



BioViron International Limited

Technical Data





The BioViron line of naturally biodegradable foam is produced from a premium-grade proprietary starch. BioViron foams provide effective product protection and offer an environmentally safe alternative to current synthetic foam products.

BioViron materials offer the following benefits:

- **Strength and Resilience**
- **Good First and Multiple Impact Protection**
- **Naturally Anti-Static Behavior** - perfect for electrostatic discharge-sensitive products
- **High Resistance to Thermal Fluctuation**
- **Lightweight, Closed-Cell, Medium Density** (2.6-5.2 pcf)
- **100% Environmentally Safe**
- **Meets Standards for Biodegradability in Ground and Water-based Environments** set by the American Society for Testing and Materials (ASTM) and the International Organization for Standardization (ISO)
- **Facilitates ISO 14000 Certification** by demonstrating a commitment to continual environmental improvement – 68% less energy requirements and 76% less greenhouse gas emissions than comparable amounts of polyethylene foam

BioViron Cornstarch Foam is the environmentally sound option to fulfill your packaging needs.

GCF&B rev.B 03/04



All BioViron products have the following characteristics:

- *Made from high-grade cornstarch and soy oil – completely biocompostable*
- *Naturally anti-static*

BioViron Cornstarch Foam Original Formula (GCA)

- *Closed-cell foam, available in 1.18-2.36 Kilos. densities*
- *Corrugated design optimizes cushioning and stabilizes cargo*
- *Width of 610mm and lengths of 1372mm, 1524mm or 1829mm*



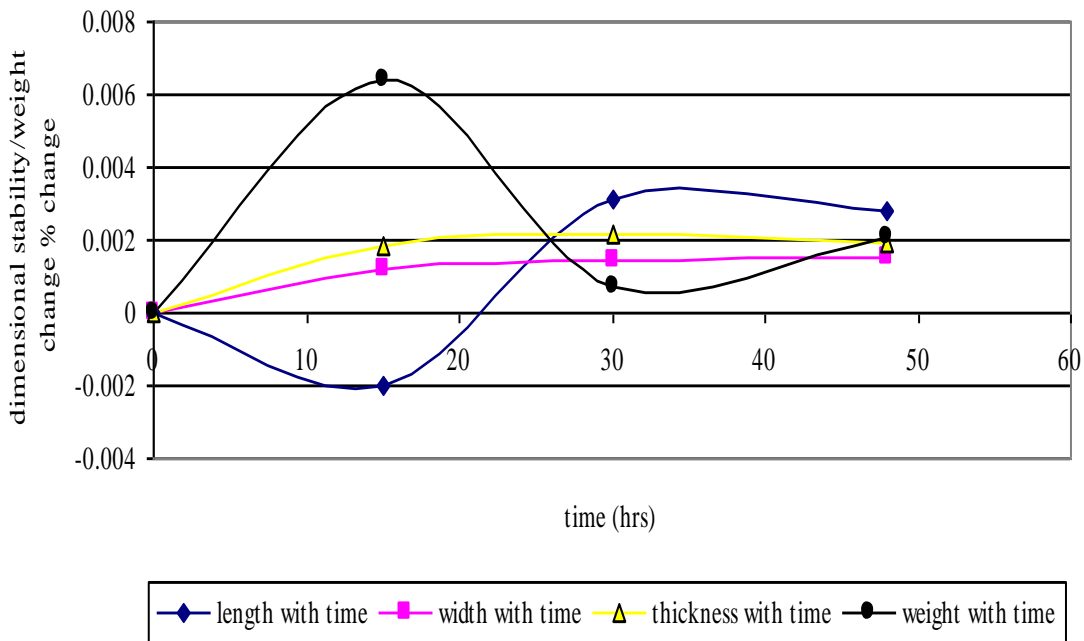


BioViron Composta-foam is biodegradable (ASTM D6400) compostable and water-soluble. These attributes make it the most environmentally friendly fabricated packaging material available. These same attributed bring rise to the questions of dimensional stability in extreme environments, high humidity and temperature as well as low temperatures. There are currently no ASTM standards testing requirements for these physical properties, although they are currently being written because of BioViron foam. These standards will include the testing protocol that was used to produce the Humidity Test results for BioViron Composta-foam

Testing was conducted on an industry standard packaging system, RSC 200# 'C' flute, kraft corrugated box sealed with BioViron Composta-foam on the inside. Tests were conducted at 95% RH +/-5% at 98.6° F for a period of 48 hours. The results recorded showed that the material weight and dimensional change was less than the margin of error expected during such procedures.

Green Cell Humidity Data

Dimensional Change of Less Than 1%





**Century Container Corporation
BioViron Composta-foam RoHS**

Technical Data

Electrical Characteristics

Naturally Anti-Static Humidity Independent
Surface Resistance: $10^9 - 10^{10}$ Ohms per EOS/ESD-S11.11-1993
Charge Decay Rate: Less than 0.1 seconds

Mechanical Characteristics

Biodegradable Foam
Multiple – Impact Protection
Acts as a Desiccant

Chemical Characteristics

Non – GMO Cornstarch
Non – Corrosive
Non – Toxic, No Irritation
No VOC's, Lead, Cadmium, Mercury, Hexavalent, Chromium, PBB or PBDE flame retardants

Environmentally Friendly

Reusable
Recyclable, Compostable, Clean Burning

Performance Requirements

ESD Industry Standards
EIA-541 and 625 Guidelines
S20.20
RoHS



DISPOSAL SUGGESTIONS

BioViron material is safe, non-toxic, water-soluble, fully biodegradable polymer material and meets all US and international standards of biodegradability including specifications for compostable plastics as per ASTM D6400 (USA), DIN54900 (Germany) and EN13432 (Europe).

BioViron Composta-foam has shown to be biodegradable in various environments as per ASTM D5988 (soil), ASTM D5338/ISO14855 (composting) and ASTM D6691 (aqueous and marine). If discarded in any of these environments, the foam would become readily available as a nutrient/food source for the microorganisms and enter the microbial food chain.

These unique properties provide unique opportunities in discarding BioViron Composta-foam in an ecologically responsible and environmentally acceptable manner.

If laminated to corrugated material...

If the foam is laminated to corrugated boxes or sheets, simply place the entire package in the recycling bin. Recyclers welcome the starch foam material as cornstarch is routinely added in the recycling process.

If the local community has a composting facility...

Composting facilities are becoming more prevalent in communities throughout North America, Europe and Asia. BioViron Composta-foam breaks down in less than one week during composting. Starch breaks down into simple sugars – excellent nutrients for microorganisms.

If a small amount is received in a package...

There are numerous ways to dispose of a small amount of BioViron Composta-foam:

- bury it in a garden or yard
- break into small pieces, place them in a sink or on the ground and run water over it
- it will dissolve without harm to pipes or the environment
- throw it away with other refuse (always safe, but not the best option)

If a large amount is received by an end user...

