
SAFETY DATA SHEET

PRODUCT NAME: IMPACT COPOLYMER POLYPROPYLENE

SDS Reference No. SDS-02-0007  REV NO. 1.3: December 14, 2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product Name: Impact Copolymer Polypropylene
Grade Name: AV161, AW564, AR564, AR764, AZ564, AZ564G, AZ764, CP55N, CP90N, CP245N, CP245NA, CP300N, CP390N, CP390NA
Description: Polypropylene (Block Copolymer)

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

IDENTIFIED USES:
Thermoplastic resin extruded or moulded by manufacturers into articles or goods such as collation shrink, liners, heavy duty sacks, refuse, tunnel films, mulching films, etc.

MOST COMMON TECHNICAL FUNCTION OF SUBSTANCE (WHAT IT DOES):
Not provided

USES BY CONSUMERS ADVISED AGAINST:
Do not use substance for purposes other than indicated in the manufacturer’s information. During such use the user may be exposed to unforeseen hazards.

1.3 Details of the supplier of the safety data sheet

Supplier: Rabigh Refining and Petrochemical (PetroRabigh) Company
Address: PO Box 666, Rabigh 21911, Kingdom of Saudi Arabia
Tel.: +966 12 425 0390
Free Number: 800 440 9000

e-mail address of person responsible for this SDS:
Moustafa A. Awad: Moustafa.Award@Petrorabigh.com
Mohamed I. El-Khashab: MohamedIbrahim.Khashab@Petrorabigh.com

1.4 Emergency telephone number

<table>
<thead>
<tr>
<th>Countries</th>
<th>Tel. No.</th>
<th>Languages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific (except China)</td>
<td>+65 3158 1074</td>
<td>English, Cantonese, Indonesian, Japanese, Korean, Malay, Mandarin, Thai, Vietnamese</td>
</tr>
<tr>
<td>China</td>
<td>+86 512 8090 3042 (only in case of high seas emergencies)</td>
<td>English, Mandarin</td>
</tr>
<tr>
<td>Europe, America, Middle East, Africa (Europe &amp; English Speaking):</td>
<td>+44 1235 239670</td>
<td>English, Albanian, Bulgarian, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Russian, Serb-Croat, Slovak, Spanish, Swedish, Turkish, Ukrainian</td>
</tr>
<tr>
<td>Middle East &amp; Africa (Arabic speaking):</td>
<td>+44 (0) 1235 239 671</td>
<td>English, Arabic, French</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

2.2.1 Classification and labeling in Annex of Directive 67/548/EEC:
This product is not classified as dangerous according to EU Directive 67/548/EEC.

Risk Phrases:
This product has been classified for the European Union according to Annex VI of this Directive. It is a preparation containing polymers and additives. Although it may contain components that may be classified, the substance does not present a danger to human health by inhalation, ingestion, or contact with the eyes and skin or to the aquatic environment in the form in which it is placed on the market. Based on Article 12 of Directive 1999/45/EC such preparations do not require labelling.
2.2.2 Classification according to Regulation (EC) No. 1272/2008:

This product is not classified as dangerous according to Regulation (EC) No 1272/2008.

Labeling

Signal word: Not applicable
Hazard pictograms: Not applicable
Hazard statements: Not applicable
Precautionary statements: Not applicable
Safety statements: Not applicable

According to Directive 1999/45/EC, this substance in NOT dangerous.

2.3 Other hazards

<table>
<thead>
<tr>
<th>Substance meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII:</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII:</td>
<td>None</td>
</tr>
<tr>
<td>Other hazards which do not result in classification:</td>
<td>Emergency overview:</td>
</tr>
<tr>
<td></td>
<td>INHALATION: Inhalation of fine particles may cause respiratory irritation. Thermal processing fumes may cause irritation, pulmonary oedema and possible asthma-like response. Some additives may include crystalline silica and/or talc. These additives are inextricably bound or coated in the Polypropylene; this appears to prevent any toxic reaction to the lungs.</td>
</tr>
<tr>
<td></td>
<td>EYES: Contact with powder or fines may cause mechanical irritation. Contact with hot or molten material may cause severe injury, including possible blindness.</td>
</tr>
<tr>
<td></td>
<td>SKIN: Contact with powder or fines may cause mechanical irritation, which is increased by rubbing or if skin is dry. Contact with hot or molten material may cause severe thermal burns. Some additives may include crystalline silica and/or talc. These additives are inextricably bound or coated in the Polypropylene; this appears to prevent any toxic reaction to the skin.</td>
</tr>
<tr>
<td></td>
<td>INGESTIONS: Ingestion of powder or fines may produce mild gastrointestinal irritation and disturbances.</td>
</tr>
</tbody>
</table>

