

Proposed Product Category for Biobased Designation

The following biobased product information has been collected to support product category designation by USDA for the BioPreferred program. This summary reflects data available as of August 1, 2008.

Title: Blast Media

Description: Abrasive particles sprayed forcefully to clean, remove contaminants, or condition surfaces, often preceding coating.

Companies Supplying Product Category: 7 companies supplying Blast Media have been identified through internet searches, manufacturer's directories, trade associations, and company submissions.

Industry Associations Investigated: The following industry associations have been investigated for member companies supplying Blast Media:

- United Soybean Board Association
- National Corn Growers Association
- Abrasive Engineering Society
- Unified Abrasive Manufacturers Association

Commercially Available Products Identified: Of the companies identified, 13 Blast Media products are commercially available on the market.

Product Information Collected: Specific product information including company contact, intended use, biobased content, and performance characteristics have been collected on 12 Blast Media products.

Industry Performance Standards: Product information submitted by biobased manufacturers and suppliers indicate that have typically been tested to the following industry standards:

- ASTM International D2240 Standard Test Method for Rubber Property—Durometer Hardness

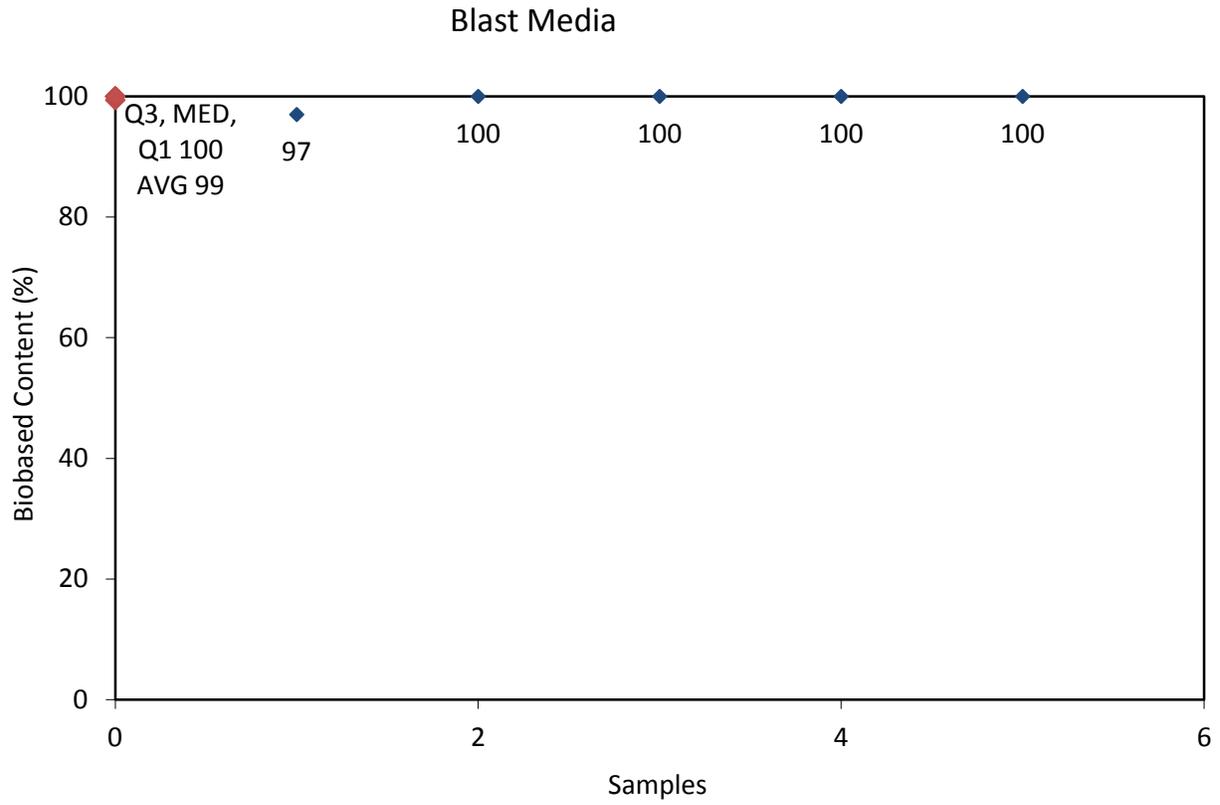
Samples Tested for Biobased Content: 5 samples of Blast Media have been submitted to independent laboratories for biobased content testing as specified by ASTM standard D6866-04.

