Material Safety Data Sheet

ARPEX^{R} CROSS-LINKED EXPANDED POLYETHYLENE BEADS

MSDS No	G-000702-1-OSHA-AE
MSDS CLASS	H
Ver. No.	1
Ver. Date	DEC 9 2004

Manufacturer: JSP International
273 Great Valley Parkway
Malvern, PA 19355

IMPORTANT: Read this MSDS before handling and disposing of this product and pass this information on to the employees, customers, and users of this product. This product is covered by the OSHA Hazard Communication Rule and this document has been prepared in accord with the MSDS requirements of this rule.

1. General

Trade Name	ARPEX^{R} CROSS-LINKED EXPANDED POLYETHYLENE BEADS
Other JSPI Names	This document covers all members of the series products identified as ARPEX^{R} Cross-linked Expanded Polyethylene Beads G000702-001 through G000702-025.
Synonyms	None
Other Industry Names	None

Telephone Numbers:
EMERGENCY
800/424-9300 CHEMTREC
610-651-8600 *JSP International*
CUSTOMER SERVICE
800/722-7776 Information Only

Chemical Family	Organic polymers			**DOT Hazardous Material Proper Shipping Name** Not regulated	
Generic Name	Ethylene Homopolymer			**DOT Hazard Class** Not regulated	**DOT Reportable Quantity** N/AP
CAS No.	(See Sec. 9 - Components)	**JSPI Material I.D.**	BE672	**UN/NA ID No.**	N/AP

2. Summary of Hazards

Signal Word	CAUTION
Physical Hazard	May product dust on handling (See Section 14- Additional Precautions) Slipping hazard if spilled on hard smooth walking surface
Acute Health Effects (Short Term)	Slight inhalation hazard - particulates/dust Dust may be a slight eye irritant No data found; no expected ingestion hazard No data found; no expected skin irritation hazard No data found; no expected skin absorption hazard
Chronic Health Effects (Long-Term)	No appropriate human or animal data are known to exist on adverse chronic health effects from repeated or prolonged exposure to this material Repeated or prolonged breathing of dust should be avoided

3. Fire and Explosion

Flash Point N/AP	**Autoignition Temperature** GT 600° F	**Flammable Limits** **Lower:** N/AP **Upper:** N/AP

Fire and Explosion Hazard	Heat from fire may melt, decompose, and generate flammable vapors. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Vapors may be heavier than air. May travel long distances along the ground before igniting and flashing back to vapor source. Melting alone may cause steam explosion on contact with water.
Extinguishing Media	Dry chemical CO2 Foam Water
Extinguishing Media Use Comment	No additional information available
Special Firefighting Procedures	Do not enter fire area without proper protection. (See Section 12 - Physical and Chemical Data - Hazardous Decomposition Products). Fight fire from a safe distance/protected location. Walking surface contact results in slipping/falling hazard. For large fire, use lots of water as straight stream to "dig" into hot molten mass from outside to open up. Cool interior/prevent reignition; spray/fog for surface cooling. Keep above burning material. Molten material forms flaming drops after igniting. Notify authorities if liquid enters sewer/public waters.

4. Health Hazards

Summary of Acute Hazards	Dust, if generated from this material, may cause respiratory irritation following an excessive inhalation exposure. Some eye irritation is also possible following exposure to the dust.	
ROUTE OF EXPOSURE	**SIGNS AND SYMPTOMS**	**PRIMARY ROUTE(S)**
Inhalation	Dust from this product may cause respiratory irritation following an excessive inhalation exposure. Follow exposure limits given on this material safety data sheet.	Yes
Eye Contact	Dust from this product may cause eye irritation.	Yes
Skin Absorption	Although no appropriate human or animal health effects data are known to exist, this material is not expected to be a health hazard by skin absorption.	No
Skin Irritation	Although no appropriate human or animal health effects data are known to exist, this material is not expected to be a skin irritant.	No
Ingestion	Although no appropriate human or animal health effects data are known to exist, this material is not expected to be an ingestion hazard.	No
Summary of Chronic Hazards	No appropriate human or animal data are available on the chronic health effects from prolonged or repeated exposure to this material.	
Special Health Effects	This material or its emissions may aggravate pulmonary/bronchial disease and/or cause breathing difficulty.	