SECTION 3: Composition/information on ingredients

3.1 Classification of the substance or mixture

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>% (BY Weight)</th>
<th>CAS#</th>
<th>EINECS#</th>
<th>HAZARD SYMBOL</th>
<th>RISK PHARES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene (Block Monomer)</td>
<td>&gt; 99</td>
<td>9010.79-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Additives</td>
<td>&lt;1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

3.2 Mixtures

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.

Inhalation

Remove victim to fresh air wearing self contained breathing apparatus, and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion
Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do NOT induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aider
No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation, where aspiration may cause pulmonary edema and pneumonitis.

4.2 Most important symptoms and effects, both acute and delayed
Potential acute health effects
Eye contact No information
Inhalation No information
Skin contact No information
Ingestion No information

Over-exposure signs/symptoms
Eye contact No specific data.
Inhalation No specific data.
Skin contact No specific data.
Ingestion No specific data.

4.3 Indication of any immediate medical attention and special treatment needed
Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. No mouth-to-mouth resuscitation. Do not induce vomiting, use gastric lavage only.
Specific treatments No specific treatment

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media Water fog or water spray. In the case of small fires, dry chemical or carbon dioxide or foam can be used.
Unsuitable extinguishing media Do not use high pressure or full jet water stream, high pressure, direct water streams as it may scatter and spread fire. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

5.2 Special hazards arising from the substance of mixture
Hazardous thermal decomposition products Decomposition products under fire conditions or upon heating the substance may emit various oligomers, waxes, and oxygenated hydrocarbons as well as carbon oxides and small amounts of organic vapors (e.g., aldehydes, acrolein). Inhalation of these decomposition products may be hazardous to health.

5.3 Advice for firefighters
Special protective actions for fire-fighting Position upwind. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. If possible, move containers, stop flow of product. Continue water spray from protected position until container stays cool. Prevent water used in emergency cases from entering sewers and drainage systems.

Specific protective equipment for fire-fighting Fire-fighters shall wear self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures
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SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

7.1.1. Recommendations shall be specified to:
   (a) keep away from ignition sources, flames, static discharges;
   (b) allow safe handling of the substance such as containment and measures to prevent fire as well as aerosol and dust generation;
   (c) prevent handling of incompatible substances or mixtures;
   (d) reduce the release of the substance or mixture to the environment, such as avoiding spills or keeping away from drains;
   (e) use only properly specified equipment and materials which are suitable for this product.
   (f) ensure equipment is adequately earthed, and use of only non-sparking tools.

7.1.2. Advice on general occupational hygiene shall be provided, such as:
   (a) not to eat, drink, and smoke in work areas;
   (b) wash hands after use; and
   (c) remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

(a) store in accordance with local regulations;
(b) store in original container outdoors and protected from direct sunlight, or in well-ventilated areas, away from incompatible materials (see section 10) and food and drink;
(c) storage area must be clearly identified, well illuminated, clear of obstruction and accessible only to trained and authorized personnel;
(d) avoid accumulation of dust by frequent cleaning and suitable construction storage and handling facility;
(e) keep container tightly closed, earthed (grounded) and sealed until ready for use;
(f) containers that have been opened must be carefully resealed and kept upright to prevent leakage;
(g) do not store in unlabelled containers;
(h) do NOT enter filled bulk containers and attempt to walk over the substance, due to risk of slipped and possible suffocation;
(i) use a fall arrest system when working near open bulk containers; and
(j) use appropriate containment to avoid environmental contamination.

### 7.3 Specific end use(s)

**Recommendations**
Outdoor storage of product in bags requires protection from ultra-violet sunlight by use of a UV stabilized bag or alternate means.