Biobased Content Data: Results from biobased content testing of Blast Media indicate a range of content percentages from 97% minimum to 100% maximum biobased content as defined by ASTM D 6866-04. A detailed distribution of biobased content levels is included as Appendix A.

Products Submitted for BEES Analysis: Life-cycle cost and environmental effect data for 2 Blast Media products have been submitted to NIST for BEES analysis.

BEES Analysis: The life-cycle costs of the submitted Blast Media range from \$0.54 minimum to \$2.73 maximum per usage unit. The environmental scores range from 0.0050 minimum to 0.0789 maximum. A detailed summary of the BEES results is included as Appendix B.

Appendix A - Biobased Content Data

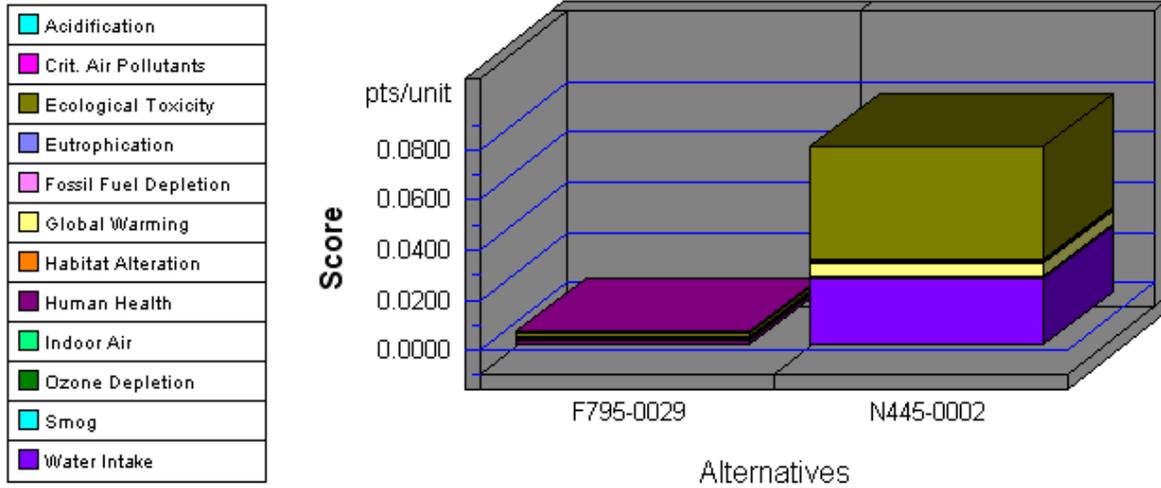


	Companies Identified	Products Identified	C14	BEES
1	F795	F795-0029	97	Yes
2	F795	F795-0030	100	
3	F795	F795-0031	100	
4	N445	N445-0001	100	
5	N445	N445-0002	100	Yes

