

# TOTAL EXPANDABLE POLYSTYRENE REGULAR GRADE

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 9/9/2017

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Version: 2.6

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

#### 1.1. Product identifier

Product form : Mixtures  
 Product name : TOTAL EXPANDABLE POLYSTYRENE REGULAR GRADE  
 CAS-No. : 9003-53-6  
 Type of product : Polymers  
 Formula : (C<sub>8</sub>H<sub>8</sub>)<sub>x</sub>  
 Chemical structure :  
 WARNING :  
 FOR STACKING  
 PALLETS, SEE  
 SECTION 7



Synonyms : 9003-53-6  
 Product group : -

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

##### 1.2.1. Relevant identified uses

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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  
 T +32 (0)2.288.91.11  
[rc.fer-sds@total.com](mailto:rc.fer-sds@total.com) - [www.total.com](http://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

| Country | Organisation/Company                                     | Address                                  | Emergency number   | Comment |
|---------|--|--|--|---------|
|         | National Poisons Emergency number                        |  | 08 45 46 47  |         |
| Ireland | National Poisons Information Centre<br>Beaumont Hospital | PO Box 1297<br>Beaumont Road<br>9 Dublin | +353 1 809 2566<br>(Healthcare professionals-24/7)<br>+353 1 809 2166 (public,<br>8am - 10pm, 7/7) |         |

### 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

In use may form flammable/explosive vapour-air mixture. some components may be dangerous for aquatic or terrestrial life.



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### 2.2. Label elements

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

Signal word (CLP) : Warning

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 - Keep container tightly closed  
P243 - Take precautionary measures against static discharge  
P403+P235 - Store in a well-ventilated place. Keep cool

EUH-statements : EUH018 - In use may form flammable/explosive vapour-air mixture

### 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 200°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. Substances

Not applicable

### 3.2. Mixtures

| Name                  | Product identifier   | %      | Classification according to Regulation (EC) No. 1272/2008 [CLP]  |
|-----------------------|--|--------|--|
| Polystyrene           | (CAS-No.) 9003-53-6  | > 88   | Not classified   |
| Additive              |  | < 6    | Not classified   |
| n-pentane             | (CAS-No.) 109-66-0<br>(EC-No.) 203-692-4   | < 4.8  | Flam. Liq. 2, H225<br>STOT SE 3, H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411  |
| Isopentane            | (CAS-No.) 78-78-4<br>(EC-No.) 201-142-8  | < 1.2  | Flam. Liq. 1, H224<br>STOT SE 3, H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411  |
| Styrene<br>(Impurity) | (CAS-No.) 100-42-5<br>(EC-No.) 202-851-5<br>(EC Index-No.) 601-026-00-0<br>(REACH-no) 01-2119457861-32 | < 0.08 | Flam. Liq. 3, H226<br>Acute Tox. 4 (Inhalation), H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Repr. 2, H361d<br>STOT SE 3, H335<br>STOT RE 1, H372<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412 |

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/effects : Refer to § 11 for more details on effects.

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

Treat symptomatically.



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### 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. In use, may form flammable/explosive vapour-air mixture.  
Hazardous decomposition products in case of fire : Carbon oxides (CO, CO<sub>2</sub>). Aldehydes. Ketones. Hydrocarbons. Toluene. Alcohols. Styrene.

#### 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.

##### 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. Keep recovered product for subsequent disposal. Do not allow to enter drains or water courses.  
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. Explosive atmospheres may result from the presence of flammable gas or from the evaporation of flammable liquids, such as some solvents. Such explosive atmospheres are likely to occur, for example, above mixers in which the product is to be added.  
Storage conditions : Explosive vapour/air mixtures may be formed. "Guidelines for Transport and Storage of Expandable - [www.plasticseurope.org](http://www.plasticseurope.org)". 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 "Do not stack" 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.  
Packaging materials : Polyethylene. Stainless steel.