BioViron recommends that to properly dispose of a large amount of the foam, an entity should understand the options available in the community: recycling companies, composting facilities, wastewater treatment plants, and even area farmers should accept the foam for safe and effective disposal and may even be useful in the operation.



BioViron Shipping Coolers

The perfect combination of sustainable technology, thermal performance and shock protection to protect frozen and perishable products during shipment. Proven effective with dry ice and cold packs for pharmaceutical and food products – up to 96 hours of thermal protection in hot or cold environments!



Improved multiple-impact protection

BioViron Cornstarch Foam provides significantly better protection from shock and vibration – no worries about integrity-robbing breaking or cracking as demonstrated by EPS shippers.

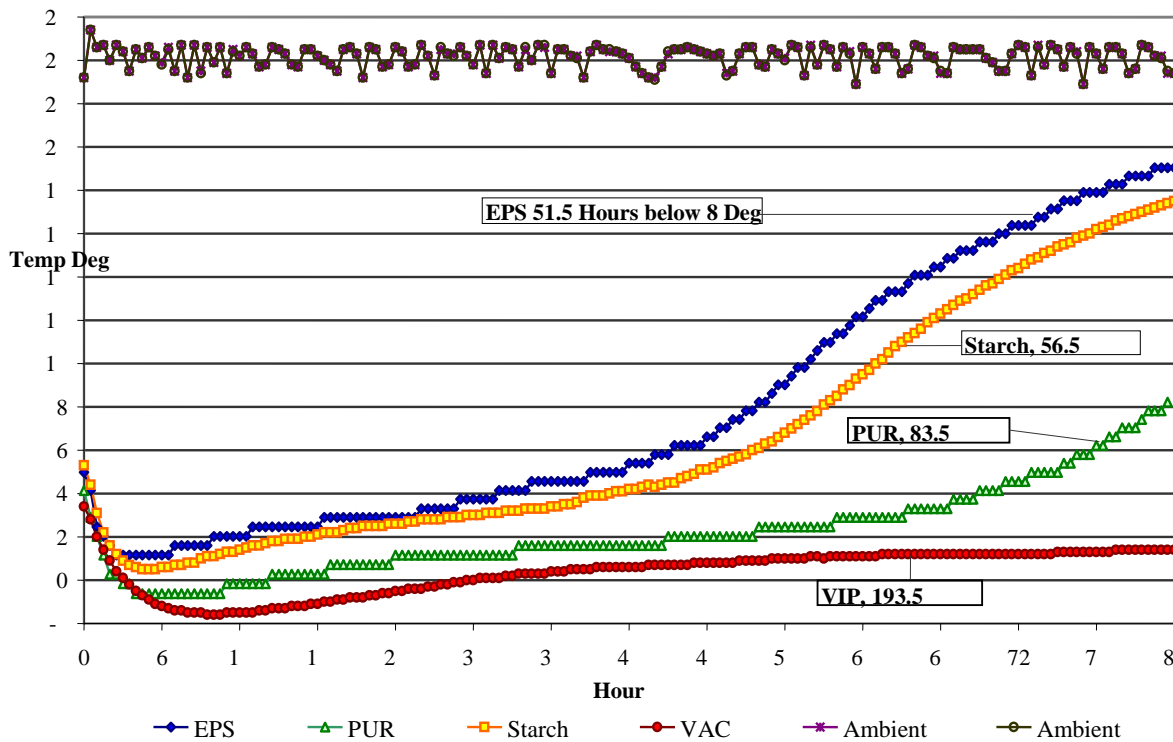
Unparalleled convenience for customers

Safe disposal by composting, recycling, dissolving in water



BIOVIRON CORNSTARCH FOAM INSULATION CHARACTERIZATION

Single Load 1.0L Plastic Bottle
 2" Wall/Lid container, I.D. 11" x 8-1/2" x 7"
 2 x 32 oz. Frozen Hardside Polar Packs
 Ambient: 22 Deg C

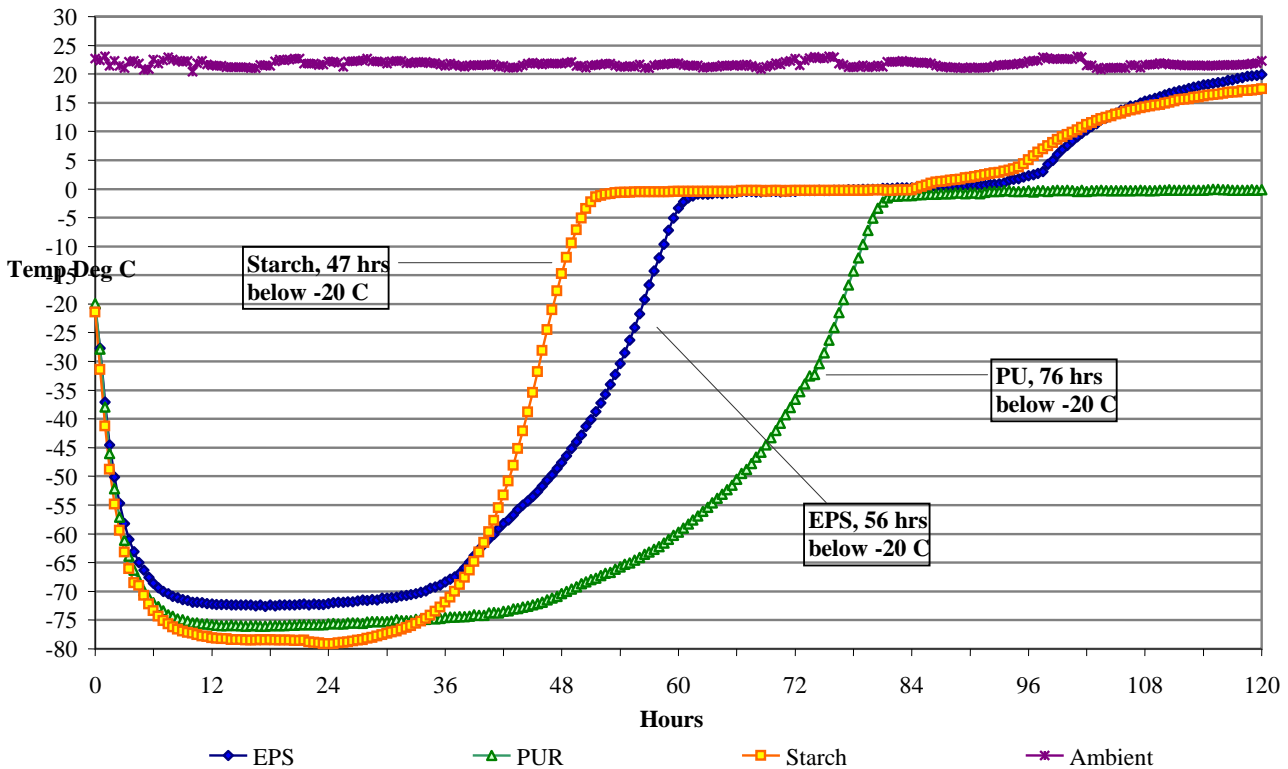


In this test, using 2 polar packs, the BioViron cooler, shown in yellow, outperforms the polystyrene cooler, shown in blue, by almost 10%. The object of the test was to keep the temperature below 8 degrees Celsius (46 Fahrenheit). The polystyrene cooler performed for 51.5 hrs, while the BioViron cooler performed for 56.5 hours.



