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

1.1. Product identifier

Product form : Mixture
Product name : TOTAL POLYPROPYLENE HETEROPHASIC COPOLYMER
CAS No : 9010-79-1
Type of product : Polymers
Formula : (C3H6)x - (C2H4)y
Chemical structure :

Synonyms : 9010-79-1 ; PPC
Product group :
Other means of identification : POLYPROPYLENE HETEROPHASIC COPOLYMER - PPC

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

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : For more detailed information, see technical data sheet

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

REFINING & CHEMICALS BRANCH
TOTAL PETROCHEMICALS & REFINING SA/NV
Rue de l'Industrie 52 Nijverheidsstraat - B-1040 BRUSSELS - BELGIUM
+32 (0)2.288.91.11
rc.fer-sds@total.com - www.total.com

1.4. Emergency telephone number

Emergency number : Emergency call Carechem 24 International :
• for English speaking countries: +44 (0) 1235 239 670
• for Europe (in local languages): + 33 1 49 00 00 49
• for Africa and Middle East: + 44 (0) 1235 239 671 + for China: + 86 10 5100 3039
• for Asia Pacific (Hong Kong, Singapore, Taiwan, Philippines, India, Vietnam, Sri Lanka, Japan, Korea, Malaysia, Indonesia, Thailand) :
+ 65 3158 1074

<table>
<thead>
<tr>
<th>Country</th>
<th>Organisation/Company</th>
<th>Address</th>
<th>Emergency number</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>National Poisons Information Centre</td>
<td>PO Box 1297 Beaumont Road 9 Dublin</td>
<td>+353 1 809 2566, +353 1 809 2166 (public, 8am - 10pm, 7/7)</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects
To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.
2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
No labelling applicable

2.3. Other hazards

Other hazards not contributing to the classification: Fine dust may cause irritation of respiratory system and mucous. Contact with hot material - prevent serious burns. If heated to more than 160°C, the product may form vapours or fumes which may cause irritation of respiratory tract and cause coughing and sensation of shortness of breath. Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Dust may form explosive mixture in air. Combustible Dust.

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propene, polymer with Ethene.</td>
<td>(CAS No) 9010-79-1</td>
<td>&gt; 98</td>
<td>Not classified</td>
</tr>
<tr>
<td>Additive</td>
<td></td>
<td>&lt; 2</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Exposure to spray, fumes and vapours produced by heated or burned product: Move to fresh air. Call a doctor.
First-aid measures after skin contact: Exposure to splashing of hot product: Treat the affected part with cold water (by spraying or immersion). Do not remove clothing adhering to the skin. In case of severe burns, seek hospital treatment.
First-aid measures after eye contact: Immediately rinse with water for a prolonged period while holding the eyelids wide open. In case of irritation caused by fine dust: wash with copious volumes of water, until the irritation disappears.
First-aid measures after ingestion: Ingestion during handling is not likely. Do not induce vomiting. Rinse mouth out with water.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries: Refer to § 11 for more details on effects.

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: For small fire: Carbon dioxide. Dry powder. Water. For large fire: Foam.
Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture
Fire hazard: Combustible.

5.3. Advice for firefighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information: Notify fire brigade and environmental authorities. Evacuate unnecessary personnel. Use water spray to cool exposed surfaces.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Protective equipment: Do not attempt to take action without suitable protective equipment. Gloves. Safety glasses.
TOTAL POLYPROPYLENE HETEROPHASIC COPOLYMER
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

6.1.2. For emergency responders
Protective equipment : Use personal protective equipment as required.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
For containment : If spilled, may cause the floor to be slippery. Sweep up or vacuum up the product. Do not allow to enter drains or water courses. On water, recover/skim from surface and pour out in disposal container.
Other information : Dispose of contaminated material at an authorized site. Notify authorities if product enters sewers or public waters.

6.4. Reference to other sections
For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Hygiene measures : Do not eat, drink or smoke when using this product. Keep away from food and drink.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures : Comply with applicable regulations. Provide local exhaust or general room ventilation. Ground/bond container and receiving equipment. Take precautionary measures against static discharge.
Storage conditions : store at ambient temperature and at atmospheric pressure in original packaging (plastic or cardboard boxes) or in silo made of appropriate material (aluminium, stainless steel, ...). Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Proper grounding procedures to avoid static electricity should be followed. Store in dry, cool, well-ventilated area.
Special rules on packaging : three pallets must never be stacked. under normal storage conditions, and following good working practices, two pallets may be stacked on flooring in sound condition. however, when the pictorial warning as shown on the top of the safety data sheet is affixed to the pallet, the pallet must never be placed either on top of or below another pallet. N.B. :here the term pallet includes both the pallet and its load. when pallets are stored in racks, it should be checked whether the pallet is fit for stacking in the concerned racks.