#### 7.3. Specific end use(s)

Recommended to professional users.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

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|             |                                |  |
|-------------|--------------------------------|--|
| USA - ACGIH | ACGIH TWA (mg/m <sup>3</sup> ) | 10 mg/m <sup>3</sup> inhalable dust particles<br>3 mg/m <sup>3</sup> respirable dust particles |
|-------------|--------------------------------|--|



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| n-pentane (109-66-0)     |  |  |
|--------------------------|--|--|
| EU                       | IOELV TWA (mg/m <sup>3</sup> )         | 3000 mg/m <sup>3</sup>   |
| EU                       | IOELV TWA (ppm)                        | 1000 ppm   |
| Ireland                  | OEL (8 hours ref) (mg/m <sup>3</sup> ) | 3000 mg/m <sup>3</sup>   |
| Ireland                  | OEL (8 hours ref) (ppm)                | 1000 ppm   |
| Ireland                  | OEL (15 min ref) (mg/m <sup>3</sup> )  | 2250 mg/m <sup>3</sup>   |
| Ireland                  | OEL (15 min ref) (ppm)                 | 750 ppm  |
| United Kingdom           | WEL TWA (mg/m <sup>3</sup> )           | 1800 mg/m <sup>3</sup>   |
| United Kingdom           | WEL TWA (ppm)                          | 600 ppm  |
| United Kingdom           | WEL STEL (mg/m <sup>3</sup> )          | 5400 mg/m <sup>3</sup> (calculated)  |
| United Kingdom           | WEL STEL (ppm)                         | 1800 ppm (calculated)  |
| USA - ACGIH              | ACGIH TWA (ppm)                        | 1000 ppm   |
| 2-methylbutane (78-78-4) |  |  |
| EU                       | IOELV TWA (mg/m <sup>3</sup> )         | 3000 mg/m <sup>3</sup>   |
| EU                       | IOELV TWA (ppm)                        | 1000 ppm   |
| Ireland                  | OEL (8 hours ref) (mg/m <sup>3</sup> ) | 3000 mg/m <sup>3</sup>   |
| Ireland                  | OEL (8 hours ref) (ppm)                | 1000 ppm   |
| Ireland                  | OEL (15 min ref) (mg/m <sup>3</sup> )  | 2250 mg/m <sup>3</sup>   |
| Ireland                  | OEL (15 min ref) (ppm)                 | 750 ppm  |
| United Kingdom           | WEL TWA (mg/m <sup>3</sup> )           | 1800 mg/m <sup>3</sup>   |
| United Kingdom           | WEL TWA (ppm)                          | 600 ppm  |
| United Kingdom           | WEL STEL (mg/m <sup>3</sup> )          | 5400 mg/m <sup>3</sup> (calculated)  |
| United Kingdom           | WEL STEL (ppm)                         | 1800 ppm (calculated)  |
| USA - ACGIH              | ACGIH TWA (ppm)                        | 1000 ppm   |
| Styrene (100-42-5)       |  |  |
| Ireland                  | OEL (8 hours ref) (mg/m <sup>3</sup> ) | 85 mg/m <sup>3</sup>   |
| Ireland                  | OEL (8 hours ref) (ppm)                | 20 ppm   |
| Ireland                  | OEL (15 min ref) (mg/m <sup>3</sup> )  | 170 mg/m <sup>3</sup>  |
| Ireland                  | OEL (15 min ref) (ppm)                 | 40 ppm   |
| United Kingdom           | WEL TWA (mg/m <sup>3</sup> )           | 430 mg/m <sup>3</sup>  |
| United Kingdom           | WEL TWA (ppm)                          | 100 ppm  |
| United Kingdom           | WEL STEL (mg/m <sup>3</sup> )          | 1080 mg/m <sup>3</sup>   |
| United Kingdom           | WEL STEL (ppm)                         | 250 ppm  |
| USA - ACGIH              | ACGIH TWA (ppm)                        | 20 ppm   |
| USA - ACGIH              | ACGIH STEL (ppm)                       | 40 ppm   |
| USA - ACGIH              | Biological Exposure Indices (BEI)      | 400 mg/g Kreatinin (Medium: urine - Time: end of shift - Parameter: Mandelic acid plus phenylglyoxylic acid (nonspecific)<br>0.2 mg/l (Medium: venous blood - Time: end of shift - Parameter: Styrene (semi-quantitative)) |

## 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.

### Personal protective equipment:

Dustproof clothing. Gloves. Safety glasses. Dust formation: dust mask.

