

**CHEMICAL PRODUCTS SAFETY DATA SHEET***Material Safety Data Sheet*

According to the Globally Harmonized System (GHS) implemented by ABNT NBR 14725-2

SECTION 1: Identification of the substance/mixture and of the company/company**1.1 Product identification**

Commercial Name	TSY, TSYBIO, TSYHTS, TSYHTSBIO, TSYPRO, TSYIJM, TSY3RS, TSYL70, TSYL82, TSYL82EV, TSYL82BIO, TSYCMS, TSYUHS, TSYPAS, TSYWPG, TSYWPGBIO, TSYCF, TSYCFBIO, TSYX, TSB, TSBHTS, TSBHTSBIO, TSBL82, TSBIBIO, TSBCSL, TBH, TBS, TMS, TMSBIO, TMSHTS, TMSHTSBIO, TMSL82, TMSCSL, TMT, TMZ, TMA, TMABIO, TMALSP, TMAPLN, TSW, TFC, TFW, TFWBIO, TFWLSK, TFCL82, TFWL82, TFCHSK, TFWHSK, TFCHPF, TPY, TPYRL, TPYPSL, TFA, TFABIO, TBB, TBM, TBZ, TBP, TBPFT, TBPFTBIO, TBPFGS, TBPFGSX, TBPRLB, TBPRLBBIO, TBPCSL, TBPPSL, TWOPSL, TPH, EP 273, EP 281, EP 400, EP 410, EP 412, EP 417, EP 431, EP 448, EP 451, EP 452, EP 453, EP 506, EP 507.
Chemical Name	Polypropylene
CAS Number	9003-07-0
EC Number	618-352-4

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use	Bioriented polypropylene resin films are used for general conversion, adhesive tapes, lamination, printing and labels widely used in the packaging segment.
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1.3 Identification of the supplier of the safety data sheet

Supplier	POLO FILMS INDÚSTRIA E COMÉRCIO S.A. BR 386, km 423 – Via 1, 280 Montenegro – RS – Brazil – CEP 95780-000 + 55 51 3883-6700 / + 55 51 3883-6835 contato@polofilms.com.br
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1.4 Emergency phone number

Emergency Number	+55 (11) 3478-5950
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SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

GHS classification	The product is not classified as dangerous according to the Globally Harmonized System (GHS).
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2.2 Label elements

GHS label	It does not need labeling as it is not a dangerous substance or mixture according to the Globally Harmonized System (GHS).
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2.3 Other hazards

Adverse effects	Dust can cause respiratory irritation if inhaled. Risk of thermal burns in case of contact with the molten product.
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SECTION 3: Composition/information on componentes

3.1 Substância

Description	Not applicable.
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3.2 Mixtures

Chemical Name	CAS Number EC Number	Concentration
Polypropylene	9003-07-0 618-352-4	97-100%

Other Information	It may contain additives and stabilizers at levels below 3%, such substances do not contribute to hazard classification.
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SECTION 4: First aid actions

4.1 Description of first aid measures

Recommendations	Take appropriate measures to ensure your own health and safety before attempting to rescue and provide first aid. Never give anything by mouth to an unconscious person. Consult a doctor immediately.
Inhalation	Ensure fresh air. Keep the victim at rest.
Skin contact	After contact with the molten product, cool quickly with cold water. Do not attempt to remove the molten material from the skin. If the burn is severe, contact a doctor.
Eye contact	Immediately flush eyes for at least 10 minutes. Consult a doctor if pain, blinking or flushing persists.
Ingestion	In case of ingestion, rinse mouth with water. Do not induce vomiting. It can cause gastrointestinal obstruction, do not administer laxatives. Consult a doctor immediately.

4.2 Notes to doctor

Inhalation	If the product generates dust, it can cause respiratory irritation.
Skin contact	Risk of thermal burns in case of contact with the molten product.



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Eye contact	Dust generated by this product can cause eye irritation.
Ingestion	It can cause suffocation if swallowed.
Treatment	Treatment should be directed to the control of the patient's symptoms and clinical status.

SECTION 5: Fire-fighting measures

5.1 Extinguishing ways

Adequate extinction	Foam. Dry powder. Carbon dioxide (CO ₂). Spraying water. Sand.
Inadequate extinction	Do not use a water jet as it may spread the fire.

5.2 Special hazards arising from the substance or mixture

Fire	Combustibility. When in combustion, it releases flammable vapors and gases. Fire can produce irritating and/or toxic smoke.
Explosion	Not applicable.
Reactivity	Not applicable.

