# Safety data sheet

## TOTAL POLYPROPYLENE HETEROPHASIC COPOLYMER

<table>
<thead>
<tr>
<th>Product:</th>
<th>PPRO-A01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revised:</td>
<td>09/01/2014</td>
</tr>
<tr>
<td>Version (en) nr:</td>
<td>11.1</td>
</tr>
<tr>
<td>Supersedes:</td>
<td>01/11/2013</td>
</tr>
</tbody>
</table>

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### 1. Identification of the substance / mixture and of the company / undertaking

#### 1.1. PRODUCT IDENTIFIER
- **Propene, polymer with Ethene.**

- **Trade name**: TOTAL POLYPROPYLENE HETEROPHASIC COPOLYMER
- **SDS number**: PPRO-A01
- **Name of the product**: POLYPROPYLENE HETEROPHASIC COPOLYMER
- **Other names**: 9010-79-1 ; PPC
- **Chemical name**: Propene, polymer with Ethene. ( hetero-phasic copolymer )
- **CAS number**: 9010-79-1

#### 1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE AND USES ADVISED AGAINST

- **Recommended uses**: Recommended to professional users

#### 1.3. DETAILS OF THE SUPPLIER OF SAFETY DATA SHEET

- **Trade name of the firm**: see below this page.
- **Email address**: rc.fer-sds@total.com (For LOR: rm.gb-msds@total.co.uk)

#### 1.4. EMERGENCY TELEPHONE 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

- **Official advisory body**
  - UK: National Poisons Emergency Number: 0845 4647
  - IRL: National Poisons Information Centre
  - PO Box 1297, Beaumont Hospital, Beaumont Road
  - Dublin 9.
  - Telephone: + 00 353 (0)1 809 2566 / + 00 353 (0)1 837 9964

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### 2. Hazards identification

#### 2.1. Classification of the substance
Safety data sheet

TOTAL POLYPROPYLENE HETEROPHASIC COPOLYMER

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PPROTO-A01 Version (en) nr : 11.1 Supersedes : 01/11/2013

EC-GHS (CLP) Not classified according to the regulation EC 1272/2008 (EC-GHS) and ATP


Main hazards none to our knowledge
low risk for temperatures below 160 °C

Adverse human health effects
Inhalation fine dust may cause irritation of respiratory system and mucous membranes.
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.

Skin contact in contact with hot material, may cause severe thermal burns

Eye contact fine dust may cause irritation to ocular mucous.

Ingestion polyolefins are biologically inert.

Adverse environmental effects because of its structure, the product should not be dangerous for aquatic life
non biodegradable

Adverse physicochemical effects combustible if exposed to flames.
flowing product can create electrical charge, resulting sparks may ignite dust or cause an explosion in some concentration ranges.

2.2. Label elements
EC-GHS (CLP) Not classified according to the regulation EC 1272/2008 (EC-GHS) and ATP

Pictogram(s)

- other non required

2.3. Other hazards
no information available

3. Composition / information on ingredients

3.1. Substances (chemical name) Propene, polymer with Ethene. : minimum 98 %
Chemical formula (C3H6)x - (C2H4)y
CAS number 9010-79-1
EINECS or ELINCS number the product is a polymer, following the European regulation, registration on the EINECS (European Inventory of Existing Commercial Chemical Substances) inventory is not required.

EC-GHS (CLP) non required

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www.total.com
4. First-aid measures

4.1. Description of first aid measures

Route of exposure

Inhalation exposure to spray, fumes and vapours produced by heated or burned product:
bring patient into fresh air
get medical advice if the symptoms continue.

Skin contact exposure to splashing of hot product:
treat the affected part with cold water (by spraying or immersion).
no attempt should be made to detach molten product adhering to the skin or to remove clothing attached with molten material, the injured body part would risk being pulled out; usually the layer detaches itself after a few days.
in case of severe burns, seek hospital treatment

Eye contact exposure to splashing of hot product:
treat the eyes with cold water.
Seek specialist advice at hospital or medical centre
in case of irritation caused by fine dust: wash with copious volumes of water, until the irritation disappears.

Ingestion ingestion during handling is not likely.
remove material from mouth
do not induce vomiting.

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

refer to § 11 for more details on effects.