### 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-wear



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### 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

|  |                                       |
|--|---------------------------------------|
| Physical state                             | : Solid                               |
| Appearance                                 | : Pellet.                             |
| Colour                                     | : Translucent. White. Colour.         |
| Odour                                      | : Mild.                               |
| Odour threshold                            | : No data available                   |
| pH   | : Not applicable                      |
| Relative evaporation rate (butylacetate=1) | : No data available                   |
| Melting point                              | : No data available                   |
| Freezing point                             | : No data available                   |
| Boiling point                              | : No data available                   |
| Flash point                                | : -50 °C pentane                      |
| Auto-ignition temperature                  | : 285 °C pentane                      |
| Decomposition temperature                  | : < 250 °C                            |
| Flammability (solid, gas)                  | : No data available                   |
| Vapour pressure                            | : No data available                   |
| Relative vapour density at 20 °C           | : No data available                   |
| Relative density                           | : No data available                   |
| Density                                    | : ≈ 1050 kg/m <sup>3</sup>            |
| Solubility                                 | : Water: Insoluble                    |
| Log Pow                                    | : No data available                   |
| Viscosity, kinematic                       | : Not applicable                      |
| Viscosity, dynamic                         | : No data available                   |
| Explosive properties                       | : No data available                   |
| Oxidising properties                       | : No data available                   |
| Explosive limits                           | : 1.3 - 7.8 pentane                   |
| Lower explosive limit (LEL)                | : 0.015 kg/m <sup>3</sup> ( < 63 µm ) |

### 9.2. Other information

VOC content : < 6.3 %

## 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. In use may form flammable/explosive vapour-air mixture.

### 10.4. Conditions to avoid

No flames, no sparks. Eliminate all sources of ignition. Avoid temperature above 250°C.

### 10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Halogens.



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### 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

Acute toxicity : Not classified (Based on available data, the classification criteria are not met)

| <b>n-pentane (109-66-0)</b> |              |
|-----------------------------|--------------|
| LD50 oral rat               | > 2000 mg/kg |
| LD50 dermal rabbit          | 3000 mg/kg   |
| LC50 inhalation rat         | 364 mg/l/4h  |

  

| <b>2-methylbutane (78-78-4)</b> |                |
|---------------------------------|----------------|
| LD50 oral rat                   | > 2000 mg/kg   |
| LD50 dermal rabbit              | 3000 mg/kg     |
| LC50 inhalation rat             | 280 mg/l/4h    |
| LC50 inhalation rat (ppm)       | > 4094 ppmv/4h |

  

| <b>Styrene (100-42-5)</b> |              |
|---------------------------|--------------|
| LD50 oral rat             | 2650 mg/kg   |
| LC50 inhalation rat       | 11.8 mg/l/4h |
| LC50 inhalation rat (ppm) | 2770 ppmv/4h |

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)

pH: Not applicable

Additional information : Heated product causes burns  
thermal decomposition products are produced at elevated temperatures and these may be irritating

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)

pH: Not applicable

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

STOT-single exposure : Not classified

Additional information : dust may cause irritation of respiratory system.  
If heated to more than 200°C, the product may form vapours or fumes which may cause irritation of respiratory tract and cause coughing and sensation of shortness of breath  
May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified

| <b>n-pentane (109-66-0)</b>              |                  |
|--|------------------|
| NOAEC (inhalation, rat, gas, 90 days)    | 6660 ppmv/6h/day |
| NOAEC (inhalation, rat, vapour, 90 days) | 20 mg/l/6h/day   |

Aspiration hazard : Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : because of its structure, the product should not be dangerous for aquatic life. some components may be dangerous for aquatic or terrestrial life.

| <b>n-pentane (109-66-0)</b>    |  |
|--------------------------------|--|
| LC50 fish 1                    | 9.87 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss) |
| LC50 fish 2                    | 4.6 mg/l (n-pentane, 96h)                                      |
| EC50 Daphnia 1                 | 9.74 mg/l (Exposure time: 48 h - Species: Daphnia magna)       |
| EC50 other aquatic organisms 1 | 7.5 mg/l (algae, growth rate, n-pentane, 72-hour)              |
| EC50 other aquatic organisms 2 | 10.7 mg/l (algae, biomass, n-pentane, 72-hour)                 |

  

| <b>2-methylbutane (78-78-4)</b> |           |
|---------------------------------|-----------|
| LC50 fish 1                     | 4.26 mg/l |



