

| IDENTIFICACIÓN DE HDS | |
|-----------------------|----------------------|
| SDS Code | SDS-ZS609-ENG-DEC 22 |
| # of revision | 0 |
| Revision date | December 2022 |

SAFETY DATA SHEET

SECTION 1: Identification of the hazardous chemical or mixture and the supplier or manufacturer

1.1 Product name: ZS609 (All color codes).

1.2 Product description: Impact-modified Polypropylene compound.

1.3 Recommended use: Injection molding. Intended for commercial use only.

1.4 Manufacturer:

ADVANCED COMPOSITES MEXICANA, S.A. DE C.V.

Av. Japón 306, Parque Industrial San Francisco de los Romo.

San Francisco de los Romo, Ags.

Telephone number: +52 (449) 925 40 10

1.5 Emergency Contact Number:

México:

*Emergencies number: 911

*Centro Nacional de Comunicaciones / Sistema Nacional de Protección Civil (CENACOM)

-Mexico City and Metropolitan area: 51 28 00 00 Exts. 11470 al 11476

-Interior of Mexican Republic: 01 800 00 41 300

-Schedule: 24 hrs., 365 days.

USA:

*CHEMTREC (USA): +1 (800) 424-9300

SECTION 2: Hazard(s) Identification

2.1 Hazard Classification (GHS-US): Category 4. Acute toxicity in case of ingestion, or due to high temperature which is harmful in case of contact with the skin or by inhalation of processing vapors.

2.2 Pictograms and signal word:



Warning

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2.3 Hazard indications:

H302+H312+H332 Harmful in case of ingestion, in contact with the skin or if high temperature processing vapors are inhaled.

H320 It causes eye irritation due to the generation of high temperature processing vapors.

Additional information:

Spilled pellets pose a slip hazard. Dust accumulation may cause explosions. High temperature processing fumes may be irritating to the eyes, nose, throat, and skin. May contain carbon black. Animal studies suggest that carbon black may cause lung cancer through inhalation. However, inhalation of carbon black dust from this product is not deemed likely due to the plastic resin form.

2.4 Precautionary measures:

P103 Read the label before use.

P210 Keep away from heat, sparks, flames, hot surfaces and other sources of ignition.

P261 Avoid breathing dust / fumes / gases / mists / vapors / aerosols.

P301 + P330 + P331 In case of ingestion, rinse mouth. Do not induce vomiting.

P305 + P351 + P338 In case of contact with the eyes: Rinse with water carefully for several minutes. Remove contact lenses when they are present and can be done easily. Continue with the washing.

P333+P313 In case of skin irritation or rash, rinse or wash affected areas. Consult a doctor.

P304+P340 In case of inhalation, transport the person outdoors and keep them in a position that facilitates breathing.

P370 + P378 In case of fire, use water spray, dry chemical, foam or carbon dioxide for extinction.

P403 Store in a well ventilated place.

P502 Ask the manufacturer or supplier for information about recovery or recycling

Additional information:

Maintain adequate ventilation to prevent accumulation of dust and fumes from processing. Dust created during handling or processing may be mildly irritating to the respiratory system. Keep away from sources of ignition. In solid form, this polymer product is not considered to be a health hazard, although the pellets and the dust generated from them may be mildly irritating to the skin and eyes by mechanical action. If swallowed, polymer may pose possible intestinal obstruction.

2.5 Irritancy

When heated, this polymer may release fumes and/or vapors that are irritating to the eyes, nose, throat, and skin. Overexposure to fumes or vapors may also cause headache, nausea, shortness of breath, and cough.

SECCIÓN 3: Composition/Information on Ingredients

| Component(s) | CAS Registry # | Weight % |
|---|-----------------------|----------|
| Ethylene-propylene-copolymer | 9010-79-1 | 90-100 |
| Further additives | 31570-04-4, 1592-23-0 | 0-2 |
| *Carbon Black (Pigment, present in dark colors) | 1333-86-4 | 0-2 |
| *Chromium oxide, Cr ₂ O ₃ (Pigment, present in some colors) | 1308-38-9 | 0-2 |
| *Titanium Dioxide, TiO ₂ (Pigment, present in some colors) | 13463-67-7 | 0-2 |

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† Proprietary information

*The portion of the pigment may or may not be present in this material depending on the finished good if it is pre-colored or natural.

