

## Safety data sheet

Printing date 10.03.2020

Version number 1

Revision: 10.03.2020

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

#### 1.1 Product identifier

Trade name:	<b>VERSALIS REVIVE PS _ Series Forever</b>
Registration number	Not applicable
Chemical name	Mixture of polystyrene and modified polystyrene with elastomers
(e-)SDS code	22070

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

Application of the substance / the mixture	Production of various plastic final applications.
Uses advised against	Not to be used for applications in contact with food, pharmaceuticals, cosmetics, drinking water and toys.

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

Manufacturer/Supplier:	Versalis S.p.A. Piazza Boldrini, 1 I-20097 San Donato Milanese (MI) N° telefono: +39 02 520 1
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E-mail address of the competent person responsible for the SDS:

e-mail: SDS.versalis@versalis.eni.com

#### 1.4 Emergency telephone number:

S.E.T. (24h): Italy 800 452 661; other countries +39 (0)362512868.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Based on the requirements of the CLP Regulation, the product is not classified.

#### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms	Not applicable
Signal word	Not applicable
Hazard statements	Not applicable

#### 2.3 Other hazards

Results of PBT and vPvB assessment

PBT: This substance / mixture is not a PBT applying the criteria of REACH Regulation, Annex XIII.

vPvB: This substance / mixture is not a vPvB applying the criteria of REACH Regulation, Annex XIII.

### SECTION 3: Composition/information on ingredients

#### 3.2 Chemical characterisation: Mixtures

Description:	Mixture composed of both virgin and post-consumer and selection polymers. Polymer: polystyrene, CAS: 9003-53-6. Copolymer: styrene-butadiene, CAS: 9003-55-8.
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Dangerous components:	Not applicable
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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General information:

No special measures required.

After inhalation:

Dust or gas/vapours released by heat: move the affected person away from the contaminated area into fresh air; seek medical assistance.

After skin contact:

In case of contact with melted material, cool down with cold water and seek medical assistance. Do not remove the product that solidified on skin. Treat as a burn.

After eye contact:

Rinse opened eye for several minutes under running water.

After swallowing:

No specific measure requested in case of ingestion. If needed seek medical assistance.

### 4.2 Most important symptoms and effects, both acute and delayed

Dust or gas/vapours released by heat: irritation of the respiratory organs. Eyes reddening.

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

No further relevant information available.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing agents:

Water, water spray, foam, dry chemicals, carbon dioxide.

For safety reasons unsuitable extinguishing agents:

Not applicable.

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

Combustion products: carbon dioxide, carbon monoxide (when starved of air / oxygen), and possible unburned hydrocarbons. Overheating/pyrolysis may evolve vapours made up of monomers, low molecular weight polymers and their oxidation products.

### 5.3 Advice for firefighters

Protective equipment:

Wear suitable protective clothing (helmet, goggles, fire resistant gloves, boots) and protect respiratory organs (self contained breathing apparatus).

Additional information

The product is combustible.  
Cool endangered receptacles with water spray.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Do not walk on granules to avoid slipping.

### 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

### 6.3 Methods and material for containment and cleaning up:

Collect by mechanical means.

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**6.4 Reference to other sections**

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See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
For information on disposal of contaminated material, see section 13.

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### SECTION 7: Handling and storage

**7.1 Precautions for safe handling**

During the processing of the product, avoid inhalation of fumes or powders, by providing good ventilation of the workroom and, if necessary, by a suitable exhaust system.

Powder formation by abrasion must be avoided during handling and transportation, especially when unloading; if such formation occurs, the powder must be eliminated immediately.

In normal conditions masks with antidust filters should be available for use when requested.

Information about fire - and explosion protection:

The product is a poor conductor and it is likely to accumulate electrostatic charges. Precautions normally used for not conductive materials and against the accumulation of electrostatic charges should be used during processes which employ powdered materials or produce dust (e.g.: reduce speed to the minimum, install earthing systems, the absolute prohibition to smoke and use free flames, use inert gases in mills and in the closed systems).

General recommendations on workplace hygiene

Apply the normal personal hygiene measures, in particular do not eat, drink or smoke while handling.

**7.2 Conditions for safe storage, including any incompatibilities**

Storage:

Requirements to be met by storerooms and receptacles:

Store the product in a covered place in its sealed packaging, away from direct sunlight and heat sources.

Ensure the proper ventilation in all storage areas.

Earth storage silos as precautionary measure against the static electricity build-up.

Information about storage in one common storage facility:

Not required.

Further information about storage conditions:

Product should be stored in a safe manner, to avoid danger from unstable or damaged packaging units (octabins/bags/boxes on pallet). In particular, stacking of packaged units can be dangerous to warehouse personnel.

In storage and working areas avoid pellets spilling as a possible cause of slipping.

**7.3 Specific end use(s)**

No further relevant information available.

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### SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities:

No further data; see item 7.

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### 8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

### 8.2 Exposure controls

General protective and hygienic measures:

Traces of monomers and other volatile substances may be given off during processing, particularly at unusually high processing temperatures.

Work rooms must be provided with adequate ventilation and exhaust equipment to collect dust and gas/vapours that may be evolved during the conversion.