BIOVIRON COMPOSTA-FOAM INSULATION BIOVIRON

Single Load Frozen 1.0L Plastic Bottle
2" Wall/Lid container, I.D. 11" x 8-1/2" x 7"
10 Lbs of Dry Ice
Ambient: 22 Deg C



In this test, using 10 lbs. of dry ice, the BioViron cooler chilled much more rapidly than the competition, and kept the temperature lower for 36 hrs. Since most dry ice shipments are made on an overnight basis, BioViron Composta-foam provided the best performance over this timeframe.



ENVIRONMENTAL PROFILE/LIFE CYCLE ASSESSMENT (LCA)

BACKGROUND

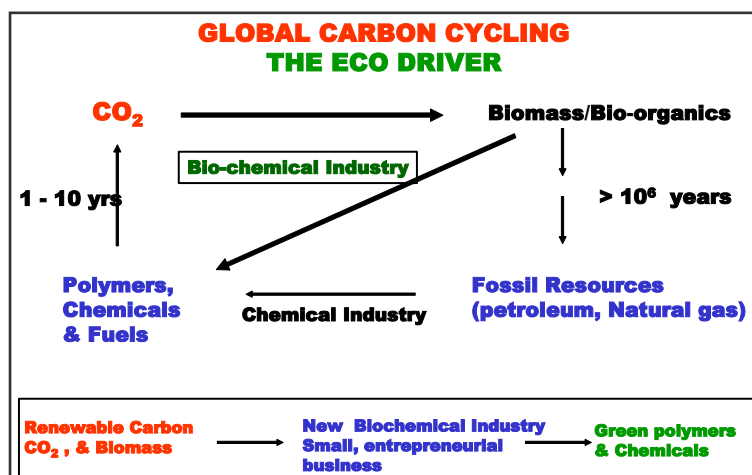
Biobased materials reduce the consumption of non-renewable resources and reduce the environmental impact associated with the creation of synthetic materials, such as increased CO₂ emissions.

BioViron International limited have the rights to a family of starch foam products that have an enhanced performance window and provide a reduced environmental footprint when compared to the products they replace – namely synthetic foam cushion packaging and insulation coolers. A key driver in today's market place is a products "environmental footprint" -- measure of the burden or impact that a product, operation or corporation places on the environment. Using Life Cycle Assessment (LCA) methodology, one can compute holistic environmental foot prints of a product. Some key metrics that need to be measure in this process are:

- Green House gas emissions (CO₂, VOCs)
- Energy Consumption
- Total waste production (mitigated by reduction in use, and recycling and composting)
- Toxic waste generation
- Regulated Air pollutants release – air emissions(SO_x/NO_x, particulates)
- Water discharges

GREEN HOUSE GASES – RESOURCE UTILIZATION BY BIOVIRON INTERNATIONAL

The use of annually renewable biomass, like corn, as opposed to petrochemicals (oil or natural gas) as the feedstocks for the production of polymers, chemicals, and fuel needs to be understood from a global carbon cycle basis. The attached figure illustrates the rationale for the use of annually renewable resources (biomass feedstocks) for managing our carbon resources and thereby our CO₂ emissions more effectively. Carbon is present in the atmosphere as CO₂.



Plants fix this carbon by photosynthesis using sunlight as the energy source and grow. Over geological time frames (>10⁶ years) these plant material are fossilized to provide our petroleum/natural gas. We consume these fossil resources to make our polymers, chemicals & fuel and release the carbon back into the atmosphere as CO₂ in a short time frame of 1-10 years (see figure). The CO₂ emissions problem is merely a kinetic rate issue. The rate at which biomass is converted to fossil resources is in total imbalance with the rate at which they are consumed and liberated (>10⁶ years vs. 1-10 years). Thus, we put out more CO₂ than we sequester as fossil resources. However, if we use annually renewable crop or biomass feedstocks, the rate at which CO₂ is fixed is equal to or greater than (if more biomass is planted than harvested) the rate at which it is consumed and liberated. Thus, the use of annually renewable crop/biomass feedstocks to produce the polymer materials, chemicals, and fuel as an adjunct to fossil resources would begin to move the rate of CO₂ fixation more in balance with the rate at which CO₂ is released. Furthermore, if we manage our biomass resources effectively by making sure that we plant more biomass (trees, crops) than we utilize, we can begin to start reversing the CO₂ rate equation and move towards a net balance between CO₂ fixation/sequestration and release due to consumption. Thus the use of renewable crop/biomass feedstock allows for:

- Sustainable development of carbon based polymer materials
- Control and even reduce CO₂ emissions and help meet global CO₂ emissions standards – Kyoto protocol
- Provide for an improved environmental profile

ENERGY SAVINGS --

In addition to the above, Life Cycle Assessment (LCA) tools have been used to quantify the energy savings and the GHG (Green House Gas) emissions reductions obtained by using crop feedstocks like starch.

Table 1 below shows the energy requirements for three standard petroleum feedstock based plastics and a thermoplastic starch or thermoplastic starch blend pellets. The energy numbers is divided into process energy and feedstock energy (the energy inherent in the product)

	Cradle to factory gate fossil energy requirements, in GJ/ton plastic		
	Process energy	Feedstock energy	TOTAL
Thermoplastic starch pellets	25	0	25
Plastic starch + 15% PVOH	26	6	32
Plastic starch + 50% polyester	32	20	52
HDPE	31	49	80
PET(bottle grade)	38	39	77
PS (general purpose)	39	48	87

Data for petrochemical polymers from APME (1999)

Data for starch polymers from Fraunhofer, ISI (1999)

The feedstock energy (energy inherent in the product) arises due to the kinetic in-balance of the geological time frames required to fix CO₂ and its release after use (see earlier discussions on global carbon cycling, and the biological carbon cycle). As explained earlier the feedstock energy for biobased products is zero because the rate at which CO₂ is fixed annually by crops is equal to or greater than the rate of release after use (see earlier section for detailed discussions).

The more important point to be made is that since biobased products is in its infancy, process energy costs is expected to decrease significantly as was the case of polyethylene, and polystyrene, thereby contributing to an even greater reductions in energy usage.

