



# SAFETY DATA SHEET

DOW CHEMICAL COMPANY LIMITED

Safety Data Sheet according to Reg. (EU) No 2015/830

**Product name:** XENERGY™ RTM-GV-Plus Extruded Polystyrene Foam

**Revision Date:** 27.11.2017

**Version:** 3.0

**Print Date:** 25.01.2018

DOW CHEMICAL COMPANY LIMITED encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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### 1.1 Product identifier

**Product name:** XENERGY™ RTM-GV-Plus Extruded Polystyrene Foam

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

**Identified uses:** Thermal insulation.

### 1.3 Details of the supplier of the safety data sheet

#### COMPANY IDENTIFICATION

DOW CHEMICAL COMPANY LIMITED  
STATION ROAD, BIRCH VALE, HIGH PEAK  
DERBYSHIRE  
England  
SK22 1BR  
UNITED KINGDOM

**Customer Information Number:**

+44 (0) 1663 746518

SDSQuestion@dow.com

**Fax:**

+44 (0) 1663 746605

### 1.4 EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 0031 115 694 982

**Local Emergency Contact:** 00 31 115 69 4982

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## SECTION 2: HAZARDS IDENTIFICATION

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### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008:**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008:**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

**Supplemental information**

EUH210 Safety data sheet available on request.

**2.3 Other hazards**

No data available

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

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**3.2 Mixtures**

This product is an article.

| CASRN /<br>EC-No. /<br>Index-No.                             | REACH<br>Registration<br>Number | Concentration | Component                                   | Classification:<br>REGULATION (EC) No<br>1272/2008 |
|--|---------------------------------|---------------|---|--|
| CASRN<br>811-97-2<br>EC-No.<br>212-377-0<br>Index-No.<br>-   | 01-2119459374-33                | < 6.0 %       | 1,1,1,2-<br>Tetrafluoroethane               | Press. Gas - Liquefied gas<br>- H280               |
| CASRN<br>29118-24-9<br>EC-No.<br>471-480-0<br>Index-No.<br>- | -                               | < 6.0 %       | Trans-1,3,3,3-<br>Tetrafluoroprop-1-<br>ene | Not classified                                     |

If present in this product, any not classified components disclosed above for which no country specific OEL value(s) is(are) indicated under Section 8, are being disclosed as voluntarily disclosed components.

For the full text of the H-Statements mentioned in this Section, see Section 16.

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**SECTION 4: FIRST AID MEASURES**

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**4.1 Description of first aid measures**

**General advice:**

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Skin contact:** Wash off immediately with plenty of water.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion:** No emergency medical treatment necessary.

**4.2 Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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## SECTION 5: FIREFIGHTING MEASURES

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### 5.1 Extinguishing media

**Suitable extinguishing media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam

**Unsuitable extinguishing media:** No data available

### 5.2 Special hazards arising from the substance or mixture

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. In smoldering or flaming conditions, carbon monoxide, carbon dioxide and carbon are generated. Combustion products may include and are not limited to: Hydrogen halides. Based on combustion toxicity testing, the effects of combustion from this foam are not more acutely toxic than the effects of combustion from common building materials such as wood.

**Unusual Fire and Explosion Hazards:** Container may vent and/or rupture due to fire. Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate. Dense smoke is produced when product burns.

### 5.3 Advice for firefighters

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct waterstream. Use fine water spray or foam. Cool surroundings with water to localize fire zone.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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**6.1 Personal precautions, protective equipment and emergency procedures:** There are no special required instructions.

**6.2 Environmental precautions:** There are no special required instructions.

**6.3 Methods and materials for containment and cleaning up:** Recover spilled material if possible. See Section 13, Disposal Considerations, for additional information.

**6.4 Reference to other sections:** References to other sections, if applicable, have been provided in the previous sub-sections.

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## SECTION 7: HANDLING AND STORAGE

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**7.1 Precautions for safe handling:** Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate. This product is combustible and may constitute a fire hazard if improperly used or installed. When installed, this product should be adequately protected as directed by national building regulations or instructions in the specific application brochure.