5. Protective Equipment and Other Control Measures

Respiratory	If exposure can exceed the PEL/TLV, use only NIOSH/MSHA approved supplied air respirator operated in a positive pressure mode as specified in the NIOSH/OSHA 1981 Occupational Health Guidelines for Chemical Hazards.
Eye	Dust service goggles should be worn to prevent mechanical injury or other irritation to eyes due to airborne particles which may result from handling this product.
Skin	Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking, and when leaving work.
Engineering Controls	If handling results in dust generation or high temperatures, local exhaust ventilation should be provided to insure that exposure to dust or decomposition products does not exceed the PEL/TLV recommended levels.
Other Hygienic Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing/wash thoroughly before reuse. Shower after work using plenty of soap and water.
Other Work Practices	No special work practices are needed beyond the above recommendations under anticipated conditions of normal use.

6. Occupational Exposure Limits

Substance	**Source**	**Date**	**Type**	**Value/Units**	**Time**	**Skin**
Particulates Not Otherwise Regulated (Total Dust)	OSHA	1989	TWA	15MG/M3	8 HRS	No
Particulates Not Otherwise Regulated (Respirable Fraction)	OSHA	1989	TWA	5 MG/M3	8 HRS	No
Nuisance Particulates	ACGIH	1992	TWA	10MG/M3	8 HRS	No

Industrial Hygiene Comments	No additional Occupational Exposure Limit information available

7. Emergency and First Aid

Inhalation	Remove victim to fresh air immediately. Obtain emergency medical attention if breathing difficulty persists beyond 15 minutes.
Eye Contact	In case of eye contact with this solid material, immediately rinse with clean water for 20-30 minutes. Retract eyelids often. Obtain emergency medical attention if pain, blinking, tears or redness persist.
Skin Contact	Not expected to present a significant skin hazard under anticipated conditions of normal use.
Ingestion	Not expected to present a significant ingestion hazard under anticipated conditions of normal use.
Emergency Medical Treatment Procedures	Treat symptomatically.
Detoxification Procedures	After adequate first aid, no further treatment is required, unless symptoms reappear.

8. Spill and Disposal

Precautions if Material is Spilled or Released

Creates dangerous slipping hazard on any hard surface. Material similar to ball bearings on walking surface, making it difficult to keep steady footing. Spread granular cover on walkways or provide open grating flooring (or equivalent). Limit access to essential cleanup personnel. Stop release. On land, sweep or shovel into suitable disposal containers. On water, material is insoluble. Collect and contain as any solid. Report per regulatory requirements.

Waste Disposal Methods

Landfill solids at permitted sites. Use registered transporters. Comply with federal/state/local regulations for solid waste disposal. Solids may be burned, if fired with supplemental fuel. Avoid flameouts. Assure emissions comply with applicable regulations. Contaminated product, soil or water should not be designated RCRA hazardous waste.

9. Components

(This may not be a complete list of components) **Compositions are typical values, not specifications**

Component Name	CAS No.	Composition Amount	Carcinogen
Polyethylene (Cross-linked)	9002-88-4	99.5 %	N/P
Modifiers/Additives	N/A	< 0.5 %	

###1=National Toxicology Program 2=International Agency for Research on Cancer 3=Occupational Health and Safety Administration 4=Other

10. Component Health Hazards

Component	Component Health Hazards
Polyethylene (Cross-linked)	No significant hazards

11. Additional Toxicological Information

Component Name / Comments

No additional toxicology information is available for the components of this material.

Material

No additional toxicology information is available for this material.