Life Cycle Impact Assessment (LCIA) –

This aims to examine the product from an environmental perspective using impact categories and category indicators connected with LCI (Life Cycle Inventory) results. For each impact category, the category indicator is selected and the category indicator result is calculated. The collection of the indicator results, referred to as the LCIA profile, provides information on the environmental issues associated with the inputs and outputs of the product system. It also provides information for the lifecycle interpretation phase.

The typical impact categories selected are:

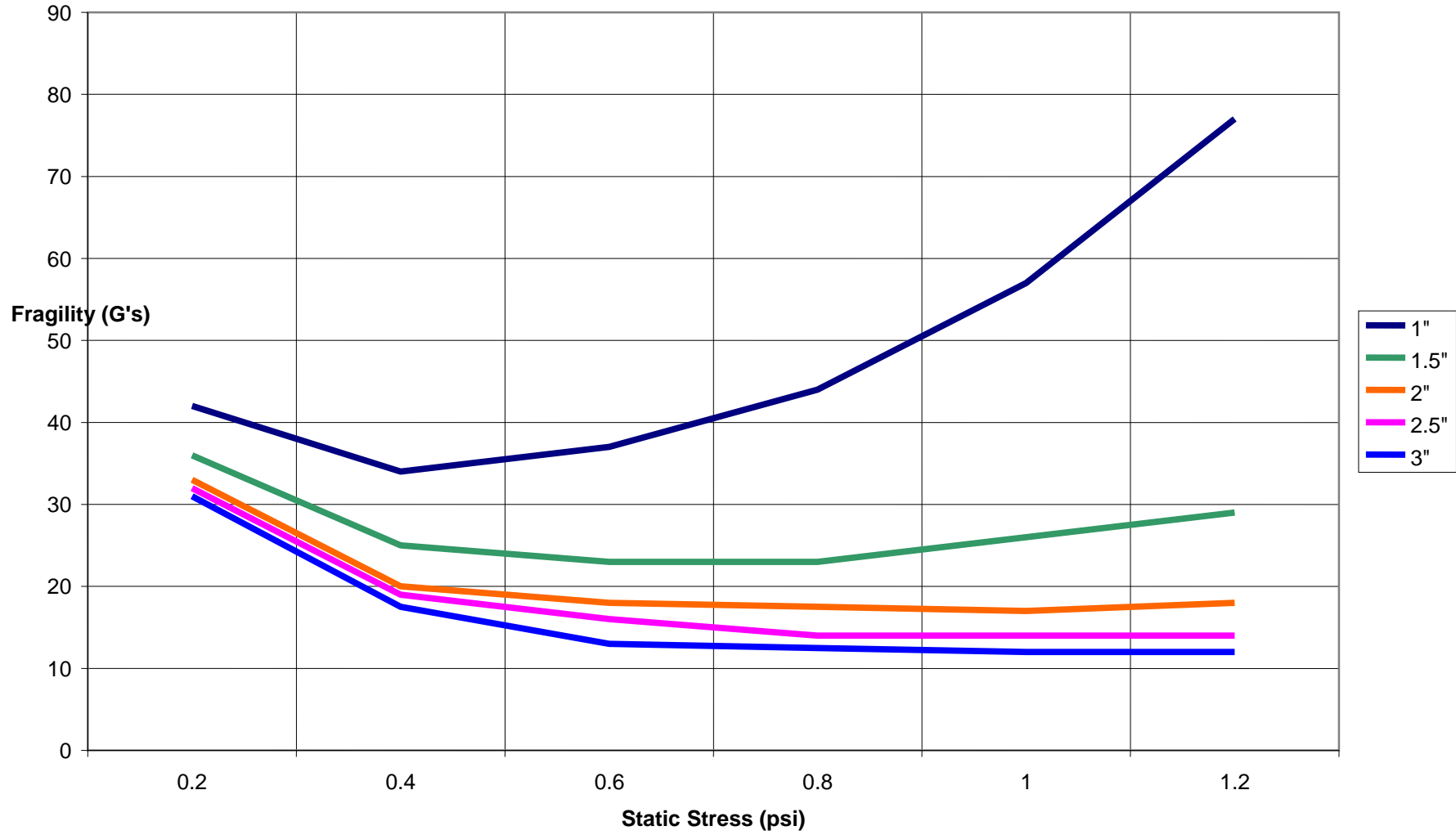
- i. resource depletion; abiotic & biotic
- ii. global warming,
- iii. ozone depletion,
- iv. human toxicity,
- v. ecotoxicity,
- vi. photochemical oxidant,
- vii. acidification,
- viii. eutrophication
- ix. degradation of ecosystems and landscapes

In the case of **starch polymer pellets** energy requirements are mostly 25%-75% below those for polyethylene (PE) and greenhouse gas emissions are 20%-80% lower. These ranges originate from the comparison of different starch/copolymer blends, different waste treatment and different polyolefin materials used as reference. Regarding the latter, APME data for LLDPE (72.3 MJ/kg) and LDPE (80.6 MJ/kg) were assumed. The lower APME values serve also as reference for the comparison with the other biopolymers (below). Starch polymers (both TPS and copolymers) score better than PE also for all other indicators listed in Table 2 with eutrophication being the sole exception. The lower the share of petrochemical copolymers, the smaller the environmental impact of starch polymers generally is.