**Industrial sector specific solutions**
No information is available.

### SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

#### 8.1 Control parameters

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Form</th>
<th>Exposure Limit (8-hour)</th>
<th>STEL</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>Dust: Inhalable</td>
<td>TWA: 10 mg/m³</td>
<td>-</td>
<td>Belgium, Portugal, Ireland, UK</td>
</tr>
<tr>
<td></td>
<td>VLA-ED: 10 mg/m³</td>
<td>-</td>
<td></td>
<td>Spain</td>
</tr>
<tr>
<td></td>
<td>TLV: 10 mg/m³</td>
<td>-</td>
<td></td>
<td>ACGIH (2011)</td>
</tr>
<tr>
<td></td>
<td>TWA: 3 mg/m³</td>
<td>-</td>
<td></td>
<td>Belgium</td>
</tr>
<tr>
<td></td>
<td>TWA: 3 mg/m³</td>
<td>-</td>
<td></td>
<td>Portugal (related to nuisance dust; provided no asbestos and crystalline silica &lt; 0.1%)</td>
</tr>
<tr>
<td></td>
<td>TLV: 3 mg/m³</td>
<td>-</td>
<td></td>
<td>ACGIH (2011)</td>
</tr>
<tr>
<td></td>
<td>TWA: 4 mg/m³</td>
<td>-</td>
<td></td>
<td>Ireland, UK (related to nuisance dust)</td>
</tr>
<tr>
<td></td>
<td>VLA-ED: 3 mg/m³</td>
<td>-</td>
<td></td>
<td>Spain (related to nuisance dust; provided no asbestos and crystalline silica &lt; 0.1%)</td>
</tr>
<tr>
<td></td>
<td>Alveolar Respirable</td>
<td>TWA: 0.025 ppm</td>
<td>TLV-STEEL: 2.5 ppm</td>
<td>ACGIH (2011)</td>
</tr>
<tr>
<td></td>
<td>MAK: 0.3 mg/m³</td>
<td>-</td>
<td></td>
<td>Austria</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.1 mg/m³</td>
<td>-</td>
<td></td>
<td>Denmark</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.05 mg/m³</td>
<td>-</td>
<td></td>
<td>Finland</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.025 mg/m³</td>
<td>-</td>
<td></td>
<td>Portugal</td>
</tr>
<tr>
<td></td>
<td>VLA-ED: 0.1 mg/m³</td>
<td>-</td>
<td></td>
<td>Spain</td>
</tr>
<tr>
<td></td>
<td>LLV: 0.1 mg/m³</td>
<td>-</td>
<td></td>
<td>Sweden</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.3 mg/m³</td>
<td>-</td>
<td></td>
<td>UK</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.1 mg/m³</td>
<td>-</td>
<td></td>
<td>France &amp; Belgium</td>
</tr>
</tbody>
</table>

**Crystalline silica (Quartz) (if present)**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Form</th>
<th>Exposure Limit (8-hour)</th>
<th>STEL</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>Dust: Respirable</td>
<td>TLV: 0.025 ppm</td>
<td>TLV-STEEL: 2.5 ppm</td>
<td>ACGIH (2011)</td>
</tr>
<tr>
<td></td>
<td>MAK: 0.3 mg/m³</td>
<td>-</td>
<td></td>
<td>Austria</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.1 mg/m³</td>
<td>-</td>
<td></td>
<td>Denmark</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.05 mg/m³</td>
<td>-</td>
<td></td>
<td>Finland</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.025 mg/m³</td>
<td>-</td>
<td></td>
<td>Portugal</td>
</tr>
<tr>
<td></td>
<td>VLA-ED: 0.1 mg/m³</td>
<td>-</td>
<td></td>
<td>Spain</td>
</tr>
<tr>
<td></td>
<td>LLV: 0.1 mg/m³</td>
<td>-</td>
<td></td>
<td>Sweden</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.3 mg/m³</td>
<td>-</td>
<td></td>
<td>UK</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.1 mg/m³</td>
<td>-</td>
<td></td>
<td>France &amp; Belgium</td>
</tr>
</tbody>
</table>

**Recommended monitoring procedures**

Personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

**Derived no effect levels**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Type</th>
<th>Exposure</th>
<th>Value</th>
<th>Population</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>DNEL</td>
<td>Short term, Inhalation</td>
<td>No information available</td>
<td>Worker</td>
<td>Local</td>
</tr>
<tr>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>No information available</td>
<td>Worker</td>
<td>Local</td>
<td></td>
</tr>
</tbody>
</table>

**Predicted no effect concentrations**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Type</th>
<th>Compartment Detail</th>
<th>Value</th>
<th>Method Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>PNEC</td>
<td>Fresh water</td>
<td>not available</td>
<td>-</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Appropriate engineering controls: If user operations generate dust, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures:

Hygiene measures:
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection:
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: safety glasses with side-shields. Wear safety goggles in circumstances where eye contact may occur (e.g. acc. to EN 166).

