

Safety Data Sheet

STYROPOR KF362M

Revision date : 2009/12/25
Version: 1.0

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(30188698/SDS_GEN_US/EN)

1. Product and Company Identification

Company
BASF CORPORATION
100 Campus Drive
Florham Park, NJ 07932, USA

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP

Chemical family: Contains: propellant
Synonyms: EXPANDABLE POLYSTYRENE

2. Hazards Identification

Emergency overview

CAUTION:
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
INGESTION MAY CAUSE GASTRIC DISTURBANCES.
THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE
CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.
Use with local exhaust ventilation.
Wear NIOSH-certified chemical goggles.
Eye wash fountains and safety showers must be easily accessible.
Wear protective clothing.

State of matter: solid
Colour: white
Odour: faint specific odour

Potential health effects

Primary routes of exposure:

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute toxicity:

not applicable

Irritation / corrosion:

Frequent and prolonged contact can lead to skin irritation.
Irritation is possible when the product comes in contact with the skin, respiratory tract or the eyes.

Sensitization:

No data available concerning sensitizing effects.

Chronic toxicity:

Carcinogenicity: No data was available concerning carcinogenic activity.

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Repeated dose toxicity: No data available concerning repeated dose toxicity.

Reproductive toxicity: No data available concerning reproduction toxicity.

Genotoxicity: No data was available concerning mutagenic activity.

Signs and symptoms of overexposure:

No hazards anticipated.

Potential environmental effects

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.

Degradation / environmental fate:

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. 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.

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
9003-53-6	> 90.0 %	polystyrene
78-78-4	> 1.0 - < 3.0 %	isopentane
109-66-0	> 1.0 - < 3.0 %	Pentane

4. First-Aid Measures

If on skin:

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

If in 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.

If swallowed:

No hazards anticipated. Do not induce vomiting. If swallowed, seek medical advice immediately and show this container or label.

Note to physician

Treatment: Treat symptomatically.

5. Fire-Fighting Measures

Flash point:	225 - 235 °F	(ASTM D3278)
Flammability:	not highly flammable	(UN Test N.1 (ready combustible solids))
Self-ignition temperature:		not self-igniting

Suitable extinguishing media:

water spray, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

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Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

6. Accidental release measures

Personal precautions:

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.

Cleanup:

Ensure adequate ventilation. Dispose of absorbed material in accordance with regulations. Avoid raising dust. 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.

Further information:

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.

7. Handling and Storage

Handling

General advice:

Handle in accordance with good industrial hygiene and safety practice. Upon delivery, trailer and/or container should be opened and allowed to vent for a minimum of one (1) hour before unloading. The substance/product in bead or expanded form generates static charges during handling which are difficult to dissipate due to the insulating properties. Take precautionary measures against static discharges. Use antistatic tools. Provide good room ventilation even at ground level (vapours are heavier than air). Containers should be opened carefully in well-ventilated areas to avoid static discharge. Maintain air circulation and ventilation at a minimum rate of six air changes per hour to prevent the formation of flammable concentrations. Ensure adequate ventilation. The substance/ product may be handled only by appropriately trained personnel.

Protection against fire and explosion:

Vapours may form ignitable mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Keep away from heat. 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. The product is combustible. Avoid flammable gas mixtures. 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. The conveying velocity of the product should not exceed 8 m/second. Empty containers may contain flammable residue. All parts of the plant and equipment should be electrically bonded together and grounded. Electrical continuity should be checked at regular intervals.

Storage

General advice:

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. Ventilate freight container with open door for one hour before unloading. 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 confirm to the requirements of ATEX Directive 94/9/EC.

Storage incompatibility:

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General advice: Segregate from strong oxidizing agents.

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 and Personal Protection

Personal protective equipment

Hand protection:

Chemical resistant protective gloves, non-static gloves (e.g. of leather)

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Anti-static protective clothing, Antistatic safety shoes

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

Form:	beads	
Odour:	faint specific odour	
Colour:	white	
pH value:		not soluble
softening temperature:	approx. 160 °F	
Sublimation point:		not applicable
Density:	approx. 1.02 - 1.05 g/cm ³	(20 °C)
Bulk density:	approx. 600 kg/m ³	(20 °C)
Vapour density:	2.5	Heavier than air.
Miscibility with water:		immiscible
Solubility (qualitative):	soluble	
	solvent(s): aromatic hydrocarbons, ketones, organic solvents,	

10. Stability and Reactivity

Substances to avoid:

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

Hazardous reactions:

Formation of explosive gas/air mixtures.