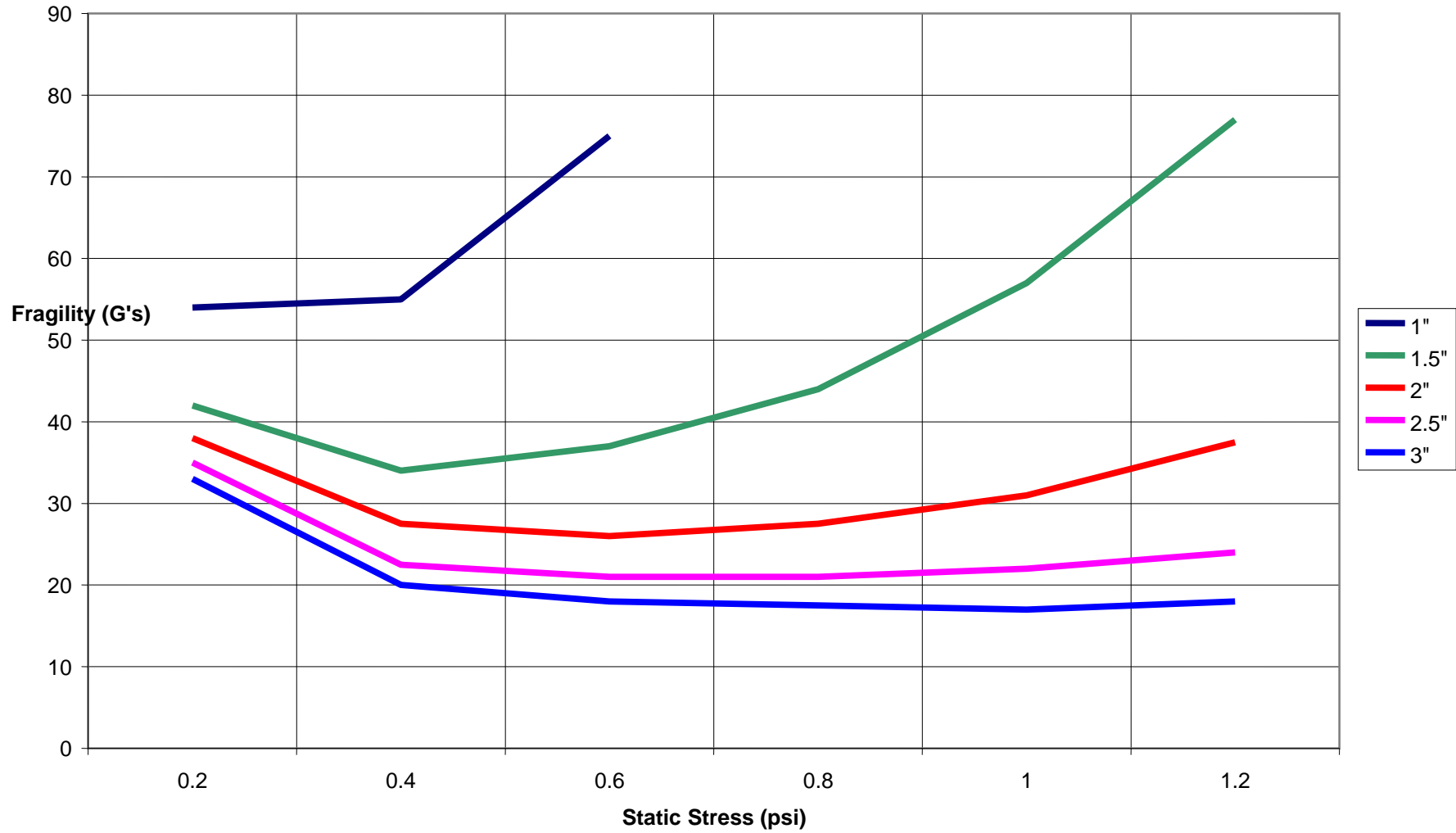
Plastic type	Cradle to gate non-renewable energy use MJ/functional unit	Waste treatment for emission calculations	GHG emissions [kg CO ₂ eq/functional unit]	Ozone precursors [g ethylene eq]	Acidification [g SO ₂ eq]	Eutrophication [g PO ₄ eq]	Ref
HDPE	80	Incineration	4.84	n/a	n/a	n/a	APME
LDPE	91.7	80% incinerate 20% landfill	5.20	13.0	17.4	1.1	Carbotech, 1996
Starch pellets	25	Incinerate	1.14	n/a	n/a	n/a	Fraunhofer, ISI 1999
Starch pellets	25	100% composting	1.14	5.0	10.6	4.7	

The final disposal/waste system has an important role in the overall eco balance of the materials. This may be particularly the case for biodegradable materials. If a biobased material is recycled through composting, and the compost applied to land, then significant emission and energy credits can accrue, because of the value of the compost to sustainable agriculture. These credits are not figured into the calculations shown above. An LCA study done by the International Nutrition and Agricultural Consultancy group on fertilization with compost as opposed to NPK chemical fertilizer in agricultural production systems clearly shows the environmental benefits of compost fertilization in a number of areas. Thus, in the potato system the compost showed a clear advantage in all effect categories over the chemical NPK fertilizer. The compost application showed an environmental relief potential between 26% (fossil energy carriers) and 91% (photooxidants) over that of the chemical fertilizer application (Figure 6). Similarly, in the winter wheat system, compost fertilization shows clear advantage in all the effect categories with values ranging between 76% and 90%.

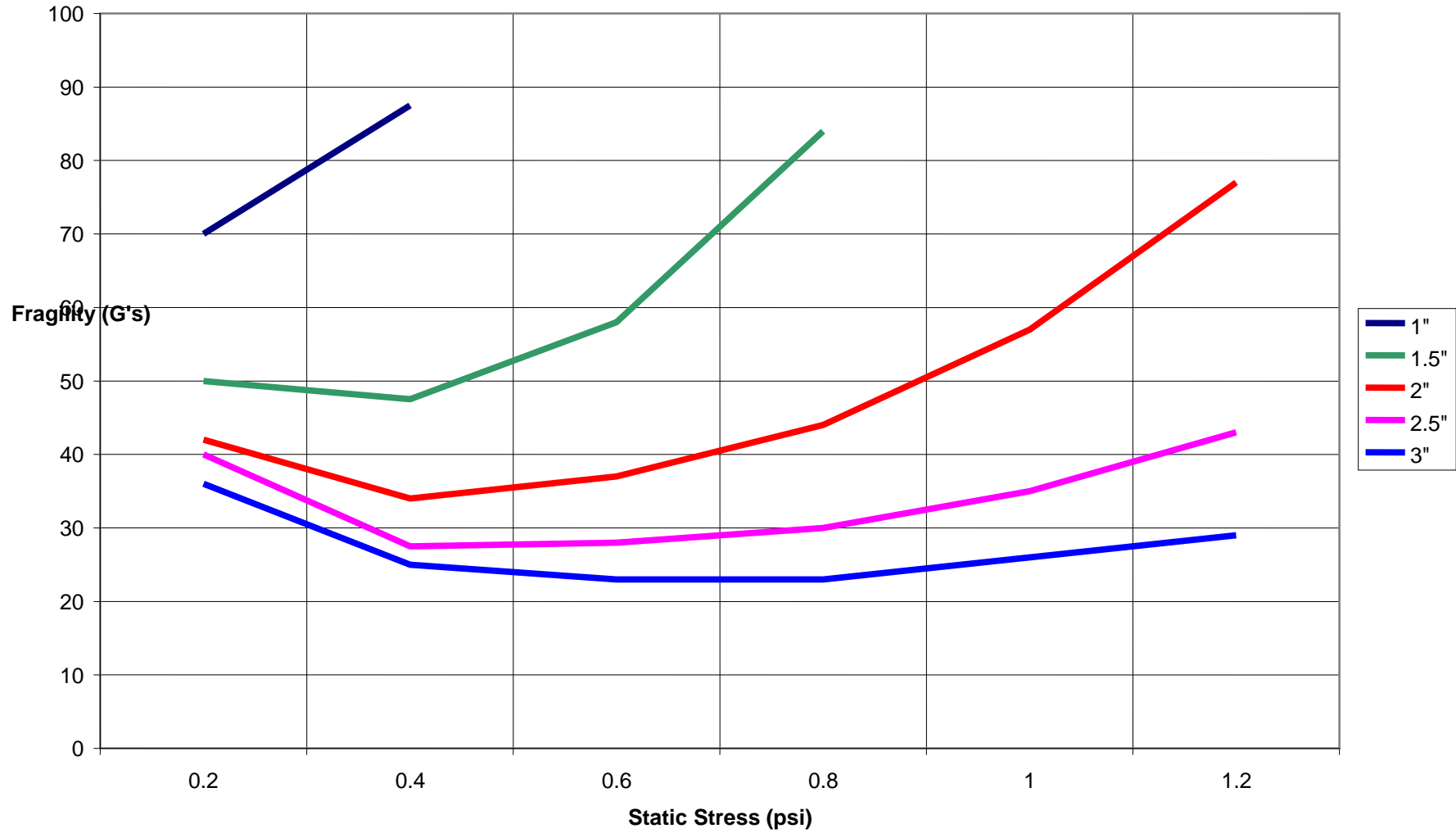
**BioViron Composta-foam
GCA Formulation
12" Drop Cushion Curve**