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

no information available

5. Fire - fighting measures

Technical measures

stop the fire spreading.
call the fire brigade immediately.
evacuate non-essential personnel
protective clothing, goggles and self-contained breathing equipment should be made available for firemen.

5.1. Extinguishing media

Suitable for minor fires : carbon dioxide (CO2) or powder
5.2. Special hazards arising from the substance

Complete combustion, with an excess of oxygen forms: carbon dioxide (CO2) and water vapour.
Partial combustion, forms also: carbon monoxide (CO), soot and cracked products: aldehydes, ketones, Acetone, Acetaldehyde, Formaldehyde, Acrolein, hydrocarbons and volatile fatty acids.

5.3. Advice for firefighters

Wear suitable breathing equipment, in case of risk of exposure to vapour or fumes.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
- Wear a suitable anti-dust respirator
- Where exposure is likely, protective clothing must be worn including gloves, goggles/spectacles.

For emergency responders
- Wear suitable breathing equipment, in case of risk of exposure to vapour or fumes.

6.2. Environmental precautions

Do not dispose off this product into the environment.

6.3. Methods and material for containment and cleaning up

On soil
- Granules spilled on the floor can cause a risk of slipping on smooth surfaces.
- Recover the spilled product by sweeping or suction; put it in containers to facilitate its disposal.
- Dispose safely in accordance with local or national regulations.

On water
- Prevent the spilled material from spreading.
- If the material has been discharged into a stream or a sewerage system, inform the authorities of the possible presence of floating materials.
- Clean up the water surface by creaming off debris from the top.
- Refer to a specialist for waste disposal in a safe manner in accordance with local or national regulations.

6.4. Refer to points 8 and 13

7. Handling and storage

Important

Refer to any national measures that may be relevant.

7.1. Precautions for safe handling
7.2. Conditions for safe storage, including any incompatibilities

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, ...).
do not store near highly flammable materials.
store away from heating source. avoid static electricity build up with connection to earth.
store in dry, well-ventilated area.
prolonged storage preferably out of the sun or other sources of radiation

Storage of pallets
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 USE(S)

refer to point 8

8. Exposure controls / personal protection

8.1. CONTROL PARAMETERS

Ihhalable dust particles:
 US (ACGIH-2012): TLV-8h TWA: 10 mg/m³
 UK: HSE EH40/2005:
 Long-term exposure limit (8-hour TWA reference period) : 10 mg/m³
(Total Inhalable Dust)
respirable dust particles:
 US (ACGIH-2012): TLV- 8h TWA: 3 mg/m³
 UK: HSE EH40/2005:
 Long-term exposure limit (8-hour TWA reference period) : 4 mg/m³
(Respirable Dust)

8.2. EXPOSURE CONTROLS

Appropriate engineering controls
The substance is not classified for human health or for the
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>Appearance</td>
<td>pellets</td>
</tr>
<tr>
<td>Physical state at 20°C</td>
<td>solid</td>
</tr>
<tr>
<td>Colour</td>
<td>translucent or white opaque</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Change in physical state at 1013 hPa</td>
<td></td>
</tr>
<tr>
<td>Melting range (°C)</td>
<td>160 to 165</td>
</tr>
<tr>
<td>Flash point (ASTM D 1929)(°C)</td>
<td>± 350</td>
</tr>
<tr>
<td>Auto-ignition temperature (°C)</td>
<td>&gt; 380</td>
</tr>
<tr>
<td>Explosion limits (kg/m³)</td>
<td>:</td>
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</tbody>
</table>
10. Stability and reactivity

10.1. REACTIVITY 
the product is combustible if heated above the flash point.

10.2. CHEMICAL STABILITY 
stable under normal operating conditions of storage, handling and use

10.3. POSSIBILITY OF HAZARDOUS REACTIONS 
dust may form an explosive mixture with air, ignited by sparks or sources of ignition.

10.4. CONDITIONS TO AVOID 
avoid proximity or contact with flames or sparks
it is recommended not to heat at a temperature higher than 300 °C

10.5. INCOMPATIBLE MATERIALS 
avoid contact with strong acids halogens

10.6. HAZARDOUS DECOMPOSITION PRODUCTS 
complete combustion, with an excess of oxygen forms: carbon dioxide (CO2) and water vapour.
partial combustion, forms also: carbon monoxide (CO), soot and cracked products: aldehydes, ketones

Advice to prevent explosion 
avoid dust accumulation by use of filters in the pneumatic transport equipment.
thoroughly ventilate the working place.
use explosion proof electrical equipment
all conductive materials must be electrically earthed.
in case of pneumatic alimentation, feed the extruders by aspiration, use preferably nitrogen as carrier gas

11. Toxicological information

11.1. Information on toxicological effects

ACUTE TOXICITY 
polyolefins are biologically inert.

