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

1.1. PRODUCT IDENTIFIER

Propene homopolymer

Trade name: TOTAL POLYPROPYLENE HOMOPOLYMER
SDS number: PPRO-A02
Name of the product: POLYPROPYLENE HOMOPOLYMER - PPH
CAS number: 9003-07-0

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: Petrochemicals.felr-sds@total.com

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

2. Hazards identification

2.1. Classification of the substance

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

67/548/EEC & 1994/5/EC
Not classified according to EEC directives 67/548/EEC (dangerous
Safety data sheet

TOTAL POLYPROPYLENE HOMOPOLYMER

Product : PPRO-A02

Version (en) nr : 11.0

Revised : 20/08/2012

Supersedes : 09/08/2011

Main hazards

substances) and 1999/45/EC (dangerous preparations).

Low risk for temperatures below 160 °C

Adverse human health effects

Inhalation fine dust may cause irritation of respiratory system and mucous.

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) -

2.3. Other hazards

no information available

3. Composition / information on ingredients

3.1. Substances (chemical name) Propene homopolymer : minimum 98 %

Chemical formula (C3H6)x

CAS number 9003-07-0

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

67/548/EEC & 1999/45/EC non required

Substances presenting a health hazard none

Chemical family Olefinic polymer : Polypropylene
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

Fire-class regulation: A: Solid material fires, principally of organic nature, that burn with incandescence.

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; for more extensive fires: foam, water spray (mist) to cool the surfaces exposed to the fire.
## 5.2. Special hazards arising from the substance

Complete combustion, with an excess of oxygen forms: carbon dioxide (CO\(_2\)) and water vapor. 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

### 7.1. Precautions for safe handling

Technical measures: All pneumatic transport equipment must be electrically earthed.
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.

8. Exposure controls / personal protection

8.1. CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMIT

- refer to any national measures that may be relevant.
- inhalable 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)
Respiratory protection
in case of risk of overexposure to dust, vapour or fumes (during product processing), it is recommended that a local exhaust system is placed above the conversion equipment (a fume hood) and the working area must be properly ventilated.
wear a suitable anti-dust respirator
recommended filter type : P1

Skin and body protection
where exposure is likely, protective clothing must be worn including gloves

Eye protection
goggles/spectacles

Other personal protection
safety non-slip shoes in areas where spills or leaks can occur.

Industrial health measures

General use
local exhaust ventilation may be needed when working in a closed area
use working clothing.
do not store near food products.
When using, do not eat, drink or smoke.

Environmental exposure controls
handle in accordance with good industrial hygiene and safety procedures

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
pellets

Physical state at 20°C
solid

Colour
translucent or white opaque

Odour
odourless

Change in physical state at 1013 hPa

Melting range (°C) 160 to 165

Flash point (ASTM D 1929)(°C) ± 350

Auto-ignition temperature (°C) > 380

Explosion limits (kg/m³):

Lower
0,020 (for polymer dust < 63 µm)

Density, mass at 20°C (kg/m³)
905 (ISO 1183)

Bulk density, mass at 20°C(kg/m³)
400 to 600

Solubility in water at 20°C (mg/l)
< 1 (insoluble)

Solubility
insoluble (organic solvents)
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
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
there is a slow loss by evaporation
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

according to local regulations.
authorized disposal
as refuse for reprocessing
do not dispose off by means of sinks, drains or into the immediate environment
may be used as fuel in suitably designed installations.
icinerate 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

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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 the product is a polymer, following the European regulation, registration on the EINECS (European Inventory of Existing Commercial Chemical Substances) inventory is not required.
listed on the Canadian DSL (Domestic Substances List) inventory.
listed on the AICS (the Australian Inventory of Chemical Substances).
listed on the Korean ECL (Existing Chemical List) Inventory.
listed on the Filipino PICCS (Philippine Inventory of Chemicals and Chemical Substances) inventory.
listed on the Japanese ENCS (Existing & New Chemical Substances) inventory.
listed on the United States 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.