**7.2 Conditions for safe storage, including any incompatibilities:** During shipment, storage, installation and use, this material should not be exposed to flame or other ignition sources. Gas fired recirculating air furnaces or heaters, gas heaters, etc., drawing air from areas where there may be a presence of the blowing agents emitted from this foam during storage or fabrication, can be subject to rust and corrosion problems as a result of thermal decomposition of the blowing agents to hydrogen fluoride.

**7.3 Specific end use(s):** See the technical data sheet on this product for further information.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 8.1 Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

| Component                 | Regulation | Type of listing | Value/Notation                    |
|---------------------------|------------|-----------------|-----------------------------------|
| 1,1,1,2-Tetrafluoroethane | US WEEL    | TWA             | 1,000 ppm                         |
|                           | GB EH40    | TWA             | 4,240 mg/m <sup>3</sup> 1,000 ppm |

Concentrations of the blowing agents anticipated incidental to proper handling are expected to be well below those which cause acute inhalation effects and below exposure guidelines.

### 8.2 Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Eye protection should not be necessary. For fabrication operations safety glasses (with side shields) are recommended. Safety glasses (with side shields) should

be consistent with EN 166 or equivalent. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent.

**Skin protection**

**Hand protection:** Use gloves to protect from mechanical injury. Selection of gloves will depend on the task.

**Other protection:** No precautions other than clean body-covering clothing should be needed.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In dusty or misty atmospheres, use an approved particulate respirator. When respiratory protection is required for certain operations, including but not limited to saw, router or hot-wire cutting, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

**Environmental exposure controls**

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

**Appearance**

|                                      |   |
|--------------------------------------|---|
| Physical state                       | Board   |
| Color                                | black   |
| Odor                                 | Odorless  |
| Odor Threshold                       | Odorless  |
| pH                                   | Not applicable                                    |
| Melting point/range                  | No data available                                 |
| Freezing point                       | No data available                                 |
| Boiling point (760 mmHg)             | Not applicable                                    |
| Flash point                          | <b>closed cup</b> 346 °C <i>Literature</i>        |
| Evaporation Rate (Butyl Acetate = 1) | Not applicable                                    |
| Flammability (solid, gas)            | Not expected to form explosive dust-air mixtures. |
| Lower explosion limit                | Not applicable                                    |
| Upper explosion limit                | Not applicable                                    |
| Vapor Pressure                       | Not applicable                                    |
| Relative Vapor Density (air = 1)     | Not applicable                                    |
| Relative Density (water = 1)         | Not applicable                                    |
| Water solubility                     | insoluble   |

|  |   |
|--|---|
| Partition coefficient: n-octanol/water | No data available                             |
| Auto-ignition temperature              | 491 °C <i>Literature</i>                      |
| Decomposition temperature              | No test data available No test data available |
| Kinematic Viscosity                    | Not applicable                                |
| Explosive properties                   | Not applicable                                |
| Oxidizing properties                   | Not applicable                                |

#### 9.2 Other information

|                  |                                 |
|------------------|---------------------------------|
| Solid Density    | 20 - 70 kg/m3 <i>Literature</i> |
| Molecular weight | No data available               |

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## SECTION 10: STABILITY AND REACTIVITY

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**10.1 Reactivity:** No dangerous reaction known under conditions of normal use.

**10.2 Chemical stability:** Thermally stable at typical use temperatures.

**10.3 Possibility of hazardous reactions:** No dangerous reaction known under conditions of normal use.

Polymerization will not occur.

**10.4 Conditions to avoid:** Avoid temperatures above 300°C (572°F) Exposure to elevated temperatures can cause product to decompose. Avoid direct sunlight.

**10.5 Incompatible materials:** Avoid contact with oxidizing materials. Avoid contact with: Aldehydes. Amines. Esters. Liquid fuels. Organic solvents.

**10.6 Hazardous decomposition products:** Does not normally decompose. Decomposition products depend upon temperature, air supply and the presence of other materials. Aromatic compounds. Aldehydes. Hydrogen halides. Polymer fragments. Under high heat, non-flaming conditions, small amounts of aromatic hydrocarbons such as styrene and ethylbenzene are generated.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Acute oral toxicity

Swallowing is unlikely because of the physical state. Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Single dose oral LD50 has not been determined.,

**Acute dermal toxicity**

Skin absorption is unlikely due to physical properties.