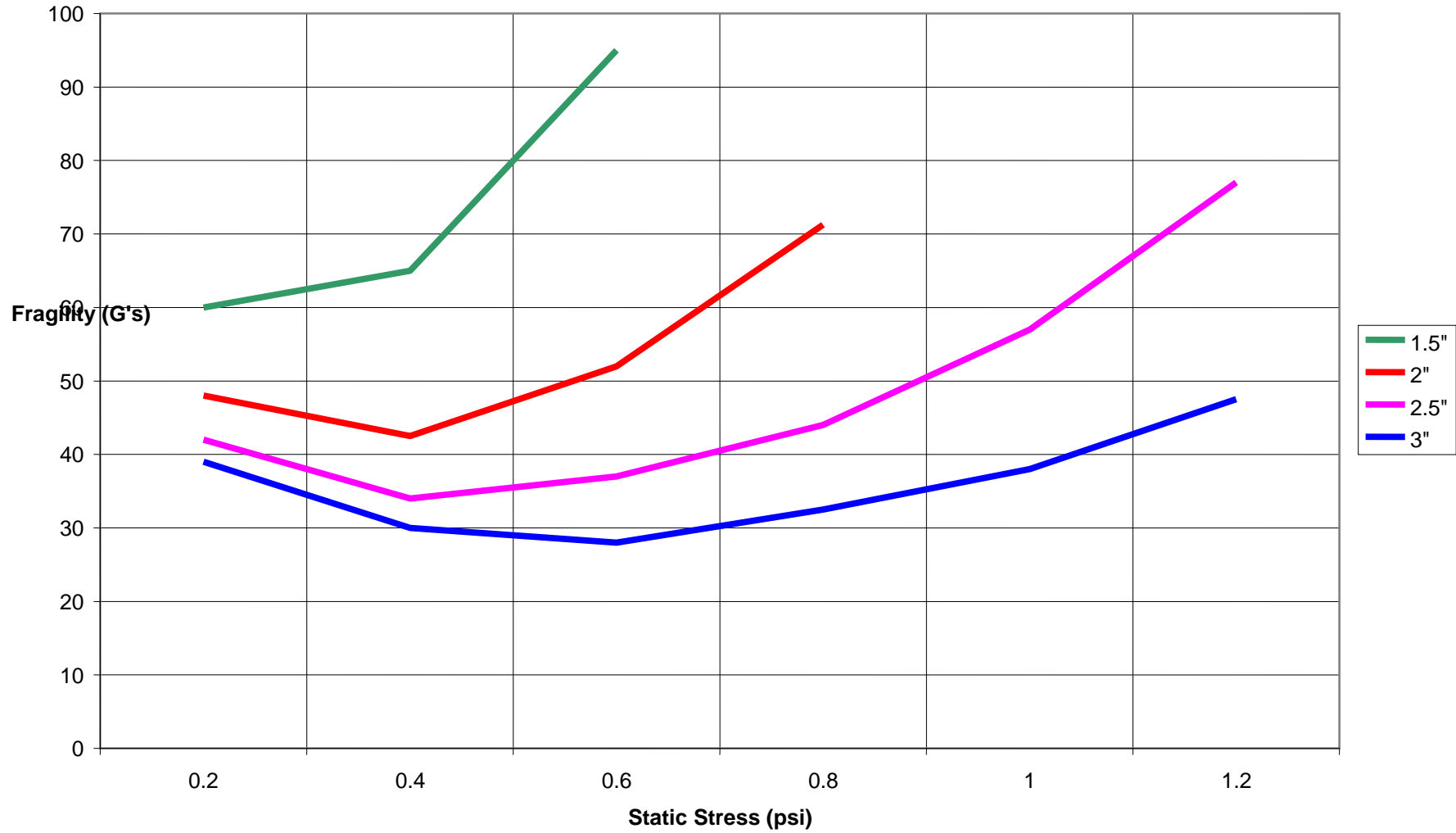
**BioViron Composta-foam Foam
GCA Formulation
18" Drop Cushion Curve**