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| <b>2-methylbutane (78-78-4)</b> |   |
|---------------------------------|---|
| EC50 Daphnia 1                  | 2.3 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| EC50 other aquatic organisms 1  | 7.5 mg/l  |
| EC50 other aquatic organisms 2  | 10.7 mg/l   |
| <b>Styrene (100-42-5)</b>       |   |
| LC50 fish 1                     | < 3.24 - 4.99 mg/l (Pimephales promelas)                |
| LC50 fish 2                     | 19.03 - 33.53 mg/l (Lepomis macrochirus)                |
| EC50 Daphnia 1                  | 3.3 - 7.4 mg/l ( Daphnia magna)                         |
| EC50 other aquatic organisms 1  | 1.4 mg/l (Pseudokirchneriella subcapitata)              |
| EC50 other aquatic organisms 2  | 0.72 mg/l (Pseudokirchneriella subcapitata)             |
| NOEC chronic algae              | 0.28 mg/l (96h)   |

### 12.2. Persistence and degradability

| <b>TOTAL EXPANDABLE POLYSTYRENE REGULAR GRADE (9003-53-6)</b> |  |
|---|--|
| Persistence and degradability                                 | Product persists. Not readily biodegradable. |
| BOD (% of ThOD)   | Below detection limit                        |
| <b>n-pentane (109-66-0)</b>                                   |  |
| Persistence and degradability                                 | Readily biodegradable.                       |
| <b>2-methylbutane (78-78-4)</b>                               |  |
| Persistence and degradability                                 | Readily biodegradable.                       |

### 12.3. Bioaccumulative potential

| <b>TOTAL EXPANDABLE POLYSTYRENE REGULAR GRADE (9003-53-6)</b> |  |
|---|--|
| Bioaccumulative potential                                     | Low bioaccumulation potential.                         |
| <b>n-pentane (109-66-0)</b>                                   |  |
| BCF fish 1  | 25 - 81 (n-pentane, isopentane & cyclopentane min/max) |
| Log Pow   | 3.39   |
| Log Kow   | 3.39   |
| <b>2-methylbutane (78-78-4)</b>                               |  |
| BCF fish 1  | 25 - 81  |
| Log Pow   | 3.2 - 3.3  |
| Log Kow   | 2.72   |
| <b>Styrene (100-42-5)</b>                                     |  |
| BCF fish 1  | 13.5   |
| Log Pow   | 2.95   |

### 12.4. Mobility in soil

| <b>TOTAL EXPANDABLE POLYSTYRENE REGULAR GRADE (9003-53-6)</b> |                        |
|---|------------------------|
| Ecology - soil  | low mobility.          |
| <b>2-methylbutane (78-78-4)</b>                               |                        |
| Log Koc   | 1.78 (estimated value) |

### 12.5. Results of PBT and vPvB assessment

| <b>TOTAL EXPANDABLE POLYSTYRENE REGULAR GRADE (9003-53-6)</b> |              |
|---|--------------|
| Results of PBT assessment                                     | Not required |

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of in accordance with relevant local regulations. Do not discharge the product into the environment.

## SECTION 14: Transport information

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

| ADR                                  | IMDG             | IATA             | ADN              | RID              |
|--------------------------------------|------------------|------------------|------------------|------------------|
| <b>14.1. UN Number</b>               |                  |                  |                  |                  |
| 2211                                 | 2211             | 2211             | 2211             | 2211             |
| <b>14.2. UN proper shipping name</b> |                  |                  |                  |                  |
| POLYMERIC BEADS,                     | POLYMERIC BEADS, | Polymeric beads, | POLYMERIC BEADS, | POLYMERIC BEADS, |



