TOTAL POLYSTYRENE A RESISTANCE AU FEU AMELIOREE (HALOGEN)

Safety Data Sheet

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

Date of issue: 8/8/2017 Supersedes: 10/17/2016 Version: 11.6

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

1.1. Product identifier

Product form : Mixtures

Product name : TOTAL POLYSTYRENE A RESISTANCE AU FEU AMELIOREE (HALOGEN)

CAS-No. : 9003-53-6

Type of product : Polymers

Formula : (C8H8)x - (C4H6)y

Chemical structure :

Synonyms : 9003-55-8

Product group : -

Other means of identification : POLYSTYRENE A RESISTANCE AU FEU AMELIOREE

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

1.2.1. Relevant identified uses

Main use category : Professional use

Use of the substance/mixture : For more detailled 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
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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 Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 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

the product does not present, in the form in which it is placed on the market a danger to human health or to the environment (regulation EC 1272/2008 annex I, point 1.3.4).

2.2. Label elements

the product does not present, in the form in which it is placed on the market a danger to human health or to the environment (regulation EC 1272/2008 annex I, point 1.3.4).

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]
High Impact Polystyrene	(CAS-No.) 9003-55-8	75 - 98	Not classified
brominated additives (Flame retardants and fire preventing agents)		< 20	Not classified
antimony trioxide (Flame retardants and fire preventing agents)	(CAS-No.) 1309-64-4 (EC-No.) 215-175-0	< 5	Carc. 2, H351
Additive		< 2	Not classified
2-(2H-benzotriazol-2-yl)-p-cresol	(CAS-No.) 2440-22-4 (EC-No.) 219-470-5	< 1	Skin Sens. 1, H317 Aquatic Chronic 1, H410
octabenzone: Methanone, [2-hydroxy-4-(octyloxy)phenyl]phenyl-	(CAS-No.) 1843-05-6 (EC-No.) 217-421-2	< 1	Skin Sens. 1, H317 Aquatic Chronic 3, H412
1-phenylazo-2-naphthol	(CAS-No.) 842-07-9 (EC-No.) 212-668-2	< 1	Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351 Aquatic Chronic 4, H413
Styrene (Impurity)	(CAS-No.) 100-42-5 (EC-No.) 202-851-5 (EC Index-No.) 601-026-00-0 (REACH-no) 01-2119457861-32	< 0.08	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d STOT SE 3, H335 STOT RE 1, H372 Asp. Tox. 1, H304 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.

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

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO2). 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. 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. Paper bag. Carton. Stainless steel.

7.3. Specific end use(s)

Recommended to professional users.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

TOTAL POLYSTYRENE A RESISTANCE AU FEU AMELIOREE (HALOGEN) (9003-53-6)		
USA - ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ inhalable dust particles 3 mg/m³ respirable dust particles

Styrene (100-42-5)		
Ireland	OEL (8 hours ref) (mg/m³)	85 mg/m³
Ireland	OEL (8 hours ref) (ppm)	20 ppm
Ireland	OEL (15 min ref) (mg/m3)	170 mg/m³

Styrene (100-42-5)		
Ireland	OEL (15 min ref) (ppm)	40 ppm
United Kingdom	WEL TWA (mg/m³)	430 mg/m³
United Kingdom	WEL TWA (ppm)	100 ppm
United Kingdom	WEL STEL (mg/m³)	1080 mg/m³
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) 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

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	:	Opaque.
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	:	No data available
Auto-ignition temperature	:	≈ 490 °C

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	:	1030 - 1180 kg/m³
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
Lower explosive limit (LEL)	:	0.015 kg/m³ (< 63 µm)

9.2. Other information

Softening point	:	75 - 104 °C
VOC content	:	< 0.5 %

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.

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.

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)

Styrene (100-42-5)	
LD50 oral rat	2650 mg/kg
LD50 dermal rat	> 26.4 mg/kg
LC50 inhalation rat	11.8 mg/l/4h as a vapor
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	:	May cause an allergic skin reaction
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Antimony and its oxides. inhalation of fumes, vapours and impurities is dangerous for respiratory tract. Toxic fumes may be released. Based on animal experimentation, it is proved that product has shown carcinogenic effects (Antimony and its oxides)

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
STOT-repeated exposure	:	Not classified
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.

Styrene (100-42-5)	
LC50 fish 1	3.24 - 4.99 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 fish 2	19.03 - 33.53 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	3.3 - 7.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	1.4 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)
EC50 other aquatic organisms 2	0.72 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)
NOEC (acute)	44 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])

12.2. Persistence and degradability

TOTAL POLYSTYRENE A RESISTANCE AU FEU AMELIOREE (HALOGEN) (9003-53-6)	
Persistence and degradability	Product persists. Not readily biodegradable.
BOD (% of ThOD)	Below detection limit

12.3. Bioaccumulative potential

TOTAL POLYSTYRENE A RESISTANCE AU FEU AMELIOREE (HALOGEN) (9003-53-6)	
Bioaccumulative potential	Low bioaccumulation potential.

Styrene (100-42-5)	
BCF fish 1	13.5
Log Pow	2.95

12.4. Mobility in soil

TOTAL POLYSTYRENE A RESISTANCE AU FEU AMELIOREE (HALOGEN) (9003-53-6)	
Ecology - soil	low mobility.

12.5. Results of PBT and vPvB assessment

TOTAL POLYSTYRENE A RESISTANCE AU FEU AMELIOREE (HALOGEN) (9003-53-6)	
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. Recycle the material as far as possible. Do not discharge the product into the environment.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN Number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

ADR	IMDG	IATA	ADN	RID
14.4. Packing Group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No 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

- Overland transport

No data available

- Transport by sea (IMDG)

No data available

- Air transport (IATA)

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

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 : < 0.5 %

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

Other information : Training staff on good practice. Manipulations are to be done only by qualified and authorised persons. Use good personal hygiene practices.

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Aquatic Chronic 4	Hazardous to the aquatic environment — Chronic Hazard, Category 4
Asp. Tox. 1	Aspiration hazard, Category 1

Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H361d	Suspected of damaging the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

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.