We create chemistry

Safety data sheet

1. Identification

Product identifier

Styropor® Sekunda 2

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

Relevant identified uses: Expanding-agent containing plastic for the production of foam plastics
Recommended use: for industrial processing only, Expanding-agent containing plastic for the production of foam plastics

Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY

Telephone: +49 621 60-0
E-mail address: global.info@basf.com

Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

No need for classification according to GHS criteria for this product.

Label elements

Globally Harmonized System (GHS)

The product does not require a hazard warning label in accordance with GHS criteria.

Labeling of special preparations (GHS):
In use may form flammable/explosive vapour-air mixture.

Other hazards

According to UN GHS criteria

May cause some eye irritation which should cease after removal of the product. In use may form flammable/explosive vapour-air mixture.

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

Preparation based on: polystyrene, propellant, polymeric flame-proofing agent
CAS number 1195978-93-8

Hazardous ingredients (GHS)
According to UN GHS criteria

pentane

Content (W/W): < 5,3 % CAS Number: 109-66-0 EC-Number: 203-692-4	Asp. Tox. 1 Flam. Liq. 2 STOT SE 3 (drowsiness and dizziness) Aquatic Acute 2 Aquatic Chronic 2 H225, H304, H336, H401, H411 EUH066

isopentane

Content (W/W): < 1,4 % CAS Number: 78-78-4 EC-Number: 201-142-8	Asp. Tox. 1 Flam. Liq. 1 STOT SE 3 (drowsiness and dizziness) Aquatic Acute 2 Aquatic Chronic 2 H224, H304, H336, H401, H411 EUH066

For the classifications not written out in full in this section the full text can be found in section 16.

4. First-Aid Measures

Description of first aid measures

No special precautions necessary.

If inhaled:
Keep patient calm, remove to fresh air. If difficulties occur: Seek medical attention.

On skin contact:
Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

On contact with eyes:
In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek medical attention.

On ingestion:
No hazards anticipated. Rinse mouth and then drink 200-300 ml of water. If difficulties occur: Seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: headache, dizziness, coordination disorder, dazed state, Eye irritation, skin irritation

Hazards: No hazards anticipated.

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Additional information:
Use extinguishing measures to suit surroundings.

Special hazards arising from the substance or mixture

Carbon monoxide, Carbon dioxide, Styrene, aliphatic hydrocarbons
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Burns with dense emission of soot. Containers/tanks should be cooled with water spray. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Flammable concentrations of propellant may accumulate on storage in closed containers. Product will burn on contact with flame or exposure to high temperature.

6. Accidental Release Measures

High risk of slipping due to leakage/spillage of product. Shut off or stop source of leak.
Substance/product can form explosive mixture with air.

Personal precautions, protective equipment and emergency procedures

Sources of ignition should be kept well clear. Ensure adequate ventilation. Note that this gas is heavier than air and can spread along the ground in the direction of the wind. Beware of pits and confined spaces. Use antistatic tools. Vapours are heavy and collect in low areas. Avoid all sources of ignition: heat, sparks, open flame.

Environmental precautions

Do not allow to enter drains or waterways. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

For small amounts: Sweep/shovel up. Pack in tightly closed containers for disposal.
For large amounts: Pick up with vacuum equipment approved for use in hazardous locations. Pack in tightly closed containers for disposal.
Ensure adequate ventilation. Dispose of absorbed material in accordance with regulations. Avoid raising dust.

7. Handling and Storage

Precautions for safe handling

Avoid dust formation. Avoid inhalation of dusts. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Product may charge electrostatically: always use earthing leads when transferring from one container to another and earth containers. It is recommended that operators should wear antistatic clothing and footwear. Use antistatic tools. Ensure an efficient ventilation (at least one air change per hour). Provide good room ventilation even at ground level (vapours are heavier than air). Monitoring of the air in work room necessary.

Protect against moisture. Protect from direct sunlight. Protect against heat. Keep container tightly sealed. Containers under pressure should be opened with care to release pressure. Once container is opened, content should be used as soon as possible. Re-open used containers with caution. Provide good ventilation when handling large quantities. Containers should be opened carefully in well-ventilated areas to avoid static discharge. Sealed containers should be protected against heat as this results in pressure build-up.

Processing machines must be fitted with local exhaust ventilation. Avoid the formation and deposition of dust. During transportation in silo trucks the product is covered with nitrogen, do not climb in. Monitoring of the air in work room necessary. Product should be worked up in closed equipment as far as possible. Protect the container opening with a wire mesh cover.