Skin protection:

Hand protection: Wear thermal insulating gloves (e.g. acc. to EN 420, EN 388, EN 374-2, EN 374-3) whenever molten material is present.

Body protection:
Personal protective equipment for the body should be selected based on the task being performed and the risks involved. It is necessary to wear protective clothes (e.g. acc. to EN 465), heat resistant gloves and other protection equipment. Protective clothing should be regularly inspected and maintained. and should be approved by a specialist before handling this product.

Other skin protection:
Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection:
In the absence of effective engineering measures, and if during operations the exposure to large amounts of product dust is inevitable, then suitable respiratory protective equipment, such as A2 filtering mask or analogous should be applied (e.g. acc. to EN 14387). When working in vessel internals or other confined spaces do not use filtering masks but the special self-contained protective equipment. Respiratory protection equipment should be selected and used in accordance with the manufacturer’s instructions and requirements established by the law.

Environmental exposure controls:
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, dust bags, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state:</td>
<td></td>
</tr>
<tr>
<td>Form:</td>
<td>Solid, pellets, or granular powder</td>
</tr>
<tr>
<td>Color:</td>
<td>Clear to white</td>
</tr>
<tr>
<td>Odour:</td>
<td>Minimal; sweet</td>
</tr>
<tr>
<td>Odour threshold:</td>
<td>Not available</td>
</tr>
<tr>
<td>pH:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point/freezing point range:</td>
<td>162°C – 168°C</td>
</tr>
<tr>
<td>Boiling point:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density (Water=1):</td>
<td>0.90 – 0.92</td>
</tr>
<tr>
<td>Vapour Pressure:</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate (n-Butyl acetate=1):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour density (Air=1):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Water solubility:</td>
<td>Insolube</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water (log value):</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Softening point:</td>
<td>Not provided</td>
</tr>
</tbody>
</table>
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**REV NO.:** 1.3: December 14, 2016

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### Upper/lower flammability
- Not applicable

### Viscosity
- Not applicable

### Explosive properties
- Fine dust and powder may form explosive mixtures with air.

### Explosive limits
- Not provided

### Self-ignition temperature
- 490°C

### Decomposition temperature
- Not provided

### Oxidising properties
- Not available

### Stability in organic solvents and identity or relevant degradation products
- Not available

### Dissociation constant
- Not applicable

### Granulometry
- Not applicable

### 9.2 Other properties
- No additional information.

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**SECTION 10: Stability and reactivity**

### 10.1 Reactivity
- No specific test data related to reactivity available for this product or its ingredients.

### 10.2 Chemical stability
- This product is stable under normal use conditions for shock, vibration, temperature or pressure.

### 10.3 Possibility of hazardous reactions
- Under normal conditions of storage and use, hazardous reactions or polymerization will not occur.

### 10.4 Conditions to avoid
- Avoid creating airborne dust or powder. These may form explosive mixtures with air. Risk of dust-air explosions is increased if flammable vapours are also present.

### 10.5. Incompatible materials
- Strong oxidizing agents, organic solvents, ether, gasoline, lubricating oils, chlorinated hydrocarbons and aromatic hydrocarbons. For material compatibility see latest version of ISO 11114.

### 10.6 Hazardous decomposition products
- Under heating or fires, Polypropylene may emit various oligomers, waxes and oxygenated hydrocarbons as well as carbon oxides and small amounts of other organic vapours and fumes (e.g., aldehydes, acrolein). Inhalation of such decomposition products may be hazardous to human health and safety.

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**SECTION 11: Toxicological information**

### 11.1 Information on toxicological effects

#### Acute Toxicity

**Conclusion/summary:** Material is considered essentially inert and non-toxic. Exposure to elevated levels of dusts or heated vapours or fumes may cause skin, eyes and respiratory tract irritation and possibly pulmonary oedema. Contact with molten material can cause severe thermal burns. The material is expected to present a lesser degree of hazards since the hazardous components are incorporated in a polymer matrix.