Ingestion 
because of its composition, the product should be considered as practically not harmful

LOCAL EFFECT
Inhalation 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.

Skin contact because of its composition, the product should be considered practically as not irritating. In contact with hot material, may cause severe thermal burns. Thermal decomposition products are produced at elevated temperatures and these may be irritating.

Eye contact because of its composition, the product should be considered practically as not irritating. Fine dust may cause irritation to ocular mucous. Splashing of molten droplets causes ocular tissue burns. Thermal decomposition products are produced at elevated temperatures and these may be irritating.

SPECIFIC EFFECTS Polyolefins are biologically inert.

12. Ecological information

Information on ecological effects avoid losses to the environment whenever possible.

12.1. TOXICITY because of its structure, the product should not be dangerous for aquatic life

12.2. PERSISTENCE AND DEGRADABILITY persistent in the environment

Biodegradation this substance is slowly biodegradable

BOD 5 (gO2/g) below the detection limit

12.3. BIOACCUMULATIVE POTENTIAL potential bioaccumulation of the product in environment is very low

12.4. MOBILITY

water / air evaporation into air is practically nil volatile organic compound (VOC) content of this product is < at 0.3 % weight

soil and sediments because of its physico-chemical properties, the product has a low soil mobility

water the product, in cases of accidental discharge, floats on the surface, is insoluble and its evaporation into air is practically nil

12.5. Results of PBT and vPvB assessment non required

12.6. OTHER ADVERSE EFFECTS no information available
13. Disposal considerations

13.1. Waste treatment methods

- authorized disposal
- as refuse for reprocessing
- do not dispose of by means of sinks, drains or into the immediate environment
- may be used as fuel in suitably designed installations.
- incinerate with household refuse in a municipal solid waste incinerator plan.

Industrial waste number EC 07 02 13, 16 01 19, 17 02 03 & 20 01 39: plastics

14. Transport information

- Road (ADR) / Rail (RID): Not restricted for transport.
- UN Number: not applicable
- Inland waterways (ADN): Not restricted for transport.
- Marine (IMO): Not restricted for transport.
- Air transport (ICAO / IATA): Not restricted for transport.

15. Regulatory information

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

- Germany
  - Wassergefährdungsklasse: NWG: non-hazardous to waters
  - Registration: These registration entries are for polymers only. For additives, please refer to TOTAL who will provide the necessary certification.
    - listed on the Canadian DSL (Domestic Substances List) inventory.
    - listed on the EINECS (European Inventory of Existing Commercial Chemical Substances) inventory.
    - listed on the ECL (Existing Chemical List) inventory.
    - listed on the ENCS (Existing & New Chemical Substances) inventory.
    - listed on the TSCA (Toxic Substances Control Act) inventory.
15.2. Chemical safety assessment

The substance is not classified for human health or for the environment, and 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.

16. Other information

Training advice

The use of this product requires specific training. The user must receive all product information in order to handle the product safely (personal protection equipment and best practice standards)

Further information

no information available


This information applies to the PRODUCT AS SUCH and conforming to specifications of TOTAL. In case of formulations or mixtures, it is necessary to ascertain that a new danger will not appear. The information contained is based on our knowledge of the product, at the date of publishing and it is given quite sincerely. However the revision of some data is in progress. Users are advised of possible additional hazards when the product is used in applications for which it was not intended. This sheet shall only be used and reproduced for prevention and security purposes. The references to legislative, regulatory and codes of practice documents cannot be considered as exhaustive. It is the responsibility of the person receiving the product to refer to the totality of the official documents concerning the use, the possession and the handling of the product. It is also the responsibility of the handlers of the product to pass on to any subsequent persons who will come into contact with the product. (usage, storage, cleaning of containers, other processes) the totality of the information contained within this safety data sheet and necessary for safety at work, the protection of health and the protection of environment.

The (*) indicate the changes made with respect to the previous version.