Protection against fire and explosion:
The product is combustible. Vapours may form ignitable mixture with air. Keep away from heat. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Containers should be earthed during decanting operations. It is recommended that all conductive parts of the machinery are grounded. All parts of the plant and equipment should be electrically bonded together and grounded. Electrical continuity should be checked at regular intervals. Higher line velocity can increase the build-up of static electric charge. Avoid flammable gas mixtures. Ensure an efficient ventilation (at least one air change per hour). Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition. Because of danger of explosion, avoid vapours reaching the cellar, sewage water and pits. Empty containers may contain flammable residue.

Temperature class: T3 (Autoignition temperature >200 °C).

Conditions for safe storage, including any incompatibilities

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Paper/Fibreboard, Stove-lacquer RDL 50, Stove-lacquer R 78433, Carbon steel (Iron), Stainless steel 1.4301 (V2), Stainless steel 1.4361, Stainless steel 1.4401, Stainless steel 1.4439, Stainless steel 1.4539, Stainless steel 1.4541, Stainless steel 1.4571, Stainless steel 1.4306 (V2A), Stainless steel 1.4307, Stainless steel 1.4311, Stainless steel 1.4404, Polyamide (PA)
Further information on storage conditions: Protect against heat. Keep away from sources of ignition - No smoking. Keep only in the original container. Keep container tightly sealed. Protect against moisture. Avoid direct sunlight. Protect containers from physical damage. The authority permits and storage regulations must be observed. Store protected against freezing. Keep tanks under inert gas. Air monitoring should be used to alert any build up of explosive mixtures. Equipment to be installed in an environment with potentially explosive atmospheres should conform to the requirements of ATEX Directive 94/9/EC. Ventilate freight container with open door for 30 minutes before unloading.

Storage stability:

Keep container tightly closed and dry.
Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame.

8. Exposure Controls/Personal Protection

Exposure controls

Personal protective equipment

Respiratory protection:
Breathing protection if dusts are formed.

Hand protection:
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Safety glasses

Body protection:
Anti-static protective clothing, safety shoes (f.e. according to EN 20346), antistatic

General safety and hygiene measures
Avoid inhalation of dusts/mists/vapours. No special precautions necessary. When using do not eat or drink. When using do not smoke.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

State of matter:	solid	
Form:	beads	
Colour:	white	
Odour:	almost odourless	
Odour threshold:	not determined	
softening temperature:	approx. 70 °C	
onset of boiling:	The substance / product decomposes therefore not determined.	
Sublimation point:	not applicable	
Flammability:	not highly flammable	(UN Test N.1 (ready combustible solids))

Flammability of Aerosol Products:
not applicable, the product does not form flammable aerosoles

Lower explosion limit:
No data available.

Information on: pentane

Lower explosion limit:
For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.

Upper explosion limit:
No data available.
Information on: pentane
Upper explosion limit:
For liquids not relevant for classification and labelling.

Flash point:
Vapours are flammable.
Information on: pentane
Flash point: *-56 °C*

Auto-ignition temperature: 285 °C (DIN 51794)
Thermal decomposition: approx. 220 °C
No decomposition if used as directed.
pH value:
not soluble
Viscosity, dynamic:
not relevant
Thixotropy: not thixotropic
Solubility in water: not soluble
Solubility (qualitative) solvent(s): aromatic hydrocarbons, ketones, organic solvents
soluble
Partitioning coefficient n-octanol/water (log Kow):
not applicable
Vapour pressure:
not applicable
Relative density: 1,02 - 1,05
(20 °C)
Density: approx. 1,02 - 1,05 g/cm3
(20 °C)
Relative vapour density (air):2,5
Heavier than air.
Particle characteristics
Particle size distribution: No data available. -

9.2. Other information

Information with regard to physical hazard classes

Explosives
Explosion hazard: not explosive
Oxidizing properties
Fire promoting properties: not fire-propagating
Pyrophoric properties
Self-ignition temperature: Test type: Spontaneous self-ignition at room-temperature.

not self-igniting

Other safety characteristics

Bulk density:	approx. 600 kg/m3 (20 °C)
Miscibility with water:	immiscible
Evaporation rate:	The product is a non-volatile solid.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated., Vapours may form explosive mixture with air.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Formation of explosive gas/air mixtures.

Conditions to avoid

> 70 °C
Avoid all sources of ignition: heat, sparks, open flame. Avoid direct sunlight. Avoid electro-static discharge.

Incompatible materials

Substances to avoid:
explosive substances according UN transport regulations class 1, Propellant release will be boosted with increasing temperature.

Hazardous decomposition products

Possible thermal decomposition products:
pentane
styrene monomers, Heated product evolves combustible vapours.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Contact with heated product can cause thermal burns.

Experimental/calculated data:

LD50 (oral): > 2.000 mg/kg

LC50 (by inhalation): > 5 mg/l

LD50 (dermal): > 2.000 mg/kg

Irritation

Assessment of irritating effects:
No irritation is expected under intended use and appropriate handling.