Suitable technical controls

Ensure good ventilation / exhaustion at the workplace.

Personal protection measures

The personal protective equipment will vary according to the possible exposure and danger of working conditions.

Respiratory protection:

In normal conditions masks with antidust filters should be available for use when requested.

Protection of skin

Protection of hands:

Protective gloves

Eye/face protection:

Not necessary when no powders or vapours are present. Where present, wear suitable protective glasses.

Other:

Standard work clothes.

Thermal dangers

No information available

Limitation and supervision of exposure into the environment

No information available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:

Granulate

Colour:

Grey

Odour:

Weak, characteristic

Odour threshold:

Not determined.

pH-value:

Not applicable.

Change in condition

Melting point/freezing point:

Undetermined.

Initial boiling point and boiling range:

Undetermined.

Flash point:

Not applicable.

Flammability (solid, gas):

Not determined.

Ignition temperature:

>300 °C

Decomposition temperature:

Not determined.

Auto-ignition temperature:

Product is not selfigniting.

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Explosive properties:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure:	Not applicable.
Density at 20 °C:	1-1.1 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with water:	Insoluble.
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
<b>9.2 Other information</b>	No further relevant information available.

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### SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	The product does not participate to dangerous reactions if stored and handled as prescribed/indicated
<b>10.2 Chemical stability</b>	
Thermal decomposition:	Prevent the formation of noxious gases and vapours by using the advised conversion conditions. Stable in the normal storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	No dangerous reactions known.
<b>10.4 Conditions to avoid</b>	Exposure to sunlight and/or heat. Buildup of electrostatic charges.
<b>10.5 Incompatible materials:</b>	Avoid the contact with oxidising substances.
<b>10.6 Hazardous decomposition products:</b>	No dangerous decomposition products known.

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### SECTION 11: Toxicological information

<b>11.1 Information on toxicological effects</b>	
Acute toxicity	Based on available data, the classification criteria are not met.
Primary irritant effect:	
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	The product's dust may cause irritation of eyes.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Additional toxicological information:	The product does not present any intrinsic health hazard when processed according to correct working procedures. Specific information on the product is not available in the literature. Residual monomers may be present in the product at trace levels, hindered in the polymer matrix and therefore not available in normal conditions.

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CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)  
Germ cell mutagenicity  
Carcinogenicity  
Reproductive toxicity  
STOT-single exposure  
STOT-repeated exposure  
Aspiration hazard

No evidence of these effects has been reported.  
Based on available data, the classification criteria are not met.  
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### SECTION 12: Ecological information

#### 12.1 Toxicity

Aquatic toxicity:

#### 12.2 Persistence and degradability

Other information:

#### 12.3 Bioaccumulative potential

#### 12.4 Mobility in soil

General notes:

#### 12.5 Results of PBT and vPvB assessment

PBT:

vPvB:

#### 12.6 Other adverse effects

No further relevant information available.

The product is essentially a high molecular weight polymer, not regarded as ecotoxic.

The product is a non biodegradable polymer.

Does not accumulate in organisms

No further relevant information available.

Use according to good working practice, and avoid releasing the product into the environment.

This substance / mixture is not a PBT applying the criteria of REACH Regulation, Annex XIII.

This substance / mixture is not a vPvB applying the criteria of REACH Regulation, Annex XIII.

No further relevant information available.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

Recommendation

The same safety considerations that apply to the product as it is, apply to scraps/waste as well.

The incineration must be done under approved conditions, possibly with energy recovery and only at suitable facilities equipped with a scrubber for the treatment of fumes before their release into the atmosphere.

Landfilling should be avoided as far as possible. If unavoidable, use approved landfill sites.

Residues should be disposed of as required by national and local regulations.

Uncleaned packaging:

Recommendation:

Recommended cleansing agents:

Disposal must be made according to official regulations.

Not applicable.

Water, if necessary together with cleansing agents.

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### SECTION 14: Transport information

**14.1 UN-Number**

ADR/RID/ADN, IMDG, IATA Not applicable

**14.2 UN proper shipping name**

ADR/RID/ADN, IMDG, IATA Not applicable

**14.3 Transport hazard class(es)**
ADR/RID/ADN, ADN, IMDG, IATA  
Class Not applicable
**14.4 Packing group**

ADR/RID/ADN, IMDG, IATA Not applicable

**14.5 Environmental hazards:**

Marine pollutant: No

**14.6 Special precautions for user** Not applicable.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

Transport/Additional information: The product is not classified as dangerous for transportation according to the following regulations: ADR/RID, IMO, IATA.

### SECTION 15: Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

National regulations: Not applicable

Regulations of the European Union Not applicable

**15.2 Chemical safety assessment:** Assessment not required.

### SECTION 16: Other information

Department issuing SDS: SRBS/CESP

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

\* Data compared to the previous version altered.

Data and information contained in this Safety Data Sheet are based on our available knowledge at the last revision date. No guarantee can be given as to the sufficiency of any safety measures contained

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in this Safety Data Sheet, nor can it be assumed that other or additional measures may not be required under particular or exceptional circumstances. The user must make sure of the fitness and completeness of the information, according to the specific use they want to do.

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