ARPAK®
Expanded Polyethylene (EPE) Bead Foam

Recycling Guidelines
ARPAK® Expanded Polyethylene (EPE)

ARPAK® Expanded Polyethylene (EPE):

PIA[1] Symbol	SAE Symbol	ISO Symbol
	>PE<	>PE-E<

Notes: PIA = Plastics Industry Association ([1]formerly SPI). PIA Symbols from PIA Guideline for Resin Identification Codes.
SAE = Society of Automotive Engineers. SAE Symbols per SAE J1344.
ISO = International Standards Organization. ISO Symbols per ISO-1043 and ISO-14021.

RECOVERY AND DISPOSAL OF ARPAK® EXPANDED POLYETHYLENE

Due to the increased use of Polyolefin plastics like ARPAK® EPE and because of increased environmental and sustainability awareness, particularly regarding packaging, automotive, and other waste legislation, much attention today is paid to reuse, recovery and disposal of these materials.

JSP encourages the reuse, recycling, or safe recovery of all waste. Polyolefins (such as ARPAK® EPE which is Polyethylene based) are used in many different products with varying demand of durability which makes it possible for them to maintain their mechanical properties for many years to come, so it takes many years for these to degrade in the natural environment.

For disposition of both ARPAK® EPE Post-Industrial Recyclate (PIR) which includes in-plant and post-processing scrap and ARPAK® EPE Post-Consumer Recyclate (PCR) which includes end-of-life products, JSP recommends the following options:

MATERIAL RECYCLING

Recycling is an increasingly attractive waste handling method. All ARPAK® EPE products can be recycled and reused. After the ARPAK® EPE is collected, it can be shredded and reused (remolded) which is referred to as Regrind. The quality of the Regrind material depends on the condition of the product, and will vary depending on the processing equipment used. ARPAK® EPE can also be collected, shredded and re-extruded (re-melted) and taken back to the base PE resin for reuse which is referred to as Repro. The Repro material can be sold as recycled PE material or can be blended with virgin PE material to produce new ARPAK® EPE material. Contact JSP for information on ARPAK® EPE recycling collection locations in North America.

ENERGY RECOVERY

Incineration with energy recovery is a very effective way of handling PIR or PCR ARPAK® EPE scrap not suitable for material recycling. Total combustion of Polyolefin materials like ARPAK® EPE will generate only water vapor and carbon dioxide. Polyolefin materials like ARPAK® EPE have high heat content. The base PE resin in ARPAK® EPE has a lower heating value of 43.5 MJ/kg (18,500 BTU/lb) [for comparison the lower heating value for light fuel oil is 42.5 MJ/kg (18,300 BTU/lb)]. Polyolefins such as ARPAK® EPE can be used very effectively as a fuel substitute in solid fuel furnaces; a.k.a. 'co-combustion' furnaces. Consult your local municipality as to the availability of program for scrap plastic collection for incineration.

LANDFILL

Landfilling of plastics waste together with other waste is an increasingly restricted solution for many municipalities in North America and vary by location. Since polyolefins like ARPAK® EPE are very stable, they will remain undegraded for long periods of time. Due to the inert nature of ARPAK® EPE, no hazardous leaching residues will be formed. However, JSP discourages the use of landfilling plastics like ARPAK® EPE as they are too valuable to end up as landfill. It should be noted that while local ordinances vary, national and state level legislations and industry standards are increasingly moving to limit or ban the practice of landfilling plastics. Recycling, Incineration (including co-combustion) for energy recovery is preferred and recommended. Consult your local municipality as to the availability and limitations on landfilling plastics waste.

For more information on ARPAK® EPE material composition, consult the specific ARPAK® EPE Technical Datasheet (TDS) and/or the ARPAK® EPE Safety Datasheet (SDS).