

## SAFETY DATA SHEET

**PRODUCT NAME:** Pelaspan® Loose Fill

**EFFECTIVE DATE:** 12/9/2015

**COMPANY:** Storopack, Inc., Cincinnati, Ohio



### SECTION 1: IDENTIFICATION

PRODUCT NAME: Pelaspan® Loose Fill

OTHER MEANS OF IDENTIFICATION: EPS loosefill, Packing peanuts, Expanded polystyrene loosefill

RECOMMENDED USE AND RESTRICTIONS: In the box void fill and cushioning

DISTRIBUTOR INFORMATION:

STOROPACK, INC.

4758 Devitt Drive

Cincinnati, OH 45246

WEBSITE: [www.storopack.us](http://www.storopack.us)

TELEPHONE NUMBER:

Main Office: 513-874-0314

EMERGENCY PHONE NUMBER: CHEMTREC: (800) 424-9300



### SECTION 2: HAZARD IDENTIFICATION

CLASSIFICATION: Flammable solid. Eye irritant: mildly irritating to eyes. White or colored, foamed plastic (approx. 0.5"W x 1.0"Tk x 1.5"L).

HAZARD STATEMENT: Pentane vapor is extremely flammable. Flash fire could result from ignition of concentrated vapor. Pentane vapors are slightly heavier than air and can collect in pockets or low areas near the floor or ground, but are readily dispersed by moving air.

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Wear protective gloves/eye protection/face protection.

In case of fire use water spray, dry chemical, foam, or carbon dioxide to extinguish flames. Burning product should be treated as a "Class B" fire.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

No identified hazards with skin contact, inhalation or ingestion in normal use as packaging.

HAZARDS NOT CLASSIFIED: None

### SECTION 3: COMPOSITION

Chemical Name	CAS Number	Composition %	Exposure Limits
Polystyrene	9003-53-6	96-98%	None
Pentanes	78-78-4, 109-66-0	1.5-3.5%	1000ppm ACGIH TWA* 1000ppm OSHA PEL

IMPURITIES AND ADDITIVES: Non-hazardous components present at less than 3% are not listed. The exact percentage of composition has been withheld as a trade secret.

\* The Exposure Limit is based on an 8-hour, Time Weighted Average (TWA) exposure (in parts per million) according to guidelines published annually by the American Conference of Governmental Industrial Hygienists (ACGIH). <http://www.acgih.org/home.htm>

### SECTION 4: FIRST AID MEASURES

**EYE CONTACT:** Eye irritant: mildly irritating to eyes. Flush eyes thoroughly with water for several minutes. Remove any larger particles 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.

**SKIN CONTACT:** Essentially non-irritating to the skin. Wash off in flowing water or shower. Get medical attention if skin irritation develops.

**INHALATION:** Inhalation of concentrated vapors may cause irritation of the nose and throat. Inhalation may also cause dizziness, drowsiness, euphoria, loss of coordination, disorientation, headache, nausea, and vomiting. 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.

**INGESTION:** No hazards anticipated from ingestion incidental to normal industrial exposure. If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

**NOTES TO PHYSICIAN:** No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs (e.g. Epinephrine) or other heart stimulant.

**EMERGENCY PERSONNEL PROTECTION:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

### SECTION 5: FIRE-FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Use water spray, dry chemical, foam, or carbon dioxide to extinguish flames. Burning product should be treated as a "Class B" fire.

**FIRE FIGHTING PROCEDURES:** Keep people away. Apply large volume of water for cooling effect, or water fog and/or spray as quenching (cooling) and snuffing agent. Dry chemical or carbon dioxide may effectively be used to snuff fires by applying to the base of the fire in a sweeping motion. Extremely hot surfaces may require the additional cooling effect provided by water, foam, or carbon dioxide.

**HAZARDOUS COMBUSTION PRODUCTS:** The presence and/or release of flammable and potentially explosive vapors associated with Pentane gas component poses the greatest fire hazard. Flammable vapors are heavier than air and may travel long distances, ignite, and then flash back.

Heating the product will increase the release of flammable and potentially explosive vapors. Do not expose to intense heat, sparks, flame, static, or other sources of ignition.

Electrostatic discharge (static electricity spark) or any other source of heat or flame may ignite accumulated pentane vapors when the LEL (Lower Explosive Limit) of 1.4% (14,000 ppm) is reached or exceeded. A flash fire and/or explosion may result that may ignite other flammable materials including the main polystyrene component of this product.

When burning, this product will give off dense black smoke and slightly acidic gases.