12. Physical and Chemical Data

Boiling Point	**Viscosity**	**Dry Point**
N/AP	N/AP	N/AP
Freezing Point	**Vapor Pressure**	**Volatile Characteristics**
N/AP	N/AP	Negligible
Specific Gravity	**Vapor Specific Gravity**	**Solubility in Water**
AP .07 (H2O = 1.0 at 39.2° F)	N/AP	Negligible (Less than .1 Percent)
pH	**Hazardous Polymerization**	**Stability**
N/AP	Not expected to occur	Stable

Other Chemical Reactivity	No additional information available
Other Physical and Chemical Properties	No additional information available
Appearance and Odor	Little or no odor; Natural color; Expanded plastic pellets
Conditions to avoid	High temperatures, oxidizing conditions; Processing at temperatures above 200°C (392°F) may produce hazardous decompostion products
Materials to avoid	Strong oxidizing agents
Hazardous Decomposition Products	JSPI recommends local exhaust ventialtion to remove these materials Incomplete combustion may produce carbon monoxide and other toxic gases

13. Hazards Rating Information

National Fire Protection Association

No hazards rating information is available for this system

National Paint and Coatings Association

Hazardous Materials Information System (HMIS)

No hazards rating information is available for this system

14. Additional Precautions

Handling and Storage Procedures

Potential dust explosion hazard. As shipped in the form of pellets, this material should not contain sufficient dust to be an explostion hazard. However, dust could be formed during transport or as a result of pellet degradation by impact or by abrasion in conveying operations. Therefore, the material should be transferred in properly grounded conveying equipment. Proper ventilation, electrical code conformance, nitrogen purging and other precautions should be considered during grinding operations or any other operation which could cause severe dusting. Due to the extremely slippery nature of this material, more care than usual must be exercised when handling to keep any spilt material off all walking surfaces. The hazard of any unavoidable spillage can be reduced by using as walking surface an open grating which will permit this material to fall into the open spaces between grating bars for later recovery.

Decontamination Procedures

No special decontamination procedures needed.

15. Regulatory Information

FEDERAL:

Toxic Substance Control Act (TSCA)

The following is the TSCA Chemical Substance Inventory Status of the components of this material with CAS numbers listed in Section 9 - Components:

CHEMICAL	CAS NO.	STATUS
Polyethylene (Cross-linked)	9002-88-4	1. Listed - Non Confidential
Modifiers/Additives	N/A	1. Listed - Non Confidential

Superfund Amendments and Reauthorization Act of 1988 (SARA), Title III

- Section 302/304

Requires emergency planning based on "Threshold Planning Quantities" (TPQs), and release reporting based on Reportable Quantities (RQs) of "Extremely Hazardous Substances" (EHS) listed in Appendix A of 40 CFR 355. There are no components of this material with known CAS numbers which are on the EHS list.

- Section 311 & 312

Based upon available information, this material and/or components are not classified as any of the specific health and/or physical hazards defined by Section 311 & 312:

- Section 313

The material does not contain any chemical components with known CAS numbers that exceed the De Minimis reporting levels established by SARA Title III, Section 313 and 40 CFR 372.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA.

OSHA Regulations

"Chemical-specific" OSHA regulations presented under 29 CFR 1910 do not apply to this material or its components.

Other EPA Regulations

No additional information is available.

Department of Transportation (DOT)

Other than the normal shipping instructions and information given in this MSDS, there are no other specific DOT regulations governing the shipment of this material.

STATE REGULATIONS:

California Safe Drinking Water and Toxic Enforcement Act of 1988 - Proposition 65

This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to the proposition.

California South Coast Air Quality Management District (SCAQMD) Rule 443.1 (VOC's)

A Volatile Organic Compound (VOC) is any volatile compound of carbon excluding methane, carbon monoxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, 1,1,1-trichloroethane, methylene chloride, (FC-23), (CFC-113), (CFC-12), (CFC-11), (CFC-22), (CFC-114), and (CFC-115). By this definition, this is not a VOC material.

Massachusetts Right-to-Know Substance List (MSL) [105 CMR670.000]

Extraordinarily Hazardous Substances (MSL-EHS) must be identified when present in materials at levels greater than state specified criterion. The criterion is >=0.0001%. Hazardous Substances (MSL-HS) on the MSL must be identified when present in materials at greater than the state specified criterion. The criterion is >=1%. Components with CAS numbers present in this material, at levels specified in Section 9 - Components, do not require reporting under the statute.