No data available concerning irritating effects.

Experimental/calculated data:
Skin corrosion/irritation: non-irritant

Serious eye damage/irritation: non-irritant

Respiratory/Skin sensitization

Assessment of sensitization:
There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:
Non-sensitizing.

Germ cell mutagenicity

Assessment of mutagenicity:
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Carcinogenicity

Assessment of carcinogenicity:
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Reproductive toxicity

Assessment of reproduction toxicity:
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Other relevant toxicity information

No reports of ill effects provided product was correctly handled and processed.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. No toxic effects occur within the range of solubility.

Aquatic invertebrates:
EC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
Nominal concentration. The product has low solubility in the test medium. An eluate has been tested. No toxic effects occur within the range of solubility. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic plants:
EC50 (72 h) > 100 mg/l (growth rate), Desmodesmus subspicatus (OECD Guideline 201, static)
Nominal concentration. The product has low solubility in the test medium. An eluate has been tested. No toxic effects occur within the range of solubility. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Persistence and degradability

Assessment biodegradation and elimination (H2O):
In accordance with the required stability the product is not readily biodegradable. The product has not been tested. The statement has been derived from the structure of the product. The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

On the basis of the data available concerning eliminability/degradation and bioaccumulation potential, longer-term harm to the environment is improbable. No data available concerning biodegradation and elimination.

Elimination information:
Non-biodegradable.

Bioaccumulative potential

Bioaccumulation potential:
The product will not be readily bioavailable due to its consistency and insolubility in water.

Mobility in soil

Assessment transport between environmental compartments:
Adsorption in soil: Study scientifically not justified.

Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

Other adverse effects

The product does not contain substances that are listed in Regulation (EU) 2024/590 on substances that deplete the ozone layer.

Additional information

Add. remarks environm. fate & pathway:
Because of the product's consistency and low water solubility, bioavailability is improbable.

Other ecotoxicological advice:
At the present state of knowledge, no negative ecological effects are expected. No toxic effects occur within the range of solubility.

13. Disposal Considerations

Waste treatment methods

Surplus, unused, old beads may still contain residual pentane. Therefore product has to be treated using all the safety measures in place for the fresh material. See Also Section 7.
Recover or recycle if possible
Disposal is via incineration operated by an accredited disposal contractor.
Dispose of contents in a useful bundle in accordance with local, state or national legislation.

Contaminated packaging:
Remove all packaging for recovery or disposal

14. Transport Information

Land transport

ADR

UN number or ID number:	UN2211
UN proper shipping name:	POLYMERIC BEADS, EXPANDABLE
Transport hazard class(es):	-
Packing group:	III
Environmental hazards:	no
Special precautions for user:	Tunnel code: D/E Can release flammable vapors. No smoking.Ventilate freight container with open door for at least 30 minutes before unloading.

RID

UN number or ID number:	UN2211

UN proper shipping name:	POLYMERIC BEADS, EXPANDABLE
Transport hazard class(es):	-
Packing group:	III
Environmental hazards:	no
Special precautions for user:	Can release flammable vapors. No smoking.Ventilate freight container with open door for at least 30 minutes before unloading.

Inland waterway transport

ADN

UN number or ID number:	UN2211
UN proper shipping name:	POLYMERIC BEADS, EXPANDABLE
Transport hazard class(es):	-
Packing group:	III
Environmental hazards:	no
Special precautions for user:	Can release flammable vapors. No smoking.Ventilate freight container with open door for at least 30 minutes before unloading.

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

UN number or ID number:	UN 2211
UN proper shipping name:	POLYMERIC BEADS, EXPANDABLE
Transport hazard class(es):	9
Packing group:	III
Environmental hazards:	no Marine pollutant: NO
Special precautions for user:	EmS: F-A; S-I Can release flammable vapors. No smoking.Ventilate freight container with open door for at least 30 minutes before unloading.

Air transport

IATA/ICAO

UN number or ID number:	UN 2211
UN proper shipping name:	POLYMERIC BEADS, EXPANDABLE
Transport hazard class(es):	9
Packing group:	III
Environmental hazards:	No Mark as dangerous for the environment is needed

Special precautions for user:	Can release flammable vapors. No smoking.Ventilate freight container with open door for at least 30 minutes before unloading.

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information

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

Directive 94/62/EC on packaging and packaging waste

16. Other Information

In addition to the information given in the safety data sheet we refer to the product specific 'Technical Information'.

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Asp. Tox.	Aspiration hazard
Flam. Liq.	Flammable liquids
STOT SE	Specific target organ toxicity — single exposure
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H224	Extremely flammable liquid and vapour.
EUH066	Repeated exposure may cause skin dryness or cracking.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.