"NO SMOKING – NO MATCHES – NO LIGHTERS – NO WELDING" rules should be strictly enforced.

When handling, use non-sparking tools; ground and bond all containers and material transport systems. For more information, see Section 7.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:** Firefighters should wear full protective clothing. Combustion vapors of this product may contain toxic compounds. Firefighters should therefore wear positive-pressure self-contained breathing apparatus when exposed to smoke from this product. See Section 10 for more information on products of combustion.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **PERSONAL PRECAUTIONS:**

**EYE/FACE PROTECTION:** Avoid eye contact with particles of this product by using eye protection equipment. Standard safety glasses with side shields may not provide adequate protection from flying particles. Chemical type goggles are recommended when there is a potential or risk for such exposure that could cause injury to the eye. Do not wear contact lenses.

**SKIN PROTECTION:** No precautions other than clean body-covering clothing should be needed.

**RESPIRATORY PROTECTION:** In dusty atmospheres, use an approved dust mask.

**METHOD OF CLEANUP:** Take immediate action to guard against exposure to sources of combustion per Sections 2 and 5 above. Take action to prevent further spread and/or leakage of materials. Protect against crushing or any mechanical damage which might create small pieces and fragments that make clean up more difficult. Guard against material entering drains to prevent drain plugging, potential accumulation of combustible blowing agent vapors in drainage systems, and/or further dispersal of spilled material.

Uncontaminated product may be swept up and reused or disposed of per approved methods. See Sections 12 and 13 for more information on environmental effects and disposal guidelines.

## **SECTION 7: HANDLING AND STORAGE**

**GENERAL HANDLING:** Use spark-proof tools. Maintain good ventilation. Do not wear clothing that is prone to generate static electrical charges such as nylon jackets or Nomex overalls. Never smoke or weld in the vicinity of this product. Keep away from open flame or heat sources.

Augers, blowers, and motors that are certified as non-sparking designs should be used when transferring or conveying this product.

**UNGROUNDING AND/OR IMPROPERLY GROUNDED MATERIAL HANDLING SYSTEMS MAY RESULT IN THE BUILD-UP AND SUBSEQUENT SUDDEN INTENSE DISCHARGE OF STATIC-ELECTRICAL SPARKS THAT MAY IGNITE THIS PRODUCT.** Systems used to transfer or convey this product **MUST BE PROPERLY AND THOROUGHLY GROUNDED** so as to safely and continuously dissipate static electrical charges which are continuously generated during transfer or conveyance of this or any other non-metallic product.

Proper grounding means that all components of the handling and conveying system(s) must be connected together by a **COMMON** ground having good electrical continuity. Any non-conductive (i.e. non-metallic) components of the conveying system must be spirally wrapped with grounding wire which has had its ends bared and cleanly and firmly attached (with good electrical conductivity and continuity) to the other grounded, conductive metal components of the system. If used, flexible plastic duct containing spiral wire re-enforcement must also have the ends of the re-enforcement wire bared and cleanly attached to the grounded metal components of the conveying system. Product shipment trailers and any of their material

handling components must be grounded to the conveying system with a common electrical ground when loading or unloading this product. Other grounding precautions and/or procedures may be needed depending upon the design of the material handling system. This is not intended to be a complete source of information on the grounding requirements for the product user's material handling system(s). It is the product user's responsibility to ensure the proper design, installation, and maintenance of a good electrical grounding system and appropriate safety procedures for the transfer and handling of this product.

**STORAGE:** Keep product away from heat, sparks, flame, and other sources of ignition. Maintain good ventilation in storage areas with particular attention to ventilation at or near floor levels since the pentane gas blowing agent vapors (which are heavier than air) may flow and/or settle near the floor and/or other low places or "pockets" when there is little or no air movement.

See Sections 8 and 10 for additional storage relevant information and recommended precautions.

## **SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**EXPOSURE LIMITS:** Polystyrene: None Established  
Pentane: 1000 ppm ACGIH TLV-TWA; 1000 ppm OSHA PEL

**APPROPRIATE ENGINEERING CONTROLS:** Use Non-Sparking and/or Explosion-Proof equipment and maintain adequate air movement and ventilation that meets occupational exposure limits, prevents accumulation of explosive air-gas mixtures, and avoids significant oxygen displacement.