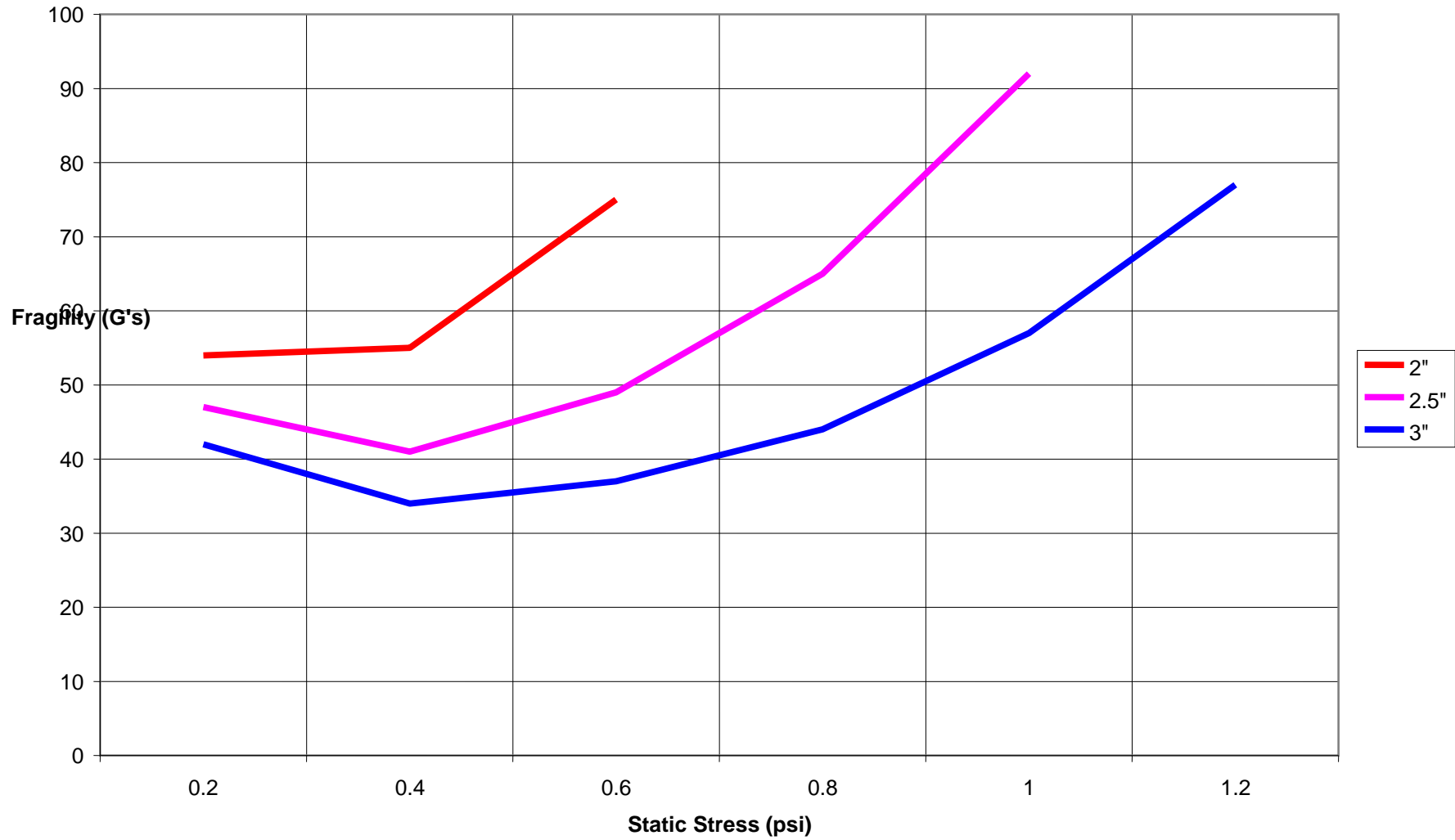
**BioViron Composta-foam
GCA Formulation
24" Drop Cushion Curve**



**BioViron Composta-foam
GCA Formulation
30" Drop Cushion Curve**



**BioViron Composta-foam
GCA Formulation
36" Drop Cushion Curve**



Section 1. Chemical Product and Company Identification	
Trade Name	BioViron Composta-foam Sheet
Product Number	
Supplier	BioViron International Bowman House Business Centre, Whitehill Lane Royal Wootton Bassett, Wiltshire SN4 7DB
Synonym	Starch-base Foam
Date Prepared	30/01/17
Manufacturer	BioViron (KTM)
Technical Information call	01793 781243

Section 2. Composition and Information on Ingredients	
Name	% by Weight
1) Corn Starch	>90
2) Proprietary Additives/processing aids	1-10

Section 3. Hazards Identification	
Physical State and Appearance	Solid. Foam has a natural off-white coloration.
Emergency Overview	Product is considered non-hazardous under normal handling, storage, and application.
Potential Acute Health Effects	<p><i>Eyes</i> Exposure to any dust formed may cause some mechanical irritation.</p> <p><i>Skin</i> Essentially non-irritating to skin.</p> <p><i>Ingestion</i> Ingestion unlikely. If ingestion occurs, product will dissolve, but may cause some gastric irritation and discomfort.</p> <p><i>Inhalation</i> No hazard under normal use, inhalation of any dust generated may cause some irritation of the respiratory system.</p>
Potential Chronic Health Effects	There is no known effect from chronic exposure to this product.

Section 4. First Aid Measures	
Eye Contact	Flush eyes with large amounts of water until irritation subsides.
Skin Contact	Wash off in flowing water or shower.
Ingestion	Due to the physical nature of the material, ingestion is unlikely. If large quantities of material are ingested, seek medical attention.
Inhalation	Remove to fresh air if any effects occur. Consult physician.

Section 5. Fire Fighting Measures	
Flammability of the Product	
<i>Flash Point</i>	232.77C
<i>Method Used</i>	Naked Flame
<i>Auto-ignition Temperature</i>	Not applicable.
Flammability Limits (LFL, UFL)	Not applicable.
Hazardous Combustion Products	Under fire conditions, the starch polymer will decompose. It burns cleanly giving no smoke. Combustion products include carbon monoxide, carbon dioxide.
Other Flammability Information	Product should not pose a strong fire hazard. However, product will burn if ignited. To reduce the potential for dust explosion, do not permit dust to accumulate.
Extinguishing Media	Water, carbon dioxide, dry chemical.
Fire Fighting Instructions	Keep people away. Isolate fire area and deny unnecessary entry. Hand held carbon dioxide or dry chemical extinguisher may be used for small fires. Soak thoroughly with water to cool and prevent re-ignition.
Protective Equipment for Fire Fighters	Wear positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.
Continued on Next Page	

Section 6. Accidental Release Measures

Protect People	Keep unnecessary people away; isolate hazard area and deny unnecessary entry.
Protect the Environment	Keep out of ditches, sewers, and water supplies.
Cleanup	Sweep up. Place in properly labelled containers.

Section 7. Handling and Storage

Handling	Good housekeeping and controlling of dusts are necessary for safe handling of product.
Storage	Store in a cool, dry area away from moisture, excessive heat and sources of ignition.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.
Personal Protective Equipment	
Eye/Face Protection	Safety glasses.
Skin Protection	No precautions should be necessary other than clean clothing covering body.
Respiratory Protection	No respiratory protection should be needed. If over-exposure to dust by inhalation is anticipated, appropriate NIOSH/MSHA approved respiratory protection should be provided.
Exposure Guideline(s)	None established.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Natural off-white colour, foamed sheet material
Odour	None to mild starch odour.
Vapour Pressure	Not applicable.
Vapour Density	Not applicable.
Boiling Point	Not applicable.
Solubility in Water	Water soluble, readily biodegradable and assimilated by soil micro-organisms as food.
Specific Gravity	
Bulk Density	
Particle Size	Not applicable.
Molecular Weight	Very high.

Section 10. Stability and Reactivity

Chemical Stability	Stable under recommended storage conditions. See Section 7. Handling and Storage.
Conditions to Avoid	Avoid temperatures above 220 degrees C. Product can decompose at or above this temperature.
Incompatibility with Other Materials	Avoid contact with oxidizing agents.
Hazardous Decomposition Products	Upon decomposition, this product emits carbon dioxide and carbon monoxide.
Hazardous Polymerization	Not applicable.

Section 11. Toxicological Information

Acute Toxicity/Target Organ Information	No data available for the product.
Mutagenicity	No relevant information found.