Decomposition products:

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

Thermal decomposition:

approx. 220 °C
No decomposition if used as directed.

Corrosion to metals:

No corrosive effect on metal.

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Oxidizing properties:
not fire-propagating

11. Toxicological information

Acute toxicity

Information on: Pentane

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Vapours may cause drowsiness and dizziness. EU-classification

Information on: isopentane

Assessment of acute toxicity:

Aspiration may result in chemical pneumonitis, which may be fatal.

Oral:

Type of value: LD50

Value: > 2,000 mg/kg

Inhalation:

Type of value: LC50

Value: > 5 mg/l

Dermal:

Type of value: LD50

Value: > 2,000 mg/kg

Irritation / corrosion

Information on: isopentane

Assessment of irritating effects:

Skin contact may cause irritation and dermatitis.

Information on: Pentane

Assessment of irritating effects:

Not irritating to the skin. Not irritating to the eyes.

Skin:

Prolonged contact with the product can result in skin irritation.

Eye:

Similar findings as for skin apply to eyes.

Sensitization

Information on: Pentane

Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies.

Result: Non-sensitizing.

Repeated dose toxicity

Information on: isopentane

Assessment of repeated dose toxicity:

Chronic overexposure has been shown to cause adverse kidney effects in experimental animals.

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Other Information:

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

12. Ecological Information

Aquatic toxicity

Information on: Pentane
Assessment of aquatic toxicity:
Acutely toxic for aquatic organisms.

Aquatic invertebrates

Acute:
OECD Guideline 202, part 1 static
Daphnia magna/EC50 (48 h): > 100 mg/l
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 products of a similar structure and composition.

Aquatic plants

Toxicity to aquatic plants:
OECD Guideline 201 static
green algae/EC50 (72 h): > 100 mg/l
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 products of a similar structure and composition.

Degradability / Persistence Biological / Abiological Degradation

Evaluation: Non-biodegradable.

Bioaccumulation

The product will not be readily bioavailable due to its consistency and insolubility in water. Because of the product's consistency and low water solubility, bioavailability is improbable.

Other adverse effects:

At the present state of knowledge, no negative ecological effects are expected. No toxic effects occur within the range of solubility.
The product contains substances classified as dangerous for the environment. Studies conducted with the preparation revealed no effects on aquatic organisms. The classification is based on the studies with the preparation.

Information on: Pentane
The substance has a very low Global Warming Potential and no Ozone Depleting Potential.

13. Disposal considerations

Waste disposal of substance:

This product is not regulated by RCRA. This product is not regulated by CERCLA ('Superfund'). Dispose of in accordance with national, state and local regulations. Do not discharge into waterways or sewer systems without proper authorization.

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Container disposal:

Completely emptied packagings can be given for recycling. Contact manufacturer regarding recycling.

14. Transport Information

Land transport

USDOT

Hazard class: 9
Packing group: III
ID number: UN 2211
Hazard label: 9
Proper shipping name: POLYMERIC BEADS, EXPANDABLE

Sea transport

IMDG

Hazard class: 9
Packing group: III
ID number: UN 2211
Hazard label: 9
Marine pollutant: NO
Proper shipping name: POLYMERIC BEADS, EXPANDABLE (contains PENTANE)

Air transport

IATA/ICAO

Hazard class: 9
Packing group: III
ID number: UN 2211
Hazard label: 9
Proper shipping name: POLYMERIC BEADS, EXPANDABLE (contains PENTANE)

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Not hazardous;

State regulations

State RTK

MA, NJ, PA
MA, PA

CAS Number

78-78-4
109-66-0

Chemical name

isopentane
Pentane

16. Other Information

HMIS III rating

Health: 1 Flammability: 2 Physical hazard: 0

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NFPA and HMIS use a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates extreme danger. Although similar, the two rating systems are intended for different purposes, and use different criteria. The NFPA system was developed to provide an on-the-spot alert to the hazards of a material, and their severity, to emergency responders. The HMIS system was designed to communicate workplace hazard information to employees who handle hazardous chemicals.

BASF supports worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

Local Contact Information

K_ProdRegs@basf.com

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This product is of industrial quality and unless otherwise specified or agreed intended exclusively for industrial use.

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