**PERSONAL PROTECTIVE EQUIPMENT:**

**EYE/FACE PROTECTION:** Eye Irritant: mildly irritating to eyes. Avoid eye contact with particles of this product by using eye protection equipment. Standard safety glasses with side shields may not provide adequate protection from flying particles. Chemical type goggles are recommended when there is a potential or risk for such exposure that could cause injury to the eye. Do not wear contact lenses.

**SKIN PROTECTION:** No precautions other than clean body-covering clothing should be needed.

**RESPIRATORY PROTECTION:** In dusty atmospheres, use an approved dust mask.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** White or colored, foamed plastic (approx. 0.5"W x 1.0"Tk x 1.5"L).

**UPPER/LOWER FLAMMABILITY LIMITS:** None established

**ODOR:** None

**ODOR THRESHOLD:** None established

**VAPOR PRESSURE:** N/A for polystyrene, 57.90 kPa for pentane at 20°C

**VAPOR DENSITY:** N/A for polystyrene, 2.5 for pentane

**pH:** N/A

**RELATIVE DENSITY:** 31-32 lb/cuft

**MELTING/FREEZING POINTS:** Softens and expands at 93-102°C (200-215°F)

**SOLUBILITY:** <0.1% in water

**INITIAL BOILING POINT:** N/A for polystyrene, 28/36°C(82/97°F) for pentane

**FLASH POINT:** N/A for polystyrene, <56°F (49°C) for pentane

**EVAPORATION RATE:** N/A

**FLAMMABILITY:** Pentane vapors are flammable

**UPPER/LOWER FLAMMABILITY LIMTS:** N/A for polystyrene, Lower 1.4% and Upper 8.3% for pentane

**PARTITION COEFFICIENT:** No data available for this product

**AUTO-IGNITION TEMPERATURE:** 427°C (800°F)for polystyrene; 309°C (588°F) for n-pentane; 420°C(788°F) for iso-pentane

**DECOMPOSITION TEMPERATURE:** No test data available

**VISCOSITY:** N/A

**VOC CONTENT:** 1.5-3.5% by weight (isopentane/n-pentane)

## **SECTION 10: STABILITY AND REACTIVITY**

**REACTIVITY:** Product is highly stable.

CHEMICAL STABILITY: Avoid contact with liquid fuels and organic solvents (eg acetone, toluene)

HAZARDOUS POLYMERIZATION: No

CONDITIONS TO AVOID: Static discharge. Open flames and heat sources.

HAZARDOUS DECOMPOSITION PRODUCTS: Does not readily decompose. When heated above 400°F (204.4°C), small amounts of aromatic hydrocarbons such as styrene and toluene may be emitted. When subjected to combustion, toxic levels of carbon monoxide, carbon dioxide, irritating aldehydes, ketones, hydrogen bromide, and styrene may be evolved. The quantity and content of decomposition products depend upon temperature, air supply, and the presence of other materials.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

ROUTES OF EXPOSURE: Eye contact, skin contact, and inhalation most likely

SYMPTOMS AND EFFECTS OF EXPOSURE:

EYE CONTACT: Eye Irritant: mildly irritating to eyes. Fragments of product resulting from rough or careless handling could cause abrasive irritation or injury.

SKIN CONTACT: Essentially non-irritating to the skin. Mechanical injuries only.

INHALATION: None

INGESTION: Single dose oral toxicity is believed to be very low. No hazards anticipated from ingestion incidental to normal industrial exposure. If several mouthfuls or more are swallowed, abdominal discomfort, nausea, irritation from intestinal abrasion, and diarrhea may occur.

SYSTEMIC (OTHER TARGET ORGANS): Only repeated exposure to concentrated vapors from the pentane gas blowing agent has been found to be harmful. Various studies have shown a possible association with pentane gas vapor and the following: respiratory tract irritation, central nervous system depression in high concentrations, potential to sensitize heart muscle, and chronic (repeated, long-term) exposure may affect the liver.

TOXICITY:

Pentane: Inhalation, rat: LC50: 364 gm/m<sup>3</sup>/4H

Oral, rat: LD50: > 2000 mg/kg

Polystyrene: No data available

CARCINOGENICITY:

OSHA: none listed

IARC: Pentane: not listed

Polystyrene: Group 3 (not classifiable as to its carcinogenicity to humans)

NTP: none listed

Product has not been found to be a potential carcinogen by OSHA, International Agency for Research on Cancer, or the National Toxicology Program.

More detailed toxicological and/or exposure limit data, plus information on industry terminology may be obtained by calling the technical services number listed in Section 1 of this SDS or through organizations such as OSHA, ACGIH, or the National Institute for Occupational Safety and Health (NIOSH).