Comments:

The listed components (if present in this product) are encapsulated in a thermoplastic resin with limited release under normal conditions of use, transportation, and storage. Increased release may occur when the resin (or material/product manufactured from it) is subject to grinding, polishing, excessive heat, or other processes which enhance the potential for the generation of particulates, fumes, and/or vapors. A qualified health specialist should evaluate the specific potential for release under user's conditions of handling of this material

SECTION 4: First-Aid Measures

4.1 Most important effects: Molten plastic can cause severe thermal burns.

4.2 First Aid:

4.2.1 Skin contact: If skin irritation or rash occurs, rinse or wash affected areas. Seek medical advice/attention if irritation persists. If contacted by molten polymer, cool immediately with cold or ice water. Do not attempt removal of any solidified material without medical assistance. Get medical attention immediately. In the case of most burns, it may be advisable to allow solidified material to slough off on its own. Attempted removal may lead to more damage of the skin and underlying tissue. If removal is indicated (e.g. solidified material is located on a critical part of the hand or face), removal with mineral oil is recommended.

4.2.2 Eye contact: If contacted by molten polymer, immediately flush eyes with plenty of cool water for at least 15 minutes. Do not rub eyes. Get medical attention immediately.

4.2.3 Ingestion: If product is ingested, contact a physician or the Poison Control Center as appropriate whenever any foreign object is swallowed. Rinse mouth. Do NOT induce vomiting.

4.2.4 Inhalation: If irritation or dizziness occurs, evacuate to fresh air and remain at rest in a comfortable position for breathing. Seek medical advice/attention.

4.3 Acute and delayed effects:

4.3.1 Skin contact: Prolonged exposure may cause irritation, rash, or allergic skin reaction. Wash hands, other exposed areas, and clothing regularly. Seek medical advice if conditions persist.

4.3.2 Eye contact, inhalation: Dust and fumes may cause irritation to the eyes, nose, throat, and lungs. Flush eyes with water or get to fresh air. Seek medical attention if irritation persists.

4.3.3 Ingestion: May cause intestinal obstruction.

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SECCIÓN 5: Fire-Fighting Measures

5.1 Flammable properties:

5.1.1 Flammable class: Class 1 – Must be heated to burn. Please use caution when handling material near open flame. Material will ignite when exposed to direct flame, but will not burn readily.

5.1.2 Flash point: Not established.

5.1.3 Autoignition temperature: 280°C (>536°F), ASTM E659

5.2 Protective equipment for firefighters: Firefighters

Fire fighters should wear self-contained breathing apparatus in the positive pressure mode with a full-face piece when there is a possibility of exposure to smoke, fumes, or hazardous decomposition products.

5.3 Suitable extinguishing media:

- Water spray
- Dry chemical
- Foam
- Carbon dioxide

5.4 Fire fighting procedures: If possible, water should be applied as a spray from a fogging nozzle since this polymer is a surface burning material. The application of high velocity water will spread the burning layer.

- **NOTE:** Individuals should perform only those fire-fighting procedures for which they have been trained.

5.5 Hazardous combustion products: Carbon, oxides of carbon, oxides of nitrogen, water, acrolein, formaldehyde, other aldehydes, ketones, alcohols, fatty acids, methane, ethane, acetylene, other organic vapors and fumes.

SECCIÓN 6. Accidental Release Measures

6.1 Personal precautions: Restrict access to only authorized personnel wearing appropriate personal protective equipment. Spilled pellets pose a slip hazard.

6.2 Environmental precautions: Mantener material derramado fuera del fuego, chispas y flama abierta. Asegurar la ventilación adecuada.

6.3 Protective equipment: Wear safety glasses meeting the specifications of OSHA 29CFR 1910.133/ ANSI Standard Z87.1 where no contact with the eye is anticipated. Chemical safety goggles meeting the specifications of OSHA 29CFR 1019.133/ ANSI Standard Z87.1 should be worn whenever there is a possibility of contact with the eyes.

6.4 General procedures: Where spills are possible, a comprehensive spill release response plan should be developed and implemented. Plastic pellets are listed as "significant materials" by US EPA (40CFR 122.26(b)(12)) and may need to be discussed in an application for a storm water discharge permit.

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6.5 Small spill: Small spills can be swept up and recycled or disposed of.

6.6 Large Spill: Wear appropriate respiratory protection and protective clothing as described in Section 8. Contain spilled material. Transfer to secure containers. In the event of an uncontrolled release of this material, the user should determine if the release is reportable under the applicable laws and regulations.

SECTION 7. Handling & Storage

7.1 Handling: The handling of pellets in both loading and unloading operations as well as fabrication may cause dust to be formed and necessary precautions for personal protection (see Section 8) should be taken. When transferring pellets, precautions such as grounding and bonding can prevent the buildup of static electricity.

7.2 Safe storage: Store in a dry place away from moisture, excessive heat, and sources of ignition. Have emergency equipment for fires and spills readily available.

7.3 Incompatible materials: Do not store with strong oxidizing agents such as nitric acid, sulfuric acid, halogens, hydrogen peroxide, and chlorinating agents.

