SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
ABNT NBR 14725-4:2014

Issuing Date 28-Jul-2023 **Revision Date** 28-Jul-2023 **Revision Number** 1.0

1. Identification

Product identifier

Product Name Recycled Polypropylene (Developmental Product)

Other means of identification

Product Code(s) DPR 007A

Recommended use of the chemical and restrictions on use

Recommended use Polymer preparations and compounds

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier
Braskem S.A.
Rua Eteno, 1561, Polo Petroquímico de Camaçari
Camaçari, BA, CEP: 42810-000, Brazil
Tel: +55 (71) 3413-3600

E-mail address productsafety@braskem.com

Emergency telephone number

Emergency telephone CHEMTREC Brazil (Rio De Janeiro): +(55)-2139581449 Portuguese
CHEMTREC Brazil (São Paulo): +(55)-1143491359 Portuguese
CHEMTREC Brazil: 0800 892 0479 Portuguese
CHEMTREC: +1 703-741-5970 (24h)

2. Hazard(s) identification

GHS Classification Most Important Hazards

Product not classified as hazardous according to ABNT 14725-2.

Label elements

Hazard statements
Not classified

Other information
Special danger of slipping by leaking/spilling product. Electrostatic charges may be generated during handling. If small particles are generated during processing or handling, this product may form combustible dust concentrations in air.

3. Composition/information on ingredients

Pure substance/mixture Mixture.

Substance

Not applicable.

Mixture

Product not classified as hazardous according to ABNT 14725-2.

Chemical name	CAS No	Weight-%
Post-Consumer recycled polypropylene	-	>95
Titanium dioxide	13463-67-7	0.5 - 5

4. First-aid measures

Description of first aid measures

Inhalation Remove to fresh air. Medical aid is necessary if symptoms appear to be an obvious consequence of inhalation.

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

Skin contact Wash skin with soap and water. Get medical attention if irritation develops and persists. After contact with molten product, cool skin area rapidly with cold water. Removal of solidified molten material from skin requires medical assistance.

Ingestion Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical Avoid generation of dust. Fine dust dispersed in air may ignite. Powders, dusts, shavings, borings, turnings or cuttings may explode or burn with explosive violence.

Explosive properties

Sensitivity to static discharge None.

Sensitivity to mechanical impact None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges. Special danger of slipping by leaking/spilling product.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Avoid generation of dust. Avoid contact with skin, eyes or clothing. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. Airborne dusts are potentially explosive. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654).

Conditions for safe storage, including any incompatibilities

Storage Conditions Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals.

Incompatible materials None known based on information supplied.

8. Exposure controls/personal protection

Exposure guidelines

Chemical name	Brazil	ACGIH TLV
Titanium dioxide	-	TWA: 0.2 mg/m^3 nanoscale respirable particulate matter TWA: 2.5 mg/m^3 finescale respirable particulate matter

Biological occupational exposure This product, as supplied, does not contain any hazardous materials with biological limits

limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). During hot processing: Tight sealing safety goggles. If there is a risk of contact: Face protection shield.

Hand protection Wear suitable gloves. Heat resistant gloves are recommended when handling molten materials.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Protective shoes or boots. During hot processing:

Respiratory protection The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Regular cleaning of equipment, work area and clothing is recommended.

Environmental exposure controls No information available.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Pellets, granules
Physical state	Solid
Color	White
Odor	No information available
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH		No data available
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flash point		No data available
Evaporation rate		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Vapor pressure		Negligible
Vapor density		No data available
Relative density		No data available

Water solubility	Negligible
Solubility(ies)	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available
Explosive properties	No information available.
Oxidizing properties	No information available.

Other information

Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available
Particle characteristics	
Particle Size	No information available
Particle Size Distribution	No information available

10. Stability and reactivity

Reactivity

Reactivity None under normal use conditions.

Sensitivity to static discharge None.

Sensitivity to mechanical impact None.

Chemical stability

Stability Stable under normal conditions.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid Excessive heat. Heating in air. Dust formation.

Incompatible materials

Incompatible materials None known based on information supplied.

Hazardous decomposition products

Hazardous decomposition products Decomposition products depend on temperature, exposure to air, and the presence of other substances. Processing may release irritating fumes.

11. Toxicological information

Information on likely routes of exposure

Inhalation Specific test data for the substance or mixture is not available. Inhalation of dust in high concentration may cause irritation of respiratory system.

Eye contact Specific test data for the substance or mixture is not available. Dust contact with the eyes can lead to mechanical irritation.

Skin contact Specific test data for the substance or mixture is not available. Contact with dust can cause mechanical irritation or drying of the skin.

Ingestion Specific test data for the substance or mixture is not available. May cause irritation of the mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity
Based on available data, the classification criteria are not met

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Titanium dioxide	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Titanium dioxide: When encapsulated in polymer is not expected to pose a health hazard when processed under normal conditions of use.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	LINACH (National List of Carcinogen Agents to Humans)	ACGIH	IARC
Post-Consumer recycled polypropylene	-	-	Group 3
Titanium dioxide	Group 2B	A3	Group 2B

Legend
LINACH (National List of Carcinogen Agents to Humans)
Group 2B - Possibly Carcinogenic to Humans
ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target organ effects No information available.

Neurological effects No information available.

Aspiration hazard No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and degradability No information available.

Mobility No information available.

Bioaccumulation No information available.

13. Disposal considerations

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

IMDG Not regulated

IATA Not regulated

ANTT Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Brazil
See section 8 for national exposure control parameters

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories
Contact supplier for inventory compliance status

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)

Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Issuing Date 28-Jul-2023

Revision Date 28-Jul-2023

Revision Note Initial Release.

This safety data sheet was created pursuant to the requirements of: ABNT NBR 14725-4:2014, ABNT NBR 14725-2:2009.

Disclaimer
The information provided in this 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. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet