

READ AND UNDERSTAND SAFETY DATA SHEET BEFORE HANDLING OR DISPOSING OF PRODUCT

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**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

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**MSDS CODE :** PF-001 REG GRADE  
**CHEMICAL NAME:** POLYMERIC BEADS, EXPANDABLE  
**GRADE :** Regular  
**SYNONYM(S) :** EPS  
**INTENDED USE:** For industrial processing only for the production of foam plastics

**DATE ISSUED** 02/02/2017  
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**COMPANY INFORMATION**

NexKemia Petrochemical Inc.  
24 Bellevue Street, P.O. Box 240  
Mansonville, QC, J0E 1X0  
Canada

**TELEPHONE NUMBERS - 24 HOUR EMERGENCY ASSISTANCE**

CANUTEC (CANADA) 613-996-6666

**TELEPHONE NUMBERS - GENERAL ASSISTANCE**

Head office (Mon to Friday) 7:30 / 4:00 pm 450-292-3333  
Email: [info@nexkemia.com](mailto:info@nexkemia.com)

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**2. HAZARD IDENTIFICATION**

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**Classified Hazards**

**H228- Flammables solids**  
**H320-Eye irritation**  
**H316-Mild skin irritation**  
**H3335- Specific target organ toxicity, single exposure; respiratory tract irritation-Category 3**  
**H336- Specific target organ toxicity, single exposure; Narcotic effects-category 3**

**Other hazards**

**Electrostatic charge may be generated during manipulation with the product**  
**Overexposure to dust/vapor/mist may aggravate existing respiratory conditions**

Label element

**DANGER**

EXTREMELY FLAMMABLE VAPOR

**WARNING**

VAPOR MAY CAUSE FLASH FIRE

VAPOR MAY CAUSE DIZZINESS AND DROWSINESS

VAPOR MAY CAUSE IRRITATION TO EYES, SKIN AND RESPIRATORY TRACT



Precautionary statements

***P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignitions sources.***

***No smoking***

***P233 – Keep container tightly closed***

***P243 – take precautionary measures against static discharge***

***P403 + P235 – Store in well ventilated place. Keep cool***

***P280- Wear proper PPE (Personal Protective Equipment)***

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**3. COMPOSITION AND INFORMATION ON INGREDIENTS**

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THE CRITERIA FOR LISTING COMPONENTS IN THE COMPOSITION SECTION AREAS FOLLOWS: CARCINOGENS ARE LISTED WHEN PRESENT AT 0.1 % OR GREATER; COMPONENTS WHICH ARE OTHERWISE HAZARDOUS ACCORDING TO OSHA ARE LISTED WHEN PRESENT AT 1.0 % OR GREATER; NON-HAZARDOUS COMPONENTS ARE LISTED AT 3.0 % OR GREATER. THIS IS NOT INTENDED TO BE COMPLETE COMPOSITIONAL DISCLOSURE. REFER TO SECTION 14 FOR APPLICABLE STATES' RIGHT TO KNOW AND OTHER REGULATORY INFORMATION.

Product and/or Component(s) Carcinogenic According to:  
OSHA \_\_\_ IARC \_\_\_ NTP \_\_\_ OTHER \_\_\_ WHMIS \_\_\_ NONE \_\_\_ X \_\_\_

**Composition:**

| <b>Chemical Name:</b>                                       | <b>CAS Number:</b> | <b>Exposure Limits:</b>   | <b>Range in %:</b> |
|---|--------------------|---|--------------------|
| Benzene, ethenyl-, homopolymer<br>(Common name:Polystyrene) | 9003-53-6          | N/A   | >92.6              |
| n-Pentane   | 109-66-0           | 600 ppm TWA ACGIH<br>1000 ppm TWA OSHA<br>750 ppm STEL OSHA<br>120 ppm TWA (Canada)<br>350 mg/m <sup>3</sup> TWA (Canada) | 3 – 8              |
| Isopentane  | 78-78-4            | 600 ppm TWA ACGIH   | 0 – 3              |

\* May contain trace amounts of styrene. See Section 11 for additional information.

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#### **4. FIRST AID MEASURES**

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**IF IN EYES:**

Flush eyes with plenty of water for several minutes. Remove larger particulates from the eye as one would any foreign object. Get medical attention if eye irritation persists or particulates are difficult to remove from the eye.

**IF ON SKIN:**

Wash skin with plenty of soap and water for several minutes. Get medical attention if skin irritation develops or persists.

**IF SWALLOWED:**

If more than several mouthfuls of this material are swallowed, give two glasses of water (16 oz.). Get medical attention.

**IF INHALATED:**

If inhaled, remove to fresh air. If not breathing, clear person's airway and give artificial respiration. If breathing is difficult, qualified medical personnel may administer oxygen. Get medical attention immediately.

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#### **5. FIRE-FIGHTING MEASURES**

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**Ignition Temperature - AIT (degrees C):**

260 (500 F) for Pentane  
471 (880 F) by ASTM D-1929 Expanded polystyrene

**Flash Point (degrees C):**

-40 (-40 F) CC for Pentane

**Flammable Limits % (Lower-Upper):**

Lower: 1.5 for Pentane  
Upper: 7.8 for Pentane

**Recommended Fire Extinguishing Agents And Special Procedures:**

Water may be ineffective on flames but should be used to cool fire-exposed containers and provide protection for persons attempting to stop the leak. Use water spray, dry chemical, foam or carbon dioxide to extinguish flames.

**Unusual or Explosive Hazards:**

Danger! Extremely flammable materials may release vapors that travel long distances, ignite, and flash back. Containers may explode in a fire. Do not expose to heat, sparks, flame, static, or other sources of ignition. When handling, use non-sparking tool, ground and bond all containers.

Explosive air-vapor mixtures may form. Fire gives off dense black smoke and acid gasses. Electrostatic discharge can be a source of ignition due to accumulated pentane vapors exceeding the L.E.L. (lower explosive limit) of 1.5% (15,000 ppm). Pentane vapors may be emitted from newly opened containers or when the product is heated. If ignited, there could be a very high rate of flame propagation.

**Special Protective Equipment for Firefighters:**

Wear full protective clothing and positive pressure breathing apparatus.

**"NO SMOKING - NO MATCHES - NO LIGHTERS - NO WELDING"**  
**Rules should be enforced.**

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## **6. ACCIDENTAL RELEASE MEASURES:**

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### **Procedures in Case of Accidental Release, Breakage or Leakage:**

Avoid the generation of dust clouds. Place in appropriate containers for disposal or recycle. Avoid breathing dust. Pressure demand air supplied respirators should always be worn when the airborne concentration of the contaminant or oxygen is unknown. Otherwise, wear respiratory protection and other personal protective equipment as appropriate for the potential exposure hazard. Wear gloves, goggles, and protective clothing to avoid contact with eyes, skin, or clothing. Use vacuuming or sweeping compound for clean-up. Do not dry sweep or use methods which increase dusting. Prevent entry into sewers and waterways.

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## **7. HANDLING AND STORAGE**

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### **Precautions to be taken in:**

#### **Handling:**

Use spark-proof tools. Material may be at elevated temperatures and/or pressures. Exercise care when opening bleeders and sampling ports.

#### **Storage:**

Ground and bond shipping container, transfer line, and receiving container. Keep away from heat, sparks, flame, and other sources of ignition.

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## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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### **Protective Equipment (Type)**

#### **Eye Protection:**

Avoid eye contact. Protective glasses should be worn. Do not wear contact lenses.

#### **Skin Protection:**

Workers should wash exposed skin several times daily with soap and water. Wearing protective gloves is recommended. Soiled work clothing should be laundered or dry-cleaned after each exposure.

#### **Respiratory Protection:**

Airborne concentrations should be kept to lowest levels possible. If vapor, mist or dust is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air supplied respirator after determining the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown.

#### **Ventilation:**

Use explosion-proof equipment to maintain adequate ventilation to meet occupational exposure limits, if applicable (see below), prevent accumulation of explosive air-gas mixtures, and avoid significant oxygen displacement. Oxygen levels should be at least 19.5% in confined spaces or other work areas (OSHA value).

#### **Exposure Limit for the Total Product:**

None established for product; refer to Section 3 for component exposure limits.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**Appearance:**

Solid, white beads

**Odor:**

Slight hydrocarbon odor

**Boiling Point (degrees C):**

Not applicable.

**Melting/Freezing Point (degrees C):**

Softens and expands > 75 C (170 F)

**Specific Gravity (water=1):**

Depending on bulk density of the product, the material may float on the top of water.