<http://www.cdc.gov/niosh/homepage.html>

## **SECTION 12: ECOLOGICAL INFORMATION**

ECOTOXICITY: No serious environmental effect due to spillage or release of the unexpanded product.

PERSISTENCE AND DEGRADABILITY: Photo degradation and decomposition is expected with exposure to sunlight. No appreciable biodegradation is expected. Blowing agent remains in the unexpanded product, diffusing out slowly over a period of time. Blowing agent vapors may become dissolved in water or absorbed by soil particles before releasing to the atmosphere. Microbiological activity in the soil may transform the

blowing agent into other organic compounds that may become beneficial constituents of the soil organic matter.

**BIOACCUMULATIVE POTENTIAL:** No bio concentration is expected because of the relatively high molecular weight (MW >1000). Biototoxicity is very low. Fish or other animals ingesting the expanding beads may, however, be harmed by abrasive irritation and/or blockage of the digestive tract.

**MOBILITY IN SOIL:** Material is expected to remain in the soil. In the aquatic environment, material is expected to float. There is no evidence for significant evolvment or leaching of any components, therefore contamination of groundwater is unlikely.

### **SECTION 13: DISPOSAL CONSIDERATIONS**

All disposal methods must be in compliance with all Federal, State/Provincial, and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. **STOROPACK HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS PRODUCT.**

Disposal methods for uncontaminated or contaminated material may also include burial in approved landfills or burning in approved incinerators in compliance with applicable laws as stated above.

Take precautions and follow good housekeeping practices to avoid unnecessary spillage, dispersal, and/or scattering of this product that makes cleanup and disposal more difficult. Do not allow this material to enter drains or sewers.

### **SECTION 14: TRANSPORT INFORMATION**

DOT, IMDG, ICAO, and TDG all have similar shipping information and labeling requirements. In the U.S., the Hazardous Materials Transportation Act (HMTA) is the major transportation-related statute. Enforcement of the HMTA regulations is maintained by the U.S. Department of Transportation (DOT) by delegation to several U.S. Government administrative organizations.

The hazardous materials regulations are contained in the U.S. Government Document 49 Code of Federal Regulations. Shipping requirements are contained in 49 CFR Part 172.

UN NUMBER: UN 2211

PROPER SHIPPING NAME: Expanded Polystyrene Loos Fill

TRANSPORT HAZARD CLASS: 9

PACKING GROUP: III (Roman numeral 3)

ENVIRONMENTAL HAZARDS: None

TRASPORT IN BULK: Not required

SPECIAL PRECAUTIONS: None

### **SECTION 15: REGULATORY INFORMATION**

Pertinent information associated with this product as related to SARA Title III provisions is as follows:

Section 302/304 Extremely Hazardous Substances: None

Section 311 Hazardous Categorization:

Acute  Chronic  Fire  Pressure  Reactive  N/A

NOTE: The above categorizations are associated with the pentane gas component only.

Section 313 Toxic Chemicals: None

Pertinent information related to CERCLA provisions of SARA is as follows:

CERCLA 102(a)/DOT Hazardous Substances: None

STATES RIGHT-TO-KNOW REGULATIONS (U.S.): Components of this product which appear on State Right-To-Know lists are as follows:

Component: Pentane (iso-pentane/normal-pentane) States: FL, MA, MN, NJ, PA, RI

List of states having right-to-know regulations:

CT (Connecticut), FL (Florida), IL (Illinois), MI (Michigan), LA (Louisiana), MA (Massachusetts), NJ (New Jersey), PA (Pennsylvania), RI (Rhode Island)

Information associated with California Proposition 65:

The following detectable components of this product are substances, or belong to classes of substances, known to the State of California to cause cancer and/or reproductive toxicity: Butyl benzyl phthalate

## **SECTION 16: OTHER INFORMATION**

*The information contained herein is believed to be accurate. It is provided for the purpose of hazard communication in accordance with OSHA guidelines as a part of Storopack's product safety program. It is not intended to constitute performance information concerning the product and accuracy or completeness of the information contained herein, or product results in any specific instance, and Storopack hereby expressly disclaims any implied warranties or merchantability or fitness for a particular purpose or any warranties or representations whatsoever, expressed or implied.*

*Purchasers and users of this product are encouraged and requested to advise those who may come in contact with this product of the information contained herein.*

*To determine the applicability or effects of any law or regulation with respect to this product, users should consult their legal advisor or the appropriate government agency. Storopack does not undertake to furnish advice on such matters.*