New Jersey Registration

The New Jersey, Registry 3, Registration law does not apply to this material, as none of its components are trade secrets.

15. Regulatory Information (Cont'd)

Pennsylvania Right-to-Know Hazardous Substance Lists

Special Hazardous Substances (PA-SHS) must be identified when present in materials at levels greater than the state specified criterion. The criterion is >=0.01%. Hazardous Substances (PA-HS) must be identified when present in materials at levels greater than the state specified criterion. The criterion is >=1%. Environmental Hazards (PA-EH) must be identified when present in materials at levels greater than the state specified criterion. The criterion is >=0.01%. Components with CAS numbers present in this material, at levels specified in Section 9 - Components, do not require reporting under the statute.

Regulatory Advisory

If you reformulate or further process this material, you should consider re-evaluation of the regulatory status of the components listed in Section 9, based on the final composition of your product.

16. Label Information

Manufacturer:

JSP International
287 Great Valley Parkway
Malvern, PA 19355

Telephone Numbers:

EMERGENCY
800-424-9300 CHEMTREC
610-651-8600 *JSP International*
CUSTOMER SERVICE
800-722-7776 Information Only

Signal Word CAUTION

Other JSPI Names This document covers all members of the series of products identified as ARPEX^{R} Cross-linked Expanded Polyethylene Beads G000702-001 through G000702-025

Use Statement For industrial use only
Keep out of reach of children

Physical Hazards
Slipping hazard on smooth, hard walking surface
May produce dust on handling

Health Hazards
Inhalation hazard - particulates/dust
Eye irritant-particulates/dust

Precautionary Measures
Do not handle near heat, sparks, or open flame
Avoid accumulation of dust in enclosed space
Avoid contact with eyes
Do not breathe dust
Use with adequate ventilation
Wash thoroughly after handling
Remove spillage immediately from hard, smooth walking areas

DOT Information: **UN/NA ID No.** N/AP **DOT Hazardous Class** Not regulated **DOT Reportable Quantity** N/AP

DOT Hazardous Material Shipping Name Not regulated

Component Name	CAS No.	Composition Amount (Wt.)	RQ
Crosslinked Polyethylene	9002-88-4	99.50%	N/AP
Modifiers/Additives	N/A	< 0.5%	N/AP

Instructions:

In case of fire use: Dry chemical; CO2; Foam; Water

First Aid:

Inhalation Remove victim to fresh air immediately. Obtain emergency medical attention if breathing difficulty persists beyond 15 minutes.

Eye Contact In case of eye contact with this solid material, immediately rinse with clean water for 20-30 minutes. Retract eyelids often. Obtain emergency medical attention if pain, blinking, tears or redness persist.

Skin Contact Not expected to present a significant skin hazard under anticipated conditions of normal use.

Ingestion Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

In case of Spill, Material creates dangerous slipping hazard on hard surfaces. Spread granular cover or provide open grating flooring. Limit access to essential personnel. On land, sweep/shovel into disposal containers. On water, material is insoluble; collect and contain as any solid. Report per regulatory requirements.

Protective Equipment

Respiratory Use only NIOSH/MSHA approved supplied air or self-contained breathing apparatus operated in a postive pressure mode. Use NIOSH/MSHA approved dust or mist respirator where excessive dust or mist may result from use.

Eye Dust service goggles should be worn to prevent mechanical injury to eyes due to airborne particles when handling.

Skin No special clothing normally required. Where use can result in skin contact, wash thoroughly before eating , drinking, smoking, or leaving work.

Label No. : LG000692 **Version No.** 1 **Date:** SEP 1 93

17. General Comments

General Comments

No additional information available.

Other Comments

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the material itself.

Note	EQ=Equal	AP=Approximately	N/P=No applicable information found
Qualifications:	LT=Less Than	UK=Unknown	N/AP=Not Applicable
	GT=Greater Than	TR=Trace	N/DA=No Data Available

Disclaimer of liability

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