**pH:**

Not applicable

**Vapor Pressure:**

Negligible

**Viscosity:**

Not applicable

**VOC Content:**

Not determined.

**Vapor Density (Air=1):**

>1

**Solubility in Water (%):**

< 0.1

**Other:**

None

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## 10. STABILITY AND REACTIVITY

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**This Material Reacts Violently With:**

Air \_\_\_ Water \_\_\_ Heat  Strong Oxidizers  Others \_\_\_ None of these \_\_\_

**Products Evolved When Subjected to Heat or Combustion:**

Possible thermal decomposition products: gases/vapors, monomers, oxides, hydrocarbons.

**Hazardous Polymerizations:**

DO NOT OCCUR

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## **11. TOXICOLOGICAL INFORMATION**

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### **TOXICOLOGICAL INFORMATION (ANIMAL TOXICITY DATA)**

**Oral:**

LD50 Believed to be > 2.00 g/kg (rat) practically non-toxic

**Inhalation:**

Not determined.

**Dermal:**

LD50 Believed to be > 2.00 g/kg (rabbit) practically non-toxic

### **IRRITATION INDEX, ESTIMATION OF IRRITATION (SPECIES)**

**Skin:**

(Draize test) Believed to be > .50 - 3.00 /8.0 (rabbit) slightly irritating

**Eyes:**

(Draize test) Believed to be > 15.00 - 25.00 /110 (rabbit) slightly irritating

**Sensitization:**

Not determined.

**Other:**

Product may contain dust or particulates that may cause eye irritation or abrasion.

This product may contain residual styrene. Typical concentrations are less than 0.1%. Please refer to product-specific purchasing specifications for information on residual styrene content of this product.

Chronic (lifetime) exposure to styrene resulted in broncho alveolar (lung) tumors in mice, but not in rats. The relevance of these cell-type specific mouse lung tumors to humans is not known. Nasal effects were also observed in these rats and mice exposed to styrene. In sub chronic exposure studies, repeated exposures of female mice to styrene resulted in liver toxicity, however, this effect was not observed in rats.

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## **12. ECOLOGICAL INFORMATION**

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**Aquatic Toxicity:**

Not applicable.

**Mobility:**

Not applicable.

**Persistence and Biodegradability:**

This product is expected to persist in the environment.

**Potential to Bioaccumulation:**

Not applicable.

**Remarks:**

Sewer/waterways obstruction; fish may eat beads and obstruct their digestive tract.

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## **13. DISPOSAL CONSIDERATIONS:**

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**Waste Disposal Methods:**

This material should be disposed of in accordance with local, state and federal regulations.

**Remarks:**

Do not allow to enter drains or sewers

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## 14. TRANSPORT INFORMATION

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### TDG:

**Proper Shipping Name:** Polymeric beads, expandable  
**Hazard Class:** 9  
**Identification Number:** UN 2211  
**Packing Group:** III  
**Label Required:** Class 9, with black vertical stripes

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## 15. REGULATORY INFORMATION

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### FEDERAL REGULATIONS:

#### SARA Title III:

#### Section 302/304 Extremely Hazardous Substances

| Chemical Name | CAS Number | Range in % | TPQ | RQ |
|---------------|------------|------------|-----|----|
| None.         |            |            |     |    |

#### Section 311 Hazardous Categorization:

Acute  Chronic  Fire  Pressure  Reactive  N/A

#### Section 313 Toxic Chemical

| Chemical Name | CAS Number | Concentration |
|---------------|------------|---------------|
| None.         |            |               |

#### CERCLA 102(a)/DOT Hazardous Substances:

| Chemical Name | CAS Number | Range in % | RQ |
|---------------|------------|------------|----|
| None.         |            |            |    |

### INTERNATIONAL REGULATIONS:

#### TSCA Inventory Status:

This product, or its components, are listed on, or are exempt from the Toxic Substance Control Act (TSCA) Chemical Substance Inventory. Per 40 CFR 723.250 exempt.

#### WHMIS Classification:

B4, D2B



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## 16. OTHER INFORMATION

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Date Issued: 12/15/2015.

Prepared by: Technical department of NexKemia Petrochemical Inc.

The information in this data sheet is intended only as a guide to the appropriate precautionary handling of the product by a properly trained person. You are encouraged and requested to advise those who may come in contact with such products of the information contained herein. The data relates only to the specific product designated, and does not relate to use of the product in combination with any other material or use of the product in any process.