Initial issue (21.09.2026).
Abbreviations and acronyms	ADR: European Agreement on the International Carriage of Dangerous Goods by Road CAS: Chemical Abstracts Service CLP: Classification, Labelling and Packaging (Regulation EC No. 1272/2008) EC: European Community IATA: International Air Transport Association IMDG: International Maritime Dangerous Goods Code LD50: Lethal Dose 50% PBT: Persistent, Bioaccumulative and Toxic PCR: Post-Consumer Recycled HDPE: High-Density Polyethylene REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail SCBA: Self-Contained Breathing Apparatus SDS/MSDS: (Material) Safety Data Sheet STOT: Specific Target Organ Toxicity SVHC: Substance of Very High Concern vPvB: Very Persistent and Very Bioaccumulative
Key literature/data sources	ECHA (European Chemicals Agency) database Regulation (EC) No. 1907/2006 (REACH) Regulation (EC) No. 1272/2008 (CLP) Commission Regulation (EU) 2020/878 (Annex II to REACH)
Training advice	Users handling this product should be informed of the content of this SDS and receive training on safe handling of polymers in industrial environments.
Disclaimer	The information contained herein is based on our current knowledge and is intended to describe the product for the purposes of health, safety, and environmental requirements only. It should not be construed as guaranteeing any specific properties of the product. None of the materials and/or products referenced herein should be used and/or applied in any product, device or material used or for use as human body implant or otherwise within the human body.