Section 12. Ecological Information

Eco-toxicity	Non-toxic in the environment.
Biodegradable	Material will completely and effectively biodegrade in the environment.
Special Remarks on Biodegradation	Material is safely and readily assimilated by soil micro-organisms, wherein it functions as an energy source for the micro-organisms.

Continued on Next Page

Section 13. Disposal Considerations

Waste Information	The material should be disposed of in accordance with all applicable federal, state or provincial, and local environmental regulations. As shipped, not regulated as a hazardous waste. No EPA waste numbers are applicable for this product's components.
Additional Waste Information	The material will completely biodegrade to carbon dioxide and cell mass in the natural environment in a short period of time.

Section 14. Transport Information

DOT Information	Not regulated as a hazardous material.
Shipping Name	Not regulated.
Hazard Class	Not regulated.
UN/NA #	Not regulated.
Packing Group	Not regulated.
International Transportation Regulations	Not regulated as dangerous goods.

Section 15. Regulatory Information (Not meant to be all-inclusive – selected regulations represented)

U.S. Federal Regulations	<p>SARA INFORMATION: to the best of our knowledge, this product contains no chemical subject to SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) or CERCLA (40 CFR 302.4).</p> <p>TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.</p> <p>OSHA HAZARD COMMUNICATION STANDARD: this product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910, 1200.</p>
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Section 16. Other Information

[References](#)

Other Special Considerations	This MSDS covers all prime general purpose cornstarch foam grades sold by BioViron International. Not a hazardous material.
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BioViron International.:
01793 781243

Notice to Reader: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state, or provincial, and local laws. The specific information above is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.



Ministry Of Defence BioViron Composta-foam

BioViron foam is starch based foam manufactured from Cornstarch and Soy Oil. It is non-toxic, biodegradable, and compostable and water soluble. It has been accepted for use within the supply chain as an environmentally friendly space filling material for transit packaging applications only. Use for Military Packaging Level applications has been excluded due to its lack of water resistance.

These materials are included in the Packaging Materials and Associated Equipment Catalogue and have the caveat of 'Biodegradable space filler- Shall not be used for the re-packaging of items to Military Level'.

The commercial supplier of these materials is :

BioViron International Limited
Bowman House Business Centre
Whitehill Lane
Royal Wootton Bassett
Wiltshire SN4 7DB

E-mail: sales@bioviron.com

Three variants of the foam have been codified for which the details are given below:

NSN 8135-99	Ref	Description	Pack sizes	Weight per pack
404-2675	GCA	600 x 1200 x 25 mm white	9 boards	2.27 Kilos
219-6906	GCA	600 x 1200 x 50 mm white	5 boards	4.1 Kilos
551-4053	GWA	600 x 1800 x 3 mm white wrap	40 sheets	18.14 Kilos

Note: In each case the 'Name' is Cushioning Material Packaging.

However, also note that this is not a 'cushioning' material in the meaning used by Def Stan 81-41 The Navy IMC is 0462 and the RAF and Army DMC is H4 for these materials



FREQUENTLY ASKED QUESTIONS

What is BioViron Composta-foam?

BioViron Composta-foam is biodegradable foam is a starched-based, anisotropic, multi-shock capable, naturally antistatic material that is used in protective packaging applications.

How is BioViron Composta-foam available?

The foam is available in sheet form. All sheets are 600mm wide. Lengths are available from 900mm to 1006. Thicknesses range from 25mm to 76.2mm. Densities are 35.3kg/m³- 80.2kg/m³.

How does BioViron Composta-foam compare to existing foams?

It is similar in price and performance to polyethylene and polyurethane foams, and requires fabrication rather than molding. BioViron Cornstarch Foam anisotropic properties (different cushioning properties in each direction) provide the added element of versatility in packaging design performance. One material is all you need for blocking, bracing and shock/vibration protection..

How does BioViron Composta-foam compare to polystyrene?

Customers may look to our foam as a ready replacement for polystyrene foam. While there has been limited success as an EPS replacement, BioViron Cornstarch Foam does NOT match EPS price points as it is more expensive and requires fabrication, which usually costs more than molding. Our foam's cushioning performance exceeds that of EPS. At BioViron we caution prospective customers that our foam may not be a good replacement for EPS due to the prospect of higher costs but we will do our best to meet their needs. Through this discussion we manage the customer's expectations and present the company and material in a straightforward and honest manner. We may not get the order this time but the door will remain open for future business.

How do you fabricate BioViron Composta-foam

The foam can be easily and effectively cut with foam saws, contour saws and rotary saws. Similar to PE and PU foam, there may be some dusting as a result of saw cutting. Die-cutting works very well with the foam and eliminated the dusting issue. When die-cutting BioViron Cornstarch Foam you can use serrated edge or straight edge blades. Die-blade design and depth need to be considered carefully to ensure quality and operational efficiencies.

Will BioViron Composta-foam laminate to corrugate?

The foam can be easily laminated to corrugate or to itself using a PVA based adhesive, hot-melt or starch-based glue. Water can also be used but requires tight tolerances to ensure proper adhesion without melting the foam.

Can BioViron b Composta-foam e substituted for other synthetic foams?

Our foam is an *excellent substitute for other fabricated foams*. Since the foam's performance properties are different than PE or PU (anisotropic vs. isotropic), a simple substitution of BioViron Cornstarch Foam for PE or PU foam in an existing design usually does not work functionally or economically. A better approach is to redesign the package to minimise costs and maximise efficiency.

What target markets are best suited for BioViron Composta-foam?

Our foam has a *proven track record on the automotive aftermarket and electronics market*. In the automotive aftermarket, where packaging is single use, the foam has been used to protect windshields and windows, bumper covers, running boards and electronic components. For these applications BioViron Cornstarch Foam is *Class A approved* to prevent scratching and marring. In the electronics market the foam has been used to protect hard drives, video players, thermal printers and consoles. For use in these applications the foam is a naturally ant-static.

Since BioViron Cornstarch Foam is an all-natural material it may be advantageous for packing fruits, vegetables, beverages and medical/scientific tools.

What are the recommended ways to dispose of BioViron Composta-foam ?

Our foam *provides unmatched convenience when it's time for disposal*.

Here are recommended disposal methods.

- *Compost it!* The foam biodegrades in 7-10 days.
- *Drown it!* The foam biodegrades in freshwater and saltwater.
- *Dissolve it!* The foam easily dissolves- safe for pipes and septic systems.
- *Burn it!* The foam burns cleanly and safely – no harmful fumes.
- *Recycle it!* The foam can be recycled with corrugated and paper materials.

Why are companies interested in BioViron Composta-foam?

Our foam is the *only cushioning material made from sustainable technology*. Companies are looking for environmentally –friendly products that provide performance without a price penalty. BioViron Composta-foam *reduces a company's carbon footprint* and is *much more price stable than PE and PU foams*, as it does not rely on fossil fuels as the base feedstock.