

## Safety data sheet

## TOTAL PETROCHEMICALS POLYETHYLENE mPE

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Product :  
PETH-010

Version (en) nr : 10.2

Revised : 10/08/2011  
Supersedes : 15/07/2010WARNING :  
FOR STACKING  
PALLETS, SEE  
SECTION 7

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

**1.1. PRODUCT IDENTIFIER**

Polyethylene

Trade name TOTAL PETROCHEMICALS POLYETHYLENE mPE

SDS number PETH-010

Name of the product TOTAL mPE Lumicene

Chemical name ethylene - 1-hexene copolymer high, medium or low density polyethylene

CAS number 25213-02-9

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

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 TOTAL PETROCHEMICALS:

- 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

The UK National Poisons Emergency number is 0870 600 6266 (Outside the UK: +44 870 600 6266)

NB: these services are only available to health professionals

IRL: National Poisons Information Centre  
PO Box 1297, Beaumont Hospital, Beaumont Road  
Dublin 9.  
Telephone: +353 (01) 837 9964 / +353 (01) 809 2566

## 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



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Not classified according to EEC directives 67/548/EEC (dangerous substances) and 1999/45/EC (dangerous preparations).

**Main hazards**none to our knowledge  
low risk for temperatures below 130 °C**Adverse human health effects**

Inhalation

fine dust may cause irritation of respiratory system and mucous.  
if heated to more than 130°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)**

Polyethylene ethylene - 1-hexene copolymer

Chemical formula

(C<sub>2</sub>H<sub>4</sub>)<sub>x</sub>

CAS number

25213-02-9

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 to our knowledge

Chemical family

Olefinic polymer

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Additives	Antioxidants and stabilisers : 0,7 % maximum Pigments : from 0 to 8 %
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### 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  
seek medical advice.

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  
fine dust may cause irritation to ocular mucous.  
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.

Protective equipment for first-aiders

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

#### 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

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### 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



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Suitable	for minor fires : carbon dioxide (CO <sub>2</sub> ) or powder, water for more extensive fires : foam. water spray (mist) to cool the surfaces exposed to the fire.
Not to be used	do not use water jets (stick jets) for extinguishing fire since they could help to spread the flames
<b>5.2. Special hazards arising from the substance</b>	complete combustion, with an excess of oxygen forms: carbon dioxide (CO <sub>2</sub> ) 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
<b>5.3. Advice for firefighters</b>	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.
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### 7.1. Precautions for safe handling



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### Technical measures

all pneumatic transport equipment must be electrically earthed.  
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

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-2009): TLV-8h TWA: 10 mg/m<sup>3</sup>  
UK: HSE EH40/2005:  
Long-term exposure limit (8-hour TWA reference period) : 10 mg/m<sup>3</sup>  
(Total Inhalable Dust)  
IRL(2002): OEL (8h): 10 mg/m<sup>3</sup> (total inhalable)  
ZA (2006): OEL (8h): 10 mg/m<sup>3</sup> (inhalable particulate: PNOC)  
respirable dust particles:  
US (ACGIH-2009): TLV- 8h TWA: 3 mg/m<sup>3</sup>  
UK: HSE EH40/2005:  
Long-term exposure limit (8-hour TWA reference period) : 4 mg/m<sup>3</sup>  
(Respirable Dust)  
IRL(2002): OEL (8h): 4 mg/m<sup>3</sup> (respirable)  
ZA (2006): OEL (8h): 5 mg/m<sup>3</sup> (respirable particulate: PNOC)

### 8.2. EXPOSURE CONTROLS



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Occupational exposure controls

Personal protection



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	powder or pellets
Physical state at 20°C	solid
Colour	translucent , white opaque or coloured
Odour	odourless
Change in physical state at 1013 hPa	
Melting range (°C)	90 to 160
Flash point (ASTM D 1929)(°C)	± 340
Auto-ignition temperature (°C)	> 350
Explosion limits (kg/m <sup>3</sup> )	:
Lower	0,015 (for polymer dust < 63 µm)
Min. ignition energy at 20°C (mJ)	63
Vapour pressure at 20°C (hPa)	none



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Density, mass at 20°C (kg/m <sup>3</sup> )	910 - 990 (ISO 1183)
Solubility in water at 20°C (mg/l)	insoluble
pH value (concentrated product)	not applicable
Viscosity (mm <sup>2</sup> /s)	not applicable
<b>9.2. OTHER INFORMATION</b>	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 320 °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<sub>2</sub>) 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.  
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 130°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

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Eye contact	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
<b>SPECIFIC EFFECTS</b>	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  polyolefins are biologically inert. no particular preoccupation for man (Genotoxicity, carcinogenicity, reproductive toxicity)

**12. Ecological information**

Information on ecological effects	avoid losses to the environment whenever possible.
<b>12.1. TOXICITY</b>	because of its structure, the product should not be dangerous for aquatic life
<b>12.2. PERSISTENCE AND DEGRADABILITY</b>	persistent in the environment
Biodegradation	this substance is slowly biodegradable
BOD 5 (gO <sub>2</sub> /g)	below the detection limit
<b>12.3. BIOACCUMULATIVE POTENTIAL</b>	potential bioaccumulation of the product in environment is very low
<b>12.4. MOBILITY</b>	
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
<b>12.5. Results of PBT and vPvB assessment</b>	non required
<b>12.6. OTHER ADVERSE EFFECTS</b>	non required

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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 &amp; 20 01 39: plastics

API (Association of Plastic Industry) Code

2 : HDPE: high density Polyethylene

**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 PETROCHEMICALS 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 United States TSCA (Toxic Substances Control Act) inventory  
listed on the Canadian DSL (Domestic Substances List) inventory.  
listed on the Japanese ENCS (Existing & New Chemical Substances) inventory.  
listed on the AICS (the Australian Inventory of Chemical Substances).



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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 swiss (liste des toxiques IGS/ IGS Giftliste 2003-2004) inventory  
listed on the People's Republic of China register: CRC-SEPA (Chemical Registration Center for Chinese State Environmental Protection Administration)

**15.2. Chemical safety assessment**

non required

**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 PETROCHEMICALS.

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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