**Acute oral toxicity:** Low toxicity; no data are provided.

**Acute inhalation toxicity:** High concentrations may cause pulmonary oedema; no data are provided.

#### Repeated dose Toxicity; oral

**Conclusion/summary:** No relevant human information is available.

#### Repeated dose Toxicity; inhalation

**Conclusion/summary:** No relevant human information is available. Crystalline silica (if present) is classified by IARC as A1 carcinogen (human carcinogen). However, it is considered bound into the polymer matrix which should prevent any toxic reaction to the respiratory tract system.

#### Repeated dose Toxicity; dermal

**Conclusion/summary:** This information is not available.
### Repeated dose Toxicity: other routes

**Conclusion/summary:** This information is not available.

### Irritation: skin

**Conclusion/Summary:** Prolonged or repeated contact with dust may cause skin mechanical irritation.

### Irritation: eyes

**Conclusion/Summary:** Prolonged or repeated contact with dust may cause eye mechanical irritation.

### Irritation: respiratory tract

**Conclusion/Summary:** Excessive dust levels can irritate the respiratory tract.

### Sensitisation: skin

**Conclusion/Summary:** The material is not considered a skin sensitizer.

### Sensitisation: respiratory tract

**Conclusion/Summary:** No human data are available indicating a concern for respiratory sensitisation.

### Mutagenicity:

**Conclusion/summary:** No human information is available.

### Carcinogenicity:

**Conclusion/summary:** The material is not classified as carcinogen. However, crystalline silica (if present) is human carcinogen.

### Reproduction Toxicity

#### Effects on fertility:

**Conclusion/summary:** No relevant human information is available.

#### Toxicity of reproduction

**Developmental toxicity:**

**Conclusion/summary:** No relevant human information is available.

### Teratogenicity:

**Conclusion/Summary:** No relevant human or non-human information is available.

### Specific target organ toxicity (single exposure):

**Conclusion/summary:** No relevant human or non-human information is available.

### Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>5</td>
<td>Inhalation and oral</td>
<td>Respiratory tract, lungs.</td>
</tr>
</tbody>
</table>

### Aspiration hazards:

**Hazards:** Not applicable

**Information on the likely routes of exposure:** No relevant human or non-human information is available

### Potential acute health effects:

**Eye contact:** Slightly and not specific.

**Inhalation:** Excessive exposure to the material may be harmful and irritating to the respiratory tract by inhalation

**Skin contact:** Mechanical irritation

**Ingestion:** May produce mild gastrointestinal irritation and disturbances.

### Symptoms related to the physical, chemical and toxicological characteristics:

**Eye contact:** Slight but not specific irritation

**Inhalation:** Irritation

**Skin contact:** Irritation

**Ingestion:** Irritation and stomach disturbances
Delayed and immediate effects and also chronic effects from short and long term exposure:

Short-term exposure
Potential immediate effects: No relevant human or non-human information is available.
Potential delayed effects: No relevant human or non-human information is available.

Long-term exposure
Potential immediate effects: No relevant human or non-human information is available.
Potential delayed effects: No relevant human or non-human information is available.

Potential chronic health effects

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Target</th>
<th>Dose</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>DNEL; Acute-inhalation, local effects</td>
<td>workers</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>DNEL; long term-inhalation, local effects</td>
<td>workers</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>DNEL; Acute-inhalation, local effects</td>
<td>general population</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>DNEL; long term-inhalation, local effects</td>
<td>general population</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion/summary:
General: Polypropylene is irritating to skin and respiratory tract by inhalation. Harmful if swallowed.
Carcinogenicity: Not classified.
Mutagenicity: No relevant human or non-human information is available.
Teratogenicity: No human or non-human information is available.
Developmental effects: No human information is available.
Fertility effects: No known significant effects or critical hazards.
Other information: Not available

SECTION 12: Ecological information

12.1 Toxicity

Acute Toxicity
Polypropylene is an essentially biological inert solid and considered to be non-toxic to the aquatic environment. It is stable and does not decompose in landfills or in aquatic systems.