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| ADR  | IMDG  | IATA  | ADN   | RID   |
|--|---|---|---|---|
| EXPANDABLE   | EXPANDABLE  | expandable  | EXPANDABLE                                  | EXPANDABLE                                  |
| <b>Transport document description</b>  |   |   |   |   |
| UN 2211 POLYMERIC BEADS, EXPANDABLE, 9, III, (D/E)                               | UN 2211 POLYMERIC BEADS, EXPANDABLE, 9, III                                       | UN 2211 Polymeric beads, expandable, 9, III                                       | UN 2211 POLYMERIC BEADS, EXPANDABLE, 9, III | UN 2211 POLYMERIC BEADS, EXPANDABLE, 9, III |
| <b>14.3. Transport hazard class(es)</b>  |   |   |   |   |
| 9  | 9   | 9   | 9   | 9   |
|  |  |  | Not applicable                              | Not applicable                              |
| <b>14.4. Packing Group</b>   |   |   |   |   |
| III  | III   | III   | III   | III   |
| <b>14.5. Environmental hazards</b>   |   |   |   |   |
| Dangerous for the environment : No   | Dangerous for the environment : No<br>Marine Pollutant : No                       | Dangerous for the environment : No  | Dangerous for the environment : No          | Dangerous for the environment : No          |
| No supplementary information available   |   |   |   |   |

### 14.6. Special precautions for user

Special transport precautions

: According to dangerous goods transport legislations, ADR (road transport), RID (rail transport), IMDG (maritime transport), EPS is classified in class of danger "9", labeled as UN 2211 "Polymeric beads expandable, evolving flammable vapours", it belongs to the "product group III" for the packaging requirements; the octabins are designed in accordance to "IBC08 type 11G" specifications and are labeled accordingly. For road domestic transport, it is recommended that closed containers of boxes are avoided. Tilt trailers and curtain side trailers are recommended since ventilation is good. Load must be properly secured within the trailer (ADR refers to the European union recommendations). For ADR, the tunnel codes are D/E, two orange placards are required (one in front and one on the back of the vehicle), for groupage it is forbidden to mix EPS with the products of class 1 (explosive substances) nor with food and transshipments are not recommended (cfr ADR 1.4.3 requirements). For rail any type of wagon with side doors can be used. Checks to ensure adequate ventilation are recommended. Special attention should be paid to secure the goods inside the wagons and to avoid damage to the packaging. Fixed sections are helpful since the forces (eg. shunting) in rail transport can be much greater than those in road transport. Refer to RID for signals and other restrictions. For sea, closed deep sea containers are not allowed for UN 2211 (cfr IMDG SP965), deep sea containers must be either ventilated, open-top or "in one door off operation". In case of ventilated containers, the inlets and the outlets should extend along the full length of the container. The ventilation area at the bottom or roof of the container should cover a minimum of 500 cm<sup>2</sup> for a 20 foot container and 1000 cm<sup>2</sup> for a 40 foot container. At each access point, a warning including the words "CAUTION – MAY CONTAIN FLAMMABLE VAPOUR" should appear in lettering 25mm high. The sign shall remain on the cargo transport until it has been completely ventilated to remove any hazardous concentration of vapour or gas, and until the immediate vicinity of the cargo transport unit is clear of any source of ignition, and until the goods have been unloaded. A DGD (dangerous declaration form) must be issued to the forwarding agent so that the shipping line takes adequate stowing measures. A CPC (container packaging certificate) must be issued at container loading. Four placards n°9 and UN 2211 must be applied on the 4 sides of the container or of the semi-trailer (Guidelines for Transport and Storage of Expandable - [www.plasticseurope.org](http://www.plasticseurope.org))

### - Overland transport

Classification code (ADR) : M3  
 Special provisions (ADR) : 207, 633  
 Limited quantities (ADR) : 5kg  
 Excepted quantities (ADR) : E1  
 Packing instructions (ADR) : P002, IBC08, R001  
 Special packing provisions (ADR) : PP14, B3, B6  
 Mixed packing provisions (ADR) : MP10  
 Portable tank and bulk container instructions (ADR) : T1  
 Portable tank and bulk container special provisions (ADR) : TP33  
 Tank code (ADR) : SGAN  
 Tank special provisions (ADR) : TE20  
 Vehicle for tank carriage : AT



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Transport category (ADR) : 3  
Special provisions for carriage - Bulk (ADR) : VV3  
Hazard identification number (Kemler No.) : 90  
Orange plates :



Tunnel restriction code (ADR) : D/E  
EAC code : 2Y

### - Transport by sea (IMDG)

Special provisions (IMDG) : 207, 965  
Limited quantities (IMDG) : 5 kg  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P002  
Special packing provisions (IMDG) : PP14  
IBC packing instructions (IMDG) : IBC08  
IBC special provisions (IMDG) : B3, B6  
Tank instructions (IMDG) : T1, BK2  
Tank special provisions (IMDG) : TP33  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-I  
Stowage category (IMDG) : E

