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Alloys
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MATERIAL SAFETY DATA SHEET

Sterngold Part Number: 810003, 810005, 810007

Sterngold Description: Hader White Riders, Hader Yellow Riders, Hader Red Riders, 6 per package

Supplier Number: 9003-07-0

Supplier Description: Propene Homopolymer

Supplier MSDS Identification: PPRO – A02

10/1/12

Date Updated:

Safety data sheet

TOTAL POLYPROPYLENE HOMOPOLYMER

Product :
PPRO-A02

Version (en) nr : 11.0

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Revised : 20/08/2012
Supersedes : 09/08/2011

WARNING :

FOR STACKING

PALLETS, SEE

SECTION 7



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

injection
extrusion
for more detailed information, see technical data sheet.

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
(Safety data sheet)

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 & 1999/45/EC Not classified according to EEC directives 67/548/EEC (dangerous



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

-

WARNING :
FOR STACKING
PALLETS, SEE
SECTION 7



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



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Additives 2 % maximum

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.



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Not to be used	do not use water jets (stick jets) for extinguishing fire since they could help to spread the flames
5.2. Special hazards arising from the substance	complete combustion, with an excess of oxygen forms: carbon dioxide (CO ₂) 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

Technical measures	all pneumatic transport equipment must be electrically earthed.
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avoid dust accumulation by use of filters in the pneumatic transport equipment.

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

container

Suitable

Polyethylene, paper bags, stainless steel

7.3. SPECIFIC USE(S)

Recommended to professional users

refer to point 8

8. Exposure controls / personal protection

8.1. CONTROL PARAMETERS

refer to any national measures that may be relevant.

OCCUPATIONAL EXPOSURE LIMIT

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)

8.2. EXPOSURE CONTROLS

Occupational exposure controls

Personal protection



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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)



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pH value (concentrated product)	not applicable
Viscosity (mm ² /s)	not applicable
9.2. OTHER INFORMATION	no information available

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 (CO ₂) 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.
<u>Ingestion</u>	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



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Eye contact thermal decomposition products are produced at elevated temperatures and these may be irritating
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.
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



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API (Association of Plastic Industry) Code 5 PP: Polypropylene

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.



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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

Safety data sheet conforms to the Regulation (EU) N° 1907/2006

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.



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