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species/Medium</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>LC50: Not provided</td>
<td>for freshwater fish:</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LC50: Not provided</td>
<td>LC50 for marine water fish</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>EC50/LC50: Not provided</td>
<td>freshwater invertebrates</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>EC50/LC50: Not provided</td>
<td>freshwater algae</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>EC50/LC50: Not provided</td>
<td>freshwater invertebrates</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>EC50 (96 h): Not provided</td>
<td>algae and aquatic plants</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>EC10/LC1/NOEC: Not provided</td>
<td>aquatic micro-organisms</td>
<td>-</td>
</tr>
</tbody>
</table>

Calculation of Predicted No Effect Concentration (PNEC):

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>PNEC</th>
<th>Species/Medium</th>
<th>Assessment factor</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>Not provided</td>
<td>aqua: freshwater</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Not provided</td>
<td>aqua: marine water</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Not provided</td>
<td>aqua: (intermittent releases)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Not provided</td>
<td>sediment (freshwater)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Not provided</td>
<td>Sediment (marine water)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**SAFETY DATA SHEET**

**PRODUCT NAME : IMPACT COPOLYMER POLYPROPYLENE**

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**Conclusion/summary:**
No information of other organisms is available.

### 12.2 Persistence and degradability

Essentially biologically inert and does not readily degrade. Under optimal oxidation conditions, >99% of Polypropylene will remain intact after exposure to microbial actions. Product will slowly change (embrittle) in the presence of sunlight, but will not fully breakdown. Product buried in landfill has been found to be stable over time. No toxic degradation products to aquatic and soil environment are known to be produced. Products of thermal decompositions disperse in the atmosphere.

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>not available</td>
<td>not available</td>
<td>not available</td>
</tr>
</tbody>
</table>

**Conclusion/summary:**
No information is available

### 12.3 Bioaccumulative potential

Polypropylene dust, powder and pellets are possibly accumulative in living organisms (birds and aquatic life) causing injury and possible death due to starvation.

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP &lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>not available</td>
<td>not available</td>
<td>Readily biodegradable</td>
</tr>
</tbody>
</table>

**Conclusion/summary:**
No information is available

### 12.4 Mobility in soil

<table>
<thead>
<tr>
<th>Soil/water partition coefficient (K&lt;sub&gt;OC&lt;/sub&gt;)</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>not available</td>
<td>If released into watercourses, most polyethylene pellets float. Pellets are persistent in aquatic and terrestrial systems. Product should be recovered from water and land following spills. The material has not been found to migrate through soils.</td>
</tr>
</tbody>
</table>

### 12.5 Results of PBT and vPvB assessment

**PBT:**
- P: not available
- B: not available
- T: not available; the substance does not fulfill the PBT criteria

**vPvB:**
- vP: Not available
- vB: Not available; the substance does not fulfill the vPvB criteria.

**12.6 Other adverse effects**
No known significant effects or critical hazards.

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**SECTION 13: Disposal considerations**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

#### 13.1 Waste treatment methods

**Product:**
- Methods of disposal: The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of non-recyclable products via a licensed waste disposal contractor. Disposal of this product, articles and any part thereof should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
- Hazardous waste: The classification of the product does not meet the criteria for a hazardous waste according to Directive 75/442/EEC.

**Packaging:**
- Methods of disposal: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions:**
This material and articles must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. If necessary, incinerate with waste heat recovery. Do NOT resort to UNCONTROLLED INCINERATION. Open burning of plastics at landfills is NOT acceptable.

---

**SECTION 14: Transport information**

<table>
<thead>
<tr>
<th>ADR</th>
<th>RID</th>
<th>IMDG</th>
<th>IATA/ICAO</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1 UN number</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.2 UN proper shipping name</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>
SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Substances of very high concern
None

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles: Not applicable

Other EU regulations


International regulations

Chemical Weapons Convention List Schedule I Chemical: Not listed
Chemical Weapons Convention List Schedule II Chemicals: Not listed
Chemical Weapons Convention List Schedule III Chemicals: Not listed

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments may still be required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms:
ATE = Acute Toxicity Estimate
CLP = Classification, Labeling and Packaging Regulation [Regulation (EC) No.1272/2008]
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
DNEL=Derived No Effect Level
DMEL=Derived Minimum Effect Level
NOAEL= No Observable Adverse Effect Level
N= Dangerous for the environment

Full text of classifications[DSD/DPD] None

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