7.4 Hygiene: Wash hands before eating, drinking, smoking, or using the restroom.

7.5 Further Advice: Keep containers closed and/or covered when not in use.

SECCIÓN 8. Exposure Controls & Personal Protection

8.1 Engineering controls: Ensure all national/local regulations are observed. Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

8.2 Personal protective equipment:

8.2.1 Skin: Wear heat protective gloves and clothing if there is a potential for contact with heated material.

8.2.2 Eyes and face: Wear safety glasses meeting the specifications of OSHA 29CFR 1910.133/ ANSI Standard Z87.1 where no contact with the eye is anticipated. Chemical safety goggles meeting the specifications of OSHA 29CFR 1019.133/ ANSI Standard Z87.1 should be worn whenever there is a possibility of contact with the eyes.

8.2.3 Respiratory: Use a NIOSH-approved respirator whenever exposure may exceed established Occupational Exposure Limits.

8.3 Occupational exposure limits

| Component | Classification | Exposure Limit |
|-----------------------------|----------------|---|
| Carbon Black (1333-86-4) | ACGIH TWA | 3.5 mg/m ³ (respirable fraction) |

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| | Category ACGIH | Confirmed animal carcinogen with unknown relevance to humans |
| | NIOSH REL (TWA) | 3.5 mg/m ³ 1.5 3.5 mg/m ³ (Carbon black in presence of Polycyclic |
| | US IDLH | 1750 mg/m ³ |
| | OSHA TWA | 3.5 mg/m ³ |
| | NOM-010-STPS-2014 | 3 mg/m ³ (VLE-PPT) |
| Chromium oxide (Cr₂O₃) (1308-38-9) | ACGIH TWA | 0.05 mg/m ³ 0.5 (Cr II & Cr III Compounds) 0.05 (Cr VI Water Soluble) |
| | OSHA PEL (TWA) | 1 (metal) 0.5 (Cr II & Cr III Compounds) 0.005 (Cr VI Compounds) |
| | NOM-010-STPS-2014 | No data available |
| Titanium dioxide (TiO₂) (13463-67-7) | OSHA TWA | 15 mg/m ³ Total dust |
| | ACGIH TWA | 10 mg/m ³ |
| | NIOSH IDLH | 5,000 mg/m ³ |
| | NOM-010-STPS-2014 | No data available |

SECCIÓN 9. Physical & Chemical Properties

| Property | Description |
|---|---|
| Appearance | Colored plastic pellets, approximately 1/8" – 3/8" (3mm – 10mm) in diameter |
| Odor | Slight to no odor |
| Pain threshold | Not applicable |
| pH | Not applicable |
| Melting point / Freezing point | 160~205°C (320~401°F)/ No data available |
| Boiling point | None |
| Flashpoint | No data available |
| Evaporation rate | No data available |
| Flammability | Will ignite when exposed to direct flame, but will not burn readily. |
| Upper/Lower of flammability or explosive | Not explosive |

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| Limit | |
| Vapor pressure | No data available |
| Vapor density | No data available |
| Relative density | 0.89 – 1.30 |
| Solubility | Not soluble |
| Partition coefficient n-octanol / water | No data available |
| Auto-ignition Temperature | >280°C (>536°F), ASTM E659 |
| Decomposition temperature | No data available |
| Viscosity | Not applicable |
| Molecular weight | Not applicable |

Note: The physical property data above are typical values and should not be construed as a product specification.

SECTION 10. Stability & Reactivity

10.1 Reactivity: Stable under recommended storage conditions (See Section 7).

10.2 Chemical stability: May be decomposed by strong oxidizing agents such as nitric acid, sulfuric acid, halogens, hydrogen peroxide, and chlorinating agents.

10.3 Hazardous polymerization: Not likely under recommended storage conditions.

10.4 Conditions to avoid: Avoid excessive heat, sparks, or open flame. Keep away from strong oxidizing agents.

10.5 Materials to avoid: May burn or react violently with fluorine/oxygen mixtures with 50~100% fluorine.

10.6 Hazardous decomposition: Combustion may produce carbon, oxides of carbon, oxides of nitrogen, water, acrolein, formaldehyde, other aldehydes, ketones, alcohols, fatty acids, methane, ethane, acetylene, other organic vapors and fumes.

SECTION 11. Toxicological Information

11.1 Primary Route(s) of Exposure: Eye and Skin Contact.

11.2 Potential Health Effects:

11.2.1 Eye contact: May cause irritation from mechanical abrasion.

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11.2.2 Skin: Pellets not expected to cause skin irritation. Contact with molten material may cause thermal burns

11.2.3 Inhalation: Not a likely route of exposure. Process fumes may cause irritation.

11.2.4 Ingestion: May pose a choking hazard if swallowed.

11.3 Immediate effects: Exposure during handling and processing may aggravate disorders of the eyes, skin, gastrointestinal tract, and respiratory system.