7.3. Specific end use(s)
Recommended to professional users.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

<table>
<thead>
<tr>
<th>TOTAL POLYPROPYLENE HETEROPHASIC COPOLYMER (9010-79-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA - ACGIH</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls : Ensure good ventilation of the work station. If handling results in dust generation or high temperatures, local exhaust ventilation should be provided to insure that exposure to dust or decomposition products does not exceed the exposure recommended levels. Safety shower. Eye fountain.
Hand protection : Protective gloves. Use insulated gloves when handling this material hot
Eye protection : Safety glasses
Skin and body protection : Wear suitable protective clothing. Safety foot-ware
Respiratory protection : Dust/aerosol mask with filter type P1

Environmental exposure controls : Avoid release to the environment.
Other information : Do not eat, drink or smoke during use.
SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Pellet.</td>
</tr>
<tr>
<td>Colour</td>
<td>Translucent, White.</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>160 - 165 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>≈ 350 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>&gt; 380 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>905 kg/m³</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: &lt; 1 mg/l Insoluble</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>0.02 kg/m³ ( &lt; 63 µm )</td>
</tr>
</tbody>
</table>

9.2. Other information

VOC content: < 0.3 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Electrostatic charges may be generated during handling. Take precautionary measures against static discharge during blending and transfer operations.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Dust may form explosive mixture in air.

10.4. Conditions to avoid

No flames, no sparks. Eliminate all sources of ignition. Avoid temperature above 300°C.

10.5. Incompatible materials


10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified (Based on available data, the classification criteria are not met)</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified (Based on available data, the classification criteria are not met)</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Additional information</td>
<td>Heated product causes burns thermal decomposition products are produced at elevated temperatures and these may be irritating</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified (Based on available data, the classification criteria are not met)</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
TOTAL POLYPROPYLENE HETEROPHASIC COPOLYMER
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Additional information:
- Fine dust may cause irritation to ocular mucous
- Thermal decomposition products are produced at elevated temperatures and these may be irritating
- Heated product causes burns

Respiratory or skin sensitisation:
- Not classified

Germ cell mutagenicity:
- Not classified

Carcinogenicity:
- Not classified

Reproductive toxicity:
- Not classified

Specific target organ toxicity (single exposure):
- Not classified

Additional information:
- Dust may cause irritation of respiratory system
- If heated to more than 160°C, the product may form vapours or fumes which may cause irritation of respiratory tract and cause coughing and sensation of shortness of breath

Specific target organ toxicity (repeated exposure):
- Not classified

Aspiration hazard:
- Not classified

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general:
- Do not allow product to spread into the environment. This product does not present any particular risk for the environment.

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>TOTAL POLYPROPYLENE HETEROPHASIC COPOLYMER (9010-79-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>TOTAL POLYPROPYLENE HETEROPHASIC COPOLYMER (9010-79-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

<table>
<thead>
<tr>
<th>TOTAL POLYPROPYLENE HETEROPHASIC COPOLYMER (9010-79-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - soil</td>
</tr>
</tbody>
</table>

12.5. Results of PBT and vPvB assessment

<table>
<thead>
<tr>
<th>TOTAL POLYPROPYLENE HETEROPHASIC COPOLYMER (9010-79-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results of PBT assessment</td>
</tr>
</tbody>
</table>

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

Waste treatment methods:
- Dispose of in accordance with relevant local regulations. Do not discharge the product into the environment. Recycle the material as far as possible.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

<table>
<thead>
<tr>
<th>ADR</th>
<th>UN Number</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.2</td>
<td>UN proper shipping name</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3</td>
<td>Transport hazard class(es)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4</td>
<td>Packing Group</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5</td>
<td>Environmental hazards</td>
<td>Dangerous for the environment : No</td>
<td>Dangerous for the environment : No</td>
<td>Dangerous for the environment : No</td>
<td>Dangerous for the environment : No</td>
</tr>
</tbody>
</table>

Marine Pollutant:
- No

No supplementary information available
14.6. Special precautions for user

- Overland transport
  No data available

- Transport by sea (IMDG)
  No data available

- Air transport (IATA)
  No data available

- Inland waterway transport
  No data available

- Rail transport
  No data available

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

VOC content: < 0.3 %

15.1.2. National regulations

These registration entries are for polymers only. For additives, please refer to TOTAL who will provide the necessary certification
Not listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Complies the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS)
Listed on the China Inventory of Existing Chemical Substances (IECSC)
Listed on the Canadian DSL (Domestic Substances List)
Listed on NZIoC (New Zealand Inventory of Chemicals)

15.2. Chemical safety assessment

The substance is not classified for human health hazards or for environment effects and it is not PBT or vPvB so that no exposure assessment or risk characterisation is required. For tasks where the intervention of workers is required, the substance must be handled in accordance with good industrial hygiene and safety procedures

SECTION 16: Other information

Other information: Training staff on good practice. Manipulations are to be done only by qualified and authorised persons. Use good personal hygiene practices.