### - Air transport (IATA)

PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Forbidden  
PCA limited quantity max net quantity (IATA) : Forbidden  
PCA packing instructions (IATA) : 957  
PCA max net quantity (IATA) : 100kg  
CAO packing instructions (IATA) : 957  
CAO max net quantity (IATA) : 200kg  
Special provisions (IATA) : A38  
ERG code (IATA) : 9L

### - Inland waterway transport

Classification code (ADN) : M3  
Special provisions (ADN) : 27, 633  
Limited quantities (ADN) : 5 kg  
Excepted quantities (ADN) : E1  
Carriage permitted (ADN) : B  
Equipment required (ADN) : PP, EX, EP, A  
Ventilation (ADN) : VE01, VE03  
Provisions for inspection of holds during carriage (ADN) : IN01  
Number of blue cones/lights (ADN) : 0

### - Rail transport

Classification code (RID) : M3  
Special provisions (RID) : 207, 633  
Limited quantities (RID) : 5kg  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P002, IBC08, R001  
Special packing provisions (RID) : PP14, B3, B6  
Mixed packing provisions (RID) : MP10  
Portable tank and bulk container instructions (RID) : T1  
Portable tank and bulk container special provisions (RID) : TP33  
Tank codes for RID tanks (RID) : SGAN



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|   |        |
|---|--------|
| Special provisions for RID tanks (RID)                                  | : TE20 |
| Transport category (RID)  | : 3    |
| Special provisions for carriage – Bulk (RID)                            | : VW3  |
| Special provisions for carriage - Loading, unloading and handling (RID) | : CW31 |
| Colis express (express parcels) (RID)                                   | : CE11 |
| Hazard identification number (RID)                                      | : 90   |

### 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 : < 6.3 %

#### 15.1.2. National regulations

These registration entries are for polymers only. For additives, please refer to TOTAL who will provide the necessary certification  
Complies the United States TSCA (Toxic Substances Control Act) inventory  
Not listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
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)

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Training advice : Training staff on good practice. Manipulations are to be done only by qualified and authorised persons.

Other information : Use good personal hygiene practices.

Full text of H- and EUH-statements:

|                           |  |
|---------------------------|--|
| Acute Tox. 4 (Inhalation) | Acute toxicity (inhal.), Category 4  |
| Aquatic Chronic 2         | Hazardous to the aquatic environment — Chronic Hazard, Category 2                          |
| Aquatic Chronic 3         | Hazardous to the aquatic environment — Chronic Hazard, Category 3                          |
| Asp. Tox. 1               | Aspiration hazard, Category 1  |
| Eye Irrit. 2              | Serious eye damage/eye irritation, Category 2  |
| Flam. Liq. 1              | Flammable liquids, Category 1  |
| Flam. Liq. 2              | Flammable liquids, Category 2  |
| Flam. Liq. 3              | Flammable liquids, Category 3  |
| Repr. 2                   | Reproductive toxicity, Category 2  |
| Skin Irrit. 2             | Skin corrosion/irritation, Category 2  |
| STOT RE 1                 | Specific target organ toxicity — Repeated exposure, Category 1                             |
| STOT SE 3                 | Specific target organ toxicity — Single exposure, Category 3, Narcosis                     |
| STOT SE 3                 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H224                      | Extremely flammable liquid and vapour.   |
| H225                      | Highly flammable liquid and vapour.  |
| H226                      | Flammable liquid and vapour.   |
| H304                      | May be fatal if swallowed and enters airways.  |
| H315                      | Causes skin irritation.  |
| H319                      | Causes serious eye irritation.   |
| H332                      | Harmful if inhaled.  |
| H335                      | May cause respiratory irritation.  |



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|        |   |
|--------|---|
| H336   | May cause drowsiness or dizziness.                              |
| H361d  | Suspected of damaging the unborn child.                         |
| H372   | Causes damage to organs through prolonged or repeated exposure. |
| H411   | Toxic to aquatic life with long lasting effects.                |
| H412   | Harmful to aquatic life with long lasting effects.              |
| EUH018 | In use may form flammable/explosive vapour-air mixture          |

### SDS EU (REACH Annex II)

*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.*