5.3. Recommendations for the firefighting team

Preventive measures against fires	Eliminate all sources of ignition, prevent sparks and flames. Do not smoke in the product area.
Firefighting instructions	In case of fire, always call the fire department. Small fires, such as those that can be controlled with a manual extinguisher, can be combated by a person instructed in the procedures for fighting at the beginning of fires according to their category. Larger fires must be combated by people who have complete training for this type of situation. It is always necessary to ensure that an exit route is available.
Protection during firefighting	In fires involving this product, do not enter a confined space without adequate personal protective equipment, including the necessary respiratory equipment due to the gases generated by the plastic fumes.
Specific methods	Use spray water or fog to eliminate fire smoke, if possible.
Special protective equipment for firefighters	Do not enter the fire zone without adequate protective equipment, including respiratory protection. Wear self-contained breathing apparatus and also protective clothing in confined spaces.

SECTION 6: Control measures for spillage or leakage

6.1 Personal precautions

Personal precautions	Alert and provide the team with the necessary personal protective equipment (PPE). The dispersion of this material can lead to the risk of slipping on any smooth surface, such as floors and so on. Safety shoes are required. Avoid accumulation of electrostatic charges. For teams not involved in emergency response: Evacuate unnecessary teams.
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	For teams involved in emergency response: Equip the team with adequate protection. For personal protection see SECTION 8.
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6.2 Environmental precautions

Environmental precautions	Avoid infiltration into sewers, public water supply networks, or natural watercourses. Notify the authorities if the product infiltrates this type of environment.
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6.3 Methods and materials for containment and cleaning

Methods and material for containment and cleaning up	Collect mechanically with the help of brooms if the material is in smaller sizes, and place in a suitable container. In cases of coils, you must request support for transportation with the help of forklifts or lifting equipment. Ensure compliance with all local/national regulations. Consult the appropriate local waste disposal organization.
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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations for safe handling	Handling on wooden pallets and pallets for handling with a forklift is recommended. Keep the film that surrounds the pallet until the product is used. The coils are packed to protect them from physical damage. Although BOPP films are suitable for use up to 6 months after manufacture, it is recommended to rotate the film in the stock. The arching tapes of the pallets are fastened under pressure, when cutting them it is recommended the use of safety glasses and later disposal in an appropriate place to avoid cuts in handling. Safety boots must be worn whenever reels or pallets are handled. BOPP films have high mechanical strength, high puncture resistance and resistance to tearing. However, once the tear starts, the BOPP film tears easily. BOPP films are slippery and should therefore not be allowed to be used as a floor covering. Avoid impacts and perforations of objects, especially on the sides of the coils, as they can cause deformations or even make the material unusable. The identification tags attached to the reels must not be removed, as they allow for internal traceability of material quality indicators. Minimize dust production. Routine cleaning should be used to ensure that no dust accumulates on surfaces. The dry powder can accumulate static electricity if it is rubbed during the conversion processes. Ensure good ventilation in the work area. Avoid contact with skin, eyes and clothing. Do not breathe the gases/vapors/fumes/aerosols that may be generated in the processing of this material.
Hygiene	Handle in accordance with good industrial hygiene and safety practices. Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking or when leaving the workplace.



7. Conditions for safe storage, including incompatibilities

Storage conditions	Keep the product away from sources of ignition, direct sunlight, heat, high temperatures, incompatible materials and protected from moisture. Maintain the storage location in accordance with good manufacturing practices. Keep at storage temperature from 20°C to 35°C.
Incompatible materials	There is not.

SECTION 8: Exposure control and personal protection

8.1 Control parameters

Control parameters	Not applicable.
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8.2 Exposure controls

Engineering control measures	Not applicable.
Environmental exposure controls	Not applicable.

8. Personal protective equipment

General protection measures	Eye washers and safety showers must be located within easy reach. Provide local exhaust ventilation to control the vapor/mist level.
Breath protection	Under normal conditions of use, no significant danger is expected. Use breathing apparatus in case of exposure to vapors/dust/aerosols.
Hand protection	Wear gloves in accordance with EN 388 to protect against mechanical risks.
Eye and face protection	Safety glasses with side-shields.
Body and skin protection	Wear insulated gloves, waterproof apron, long sleeves and other protective clothing when handling hot material. When handling it with the aid of pointed equipment, use gloves in accordance with EN 388. Wear suitable eye/skin protection.

SECTION 9: Physico-chemical properties

9.1 Information on basic physical and chemical properties

Aspect	Plastic film.
Color	Transparent, white, matte or metallic.
Odor	Odorless.
Odor limit	Not applicable.
Flash point	Not applicable.
Lower explosive limit Not applicable.	Not applicable.