The dermal LD50 has not been determined.,

**Acute inhalation toxicity**

Dust may cause irritation to upper respiratory tract (nose and throat). Fumes/vapors released during thermal operations such as hot wire cutting may cause respiratory irritation. Based on the available data, narcotic effects were not observed.

The LC50 has not been determined.,

**Skin corrosion/irritation**

Essentially nonirritating to skin.

Mechanical injury only.

**Serious eye damage/eye irritation**

Solid or dust may cause irritation due to mechanical action.

Fumes/vapor released during thermal operations such as hot-wire cutting may cause eye irritation.

**Sensitization**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

**Carcinogenicity**

No relevant data found.

**Teratogenicity**

No relevant data found.

**Reproductive toxicity**

No relevant data found.

**Mutagenicity**

No relevant data found.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

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## SECTION 12: ECOLOGICAL INFORMATION

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*Ecotoxicological information appears in this section when such data is available.*

### 12.1 Toxicity

#### Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms.

### 12.2 Persistence and degradability

**Biodegradability:** Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

### 12.3 Bioaccumulative potential

**Bioaccumulation:** No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

### 12.4 Mobility in soil

In the terrestrial environment, material is expected to remain in the soil.

### 12.5 Results of PBT and vPvB assessment

This mixture has not been assessed for persistence, bioaccumulation and toxicity (PBT).

### 12.6 Other adverse effects

Product contains no ozone-depleting components.

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## SECTION 13: DISPOSAL CONSIDERATIONS

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### 13.1 Waste treatment methods

All efforts to recycle material should be made. This material may be disposed of preferably by incineration under approved conditions or, in some countries, in approved landfills. Customers are advised to check their local legislation governing the disposal of waste materials. If incinerated, it is recommended that the flue gases be treated by a scrubber before exhausting to the atmosphere.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

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## SECTION 14: TRANSPORT INFORMATION

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### Classification for ROAD and Rail transport (ADR/RID):

- |                                 |                             |
|---------------------------------|-----------------------------|
| 14.1 UN number                  | Not applicable              |
| 14.2 UN proper shipping name    | Not regulated for transport |
| 14.3 Transport hazard class(es) | Not applicable              |
| 14.4 Packing group              | Not applicable              |



- 14.5 **Environmental hazards** Not considered environmentally hazardous based on available data.
- 14.6 **Special precautions for user** No data available.

**Classification for SEA transport (IMO-IMDG):**

- 14.1 **UN number** Not applicable
- 14.2 **UN proper shipping name** Not regulated for transport
- 14.3 **Transport hazard class(es)** Not applicable
- 14.4 **Packing group** Not applicable
- 14.5 **Environmental hazards** Not considered as marine pollutant based on available data.
- 14.6 **Special precautions for user** No data available.
- 14.7 **Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code** Consult IMO regulations before transporting ocean bulk

**Classification for AIR transport (IATA/ICAO):**

- 14.1 **UN number** Not applicable
- 14.2 **UN proper shipping name** Not regulated for transport
- 14.3 **Transport hazard class(es)** Not applicable
- 14.4 **Packing group** Not applicable
- 14.5 **Environmental hazards** Not applicable
- 14.6 **Special precautions for user** No data available.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## **SECTION 15: REGULATORY INFORMATION**

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### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

#### **REACH Regulation (EC) No 1907/2006**

This article contains neither dangerous substances nor dangerous mixtures which are intended to be released under normal or reasonably foreseeable conditions of use., The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the ef

**Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.**

Listed in Regulation: Not applicable

**15.2 Chemical safety assessment**

Not applicable

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**SECTION 16: OTHER INFORMATION**

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**Full text of H-Statements referred to under sections 2 and 3.**

H280 Contains gas under pressure; may explode if heated.

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008**

This product is not classified as dangerous according to EC criteria.

**Revision**

Identification Number: 99098896 / A279 / Issue Date: 27.11.2017 / Version: 3.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

|         |  |
|---------|--|
| GB EH40 | UK. EH40 WEL - Workplace Exposure Limits               |
| TWA     | Long-term exposure limit (8-hour TWA reference period) |
| US WEEL | USA. Workplace Environmental Exposure Levels (WEEL)    |

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

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