11.4 Delayed effects: There is no information on the long term health effects of exposure to this product or the fumes and dust that may result from the handling and processing of it.

11.5 Acute toxicity:

| Component | Measured toxicity |
|--|---|
| Carbon black (1333-86-4) | LD50: > 8000 mg/kg (Oral, Rat) |
| Chromium Oxide (Cr2O3) (1308-38-9) | ATE: 100.00 mg/kg body weight (Oral) ATE: 1.50 mg/l/4h (Dust/mist) |
| Titanium Dioxide (13463-67-7) | LD50: > 5000 mg/kg (Oral, Rat) LC50: > 6.82 mg/L (Inhaled Dust/Mist, Male Rat) |

11.6 Carcinogenicity: OSHA, IARC, and NTP have listed carbon black (pigment used in dark colors), as known human carcinogens. Titanium dioxide and chromium oxide have been identified as suspected or confirmed human carcinogens. These components are essentially bound to the plastic matrix and are unlikely to contribute to workplace exposure under recommended processing conditions.

11.7 Reproductive toxicity: Not classified.

11.8 Medical conditions aggravated: There are no known medical conditions aggravated by exposure to this product. However, certain sensitive individuals with respiratory impairments may be affected by exposure to components in the processing emissions.

SECTION 12. Ecological Information

12.1 Ecotoxicity: No data is available on the adverse environmental effects of this product. Ecotoxicity is expected to be low due to the limited water solubility of polymers. However, birds, fish, and other wildlife may eat pellets that may obstruct their intestinal tracts.

12.2 Persistence and degradability: This material is generally inert and insoluble and is not expected to have any adverse effect on the environment. This material may deteriorate by a number of mechanisms including photo- and thermo-oxidative degradation. Photodegraded polymers are also more easily biodegraded.

12.3 Bioaccumulation potential: No data available.

12.4 Mobility in soil: No data available.

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12.5 Other adverse effects: No data available.

SECTION 13. Disposal Considerations

13.1 Product Disposal: All recovered material should be packaged, labeled, transported, and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.

SECTION 14. Transport Information

This product is NOT regulated as a hazardous material/dangerous good for all forms of transportation

Regulation in Mexico:

- **ONU number:** None.
- **Official transportation designation of the United Nations:** None.
- **Class (s) of hazards in transportation:** None.
- **Packing group, if it is applicable:** None.
- **Environmental risks:** No additional information available.
- **Special precautions for the user:** None.
- **Bulk transport according to Annex II of MARPOL 73/78 and the IBC Code (IBC):** None.

Regulation in USA:

- **In Accordance with DOT:** Not regulated for transport.
- **In Accordance with IMDG:** Not regulated for transport.
- **In Accordance with IATA:** Not regulated for transport.
- **UN Number:** None.
- **UN Proper Shipping Name:** None.
- **Transport Hazard Class(es):** None.
- **Packing Group:** None.
- **Special precautions to be aware of or comply with:** None.

SECTION 15. Regulatory Information

15.1 USA

| SARA TITLE III (Superfund Amendments and Reauthorization Act)* | |
|--|---|
| Fire | No |
| Pressure | No |
| Reactivity | No |
| Acute | No |
| Chronic | No |
| 302/304 | This product does not contain chemicals regulated under SARA 302/304. |

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| 311/312 Hazard categories | This product does not meet the criteria of any SARA hazard categories. |
| 313 Toxic Release | This product does not contain any chemicals listed under SARA 313. |

* **Title III Notes:** This product contains no SARA “toxic chemicals” above threshold levels.

15.2 International regulation

All ingredients of this compound are listed on the following inventories or are exempt from listing:

| Country | Notifications list |
|-----------------------|--------------------|
| Australia | AICS |
| Canada | DSL |
| China | IECS |
| European Union | EINECS |
| Japan | ENCS/ISHL |
| Korea | ECL |
| New Zealand | NZIoC |
| USA | TSCA |

SECTION 16. Other Information

- **Date of elaboration:** December 2022.
- **Prepared by:** Advanced Composites Mexicana, S.A. de C.V.

The information is considered correct, but is not exhaustive and will be used only as guidance, which is based on current knowledge of the chemical or mixture and is applicable to the appropriate safety precautions for the product.

The information presented herein has been obtained from sources believed to be reliable. However, because of the possibility of human or mechanical error by our sources, Advanced Composites Mexicana, S.A. de C.V., or others do not guarantee the accuracy, adequacy, or completeness of any information, and is not responsible for any errors or omissions or for any results obtained from the use of such information. We assume no liability or responsibility, expressed or implied, for errors or omissions of any kind, and no warranties or merchantability or fitness, expressed or implied, is made or is to be implied. Consequently, each user should review the information to determine whether it is adequate and appropriate to all aspects of your intended use of this material.

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