

SECTION 1: Identification

1.1. Product identifier

Product form : Substance
Trade name : POLYSTYRENE
Type of product : Group, Polymer
CAS-No. : 9003-53-6
Formula : (C₈H₈)_n

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

Recommended use : In construction materials, packaging, toys, household items, refrigeration industry, disposable.

1.3. Supplier's details

VIDEOLAR - INNOVA S/A
BR 386, Rodovia Tabai/Canoas, Km 419, Complexo Básico, Via do Contorno 212. Bairro: III Pólo Petroquímico
95853-000 Triunfo/RS - Brasil
T +55 (51) 3457-5800

Av. Abiurana, 1616 – Distrito Industrial
69075-010 Manaus AM
T +55 (92) 2101-7800

1.4. Emergency telephone number

Emergency number : (51) 3457-5888 / (92) 2101-7800

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Not classified

2.2. Label elements

Labelling according to the United Nations GHS

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to the United Nations GHS
Polystyrene (Main constituent)	(CAS-No.) 9003-53-6	100	Not classified

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Vomiting: prevent asphyxia/aspiration pneumonia. Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Administer oxygen if breathing is difficult. Apply artificial respiration if breathing stopped. Seek medical advice immediately, show the product label where possible.

First-aid measures after skin contact : Cool skin rapidly with cold water after contact with molten product. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately rinse with water for a prolonged period while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Refer the victim to the medical service.

First-aid measures after ingestion : Ingestion is very unlikely due to the form of pellets (grains). If swallowed, rinse mouth with water (only if the person is conscious). If vomiting occurs have person lean forward. Prevent aspiration of vomit. Get immediate medical advice/attention.

POLYSTYRENE

Safety Data Sheet

according to the United Nations GHS (Rev. 5, 2013)

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: Fuel solid. Dust may be irritating to eyes, mucous membranes and upper respiratory tract. Risk of thermal burns on contact with molten product.
Symptoms/effects after inhalation	: Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Exposure to dust may cause skin irritation.
Symptoms/effects after eye contact	: Dust from this product may cause eye irritation.
Symptoms/effects after ingestion	: Ingestion is very unlikely due to the form of pellets (grains).

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray, foam, chemical powder and carbon dioxide (CO ₂).
Unsuitable extinguishing media	: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: When in combustion releases flammable vapors and gases, large amounts of heat, dense black smoke and toxic gases.
Explosion hazard	: Combustible product. Avoid creating or spreading dust.
Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

Precautionary measures fire	: Keep container tightly closed and away from heat, sparks and flame.
Firefighting instructions	: Fight fire with normal precautions from a reasonable distance. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Use self-contained breathing apparatus and chemically protective clothing. Wear fire/flame resistant/retardant clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Evacuate area. Only qualified personnel equipped with suitable protective equipment may intervene. Notify fire brigade and environmental authorities.

6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Do not allow product to spread into the environment. Prevent liquid from entering sewers, watercourses, underground or low areas.

6.3. Methods and material for containment and cleaning up

For containment	: Stop leak without risks if possible. Contain released product, pump into suitable containers. It is recommended to install a fire alarm and leak detection system in the storage and use areas of the product.
Methods for cleaning up	: Take up mechanically (sweeping, shovelling) and collect in suitable and labelled container for disposal according to local legislation.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Do not handle until all safety precautions have been read and understood.
Hygiene measures	: Do not eat, drink or smoke when using this product.
Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Provide local exhaust or general room ventilation. All equipment used when handling the product must be grounded.
Storage conditions	: Store in a closed container. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from moisture.
Storage area	: Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

POLYSTYRENE

Safety Data Sheet

according to the United Nations GHS (Rev. 5, 2013)

Incompatible products	: Strong oxidizing agents and aromatic hydrocarbons derived from benzene.
Packaging materials	: Bulk product: 25 kg polyethylene bags, 1,250 kg polypropylene big bags, 500 kg containers and cardboard boxes. Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

POLYSTYRENE (9003-53-6)

USA - ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ (40 h/week; total dust)
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8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station. Measure concentrations regularly, and at the time of any change occurring in conditions likely to have consequences on workers exposure.
Environmental exposure controls	: Do not exceed the occupational exposure limits (OEL).

8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection	: Protective gloves.
Eye protection	: Chemical goggles or face shield.
Skin and body protection	: Industrial Protective Clothing.
Respiratory protection	: Dust formation: dust mask.

8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Grains
Colour	: White
Odour	: Odourless
Odour threshold	: No data available
pH	: No data available
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: ≥ 120 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 345 - 360 °C
Auto-ignition temperature	: 450 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1,04 (water=1)
Relative density of saturated gas/air mixture	: No data available
Density	: No data available
Relative gas density	: No data available
Solubility	: Insoluble in water. Partially soluble in aromatic hydrocarbons and ketones.
Log Pow	: No data available
Log Kow	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
Lower explosive limit (LEL)	: No data available
Upper explosive limit (UEL)	: No data available

POLYSTYRENE

Safety Data Sheet

according to the United Nations GHS (Rev. 5, 2013)

9.2. Other information

Other properties : Translucent.

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal use.

10.4. Conditions to avoid

Extremely high or low temperatures. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Strong oxidizing agents and aromatic hydrocarbons derived from benzene.

10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

POLYSTYRENE (9003-53-6)

LC50 inhalation rat (mg/l)	120 mg/kg
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Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

12.2. Persistence and degradability

No additional information available.

12.3. Bioaccumulative potential

No additional information available.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Ozone : Not classified.

Other adverse effects : No additional information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Must follow special treatment according to local regulation.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

POLYSTYRENE

Safety Data Sheet

according to the United Nations GHS (Rev. 5, 2013)

SECTION 14: Transport information

In accordance with IMDG / IATA / UN RTDG

14.1. UN number

Not regulated for transport

14.2. Proper Shipping Name

Proper Shipping Name (UN RTDG) : Not applicable

Proper Shipping Name (IMDG) : Not applicable

Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

UN RTDG

Transport hazard class(es) (UN RTDG) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (UN RTDG) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- UN RTDG

Transport regulations (UN) : Not subject

- IMDG

Transport regulations (IMDG) : Not subject

- IATA

Transport regulations (IATA) : Not subject

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

Regulatory reference : IMDG Code - International Maritime Dangerous Goods.
IATA - International Air Transport Association.
UN - Recommendations on the Transport of Dangerous Goods.
GHS - Globally Harmonized System of Classification and Labelling of Chemicals

SECTION 16: Other information

Data Source : VIDEOLAR - INNOVA S/A.,- FISPQ – POLIESTIRENO; May 15th, 2017.
Abbreviations and Acronyms : ACGIH – American Conference of Government Industrial Hygienists, United States
CAS – Chemical Abstracts Service
LC50 – Lethal Concentration 50%
GHS – Globally Harmonized System of Classification and Labeling of Chemicals
USA – United States of America
OEL – Occupational exposure limit
TWA – Time Weighted Average

SDS UN

This information 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 therefore be construed as guaranteeing any specific property of the product.