Upper explosive limit	Not applicable.
Oxidizing properties	Not applicable.
Auto-ignition temperature	> 300 °C
Decomposition temperature	Not applicable.
Fusion point	150 - 170 °C.
Steam pressure	Not applicable.
Density	0,7 – 1g/cm ³ .
Solubility in water	Insolúvel.
Partition coefficient (n-octanol/water)	Not applicable.
Dynamic viscosity	Not applicable.

9.2 Other information

Other information	This material is not volatile and is insoluble in water.
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SECTION 10: Stability and reactivity

Reactivity	The product is not reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal conditions with respect to use and storage.
Dangerous reactions	There is not.
Conditions to avoid	BOPP plastic films are susceptible to developing electrostatic charges. Although there are additives with antistatic agents in the formulation, electrical discharges during the use of the coil can cause the ignition of fire through electric shocks and/or the ignition of solvent vapors. Avoid overheating the material.
Incompatible materials	There is not.
Hazardous decomposition products	It should not decompose under normal conditions.
Thermal decomposition	Incomplete thermal incineration/decomposition generates carbon monoxide, carbon dioxide and other toxic gases.

SECTION 11: Toxicological information

Acute toxicity	Not classified.
Skin corrosion/irritation	Not irritating.
Serious eye damage/eye irritation	Not irritating.
Respiratory or skin sensitization	Not classified.
Germ cell mutagenicity	Not classified.





Genotoxicity	Not classified.
Carcinogenicity	Not classified.
Reproductive toxicity	Not classified.
Specific target organ toxicity (STOT) — single exposure	Not classified.
Aspiration hazard	Not applicable.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity	Material in the form of plastic film and commonly used in packaging. It can cause adverse effects if it is ingested by waterfowl or other aquatic fauna.
Danger to the aquatic environment — Acute	Not classified.
Danger to the aquatic environment — Chronic	Not classified.

12.2 Persistence and degradability

Persistence and degradability	This water-insoluble polymer solid is expected to be inert in the environment. Photodegradation of the surface is expected to occur when the product is exposed to sunlight. Significant biodegradation is not expected to occur unless the product is from Polo Films' biodegradable line of BOPP films.
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12.3 Bioaccumulative potential

Bioaccumulation	Not applicable.
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12.4 Mobility in soil

Mobility in soil	Not applicable.
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12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	Not applicable.
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12.6 Other adverse effects

Other adverse effects	Avoid disposal in the environment.
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SECTION 13: Final destination considerations

Disposal considerations	Dispose of safely in accordance with local/national regulations. All recovered material must be packaged, labeled, transported and disposed of or recovered in accordance with current laws and regulations and in accordance with good engineering practices. Recover whenever possible. Recycle if possible. Never carry waste to the sewer. Do not dispose of with household waste. Prevent contamination of soils, sewage systems and surface water.
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SECTION 14: Transport information

UN Number	Not applicable.
UN proper shipping name	Not applicable.
Hazard classes for transport purposes	Not applicable.
Packing group	Not applicable.
Environmental hazards	Not applicable.
Special precautions for the user	Not applicable.
Transport	Not applicable.
Other information	It is not classified as a dangerous product for transportation.

SECTION 15: Regulatory information

Brazil	Standard ABNT NBR 14725. Federal Decree No. 2,657, of July 3, 1998 - Promulgates ILO Convention No. 170 on Safety in the Use of Chemical Products at Work, signed in Geneva, on June 25, 1990. Ordinance No. 229, of May 24, 2011 - Amends Regulatory Standard No. 26 Resolution No. 5232, of December 14, 2016 - Approves the Complementary Instructions to the Land Regulation for the Transport of Dangerous Products, and makes other provisions.
Europe	Regulation (EC) No. 1907/2006 (REACH), (EC) 2015/830, (EC) No. 1272/2008.
United States	HCS/HAZCOM 2012.
Uruguay	Decree 307/2009.
Argentina	Resolution 801/2015.
Regulatory reference	IMDG Code – <i>International Maritime Dangerous Goods Code</i> . IATA – <i>International Air Transport Association</i> . GHS – <i>Globally Harmonized System of Classification and Labeling of Chemicals</i> .



SECTION 16: Other information

Abbreviations	CAS – Chemical Abstracts Service EC – European Community GHS – Globally Harmonized System of Classification and Labeling of Chemicals PPE – Personal Protective Equipment BOPP – Bi-axially Oriented Polypropylene PBT – Persistent, Bioaccumulative and Toxic vPvb – Very Persistent and Very Bioaccumulative UN – United Nations ABNT – Brazilian Association of Technical Standards NBR – Brazilian Technical Standard ILO – International Labor Organization REACH – Registration, Evaluation, Authorization and Restriction of Chemicals HCS – Hazard Communication HAZCOM - Hazard Communication
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