Appendix B - BEES Analysis Results

Functional Unit: 100 cubic yards of soil treatment

Environmental Performance



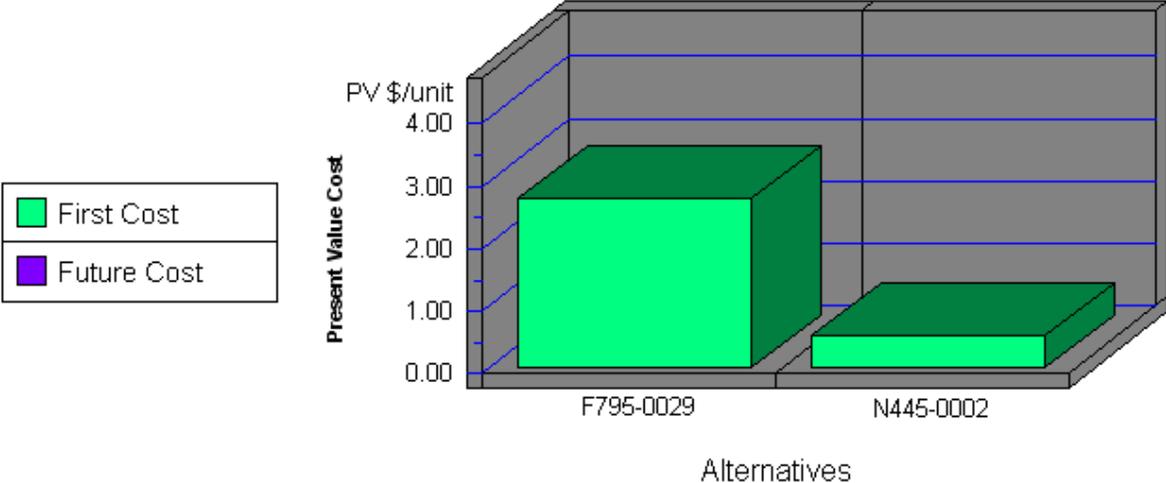
Note: Lower values are better

Category	F795-0029	N445-0002
Acidification--3%	0.0000	0.0000
Crit. Air Pollutants--9%	0.0001	0.0000
Ecolog. Toxicity--7%	0.0016	0.0450
Eutrophication--6%	0.0012	0.0008
Fossil Fuel Depl.--10%	0.0004	0.0004
Global Warming--29%	-0.0001	0.0055
Habitat Alteration--6%	0.0000	0.0000
Human Health--13%	0.0013	0.0005
Indoor Air--3%	0.0000	0.0000
Ozone Depletion--2%	0.0000	0.0000
Smog--4%	0.0002	0.0005
Water Intake--8%	0.0003	0.0262
Sum	0.0050	0.0789

Blast Media			
Impacts	Units	F795-0029	N445-0002
Acidification	millimoles H ⁺ equivalents	4.44E+02	7.26E+02
Criteria Air Polutants	microDALYs	1.22E-01	6.05E-02
Ecotoxicity	g 2,4-D equivalents	1.81E+01	5.24E+02
Eutrophication	g N equivalents	3.81E+00	2.58E+00
Fossil Fuel Depletion	MJ surplus energy	1.32E+00	1.41E+00
Global Warming	g CO ₂ equivalents	-1.17E+02	4.81E+03
Habitat Alteration	T&E count	0.00E+00	0.00E+00
Human Health--Cancer	g C ₆ H ₆ equivalents	8.22E-01	3.12E-01
Human Health--NonCancer	g C ₇ H ₈ equivalents	1.55E+03	3.24E+02
Indoor Air Quality	g TVOCs	0.00E+00	0.00E+00
Ozone Depletion	g CFC-11 equivalents	2.24E-06	2.08E-08
Smog	g NO _x equivalents	6.16E+00	1.75E+01
Water Intake	liters of water	2.26E+01	1.74E+03
Functional Unit	-----	1 ft ² surface treatment	

1 Following are more complete descriptions of units: Acidification: millimoles of hydrogen ion equivalents; Criteria Air Pollutants: micro Disability-Adjusted Life Years; Ecological Toxicity: grams of 2,4-dichlorophenoxy-acetic acid equivalents; Eutrophication: grams of nitrogen equivalents; Fossil Fuel Depletion: megajoules of surplus energy; Global Warming: grams of carbon dioxide equivalents; Habitat Alteration: threatened and endangered species count; Human Health-Cancer: grams of benzene equivalents; Human Health-NonCancer: grams of toluene equivalents; Indoor Air Quality: grams of Total Volatile Organic Compounds; Ozone Depletion: grams of chloroflourocarbon-11 equivalents; Smog: grams of nitrogen oxide equivalents; and Water Intake: liters of water.

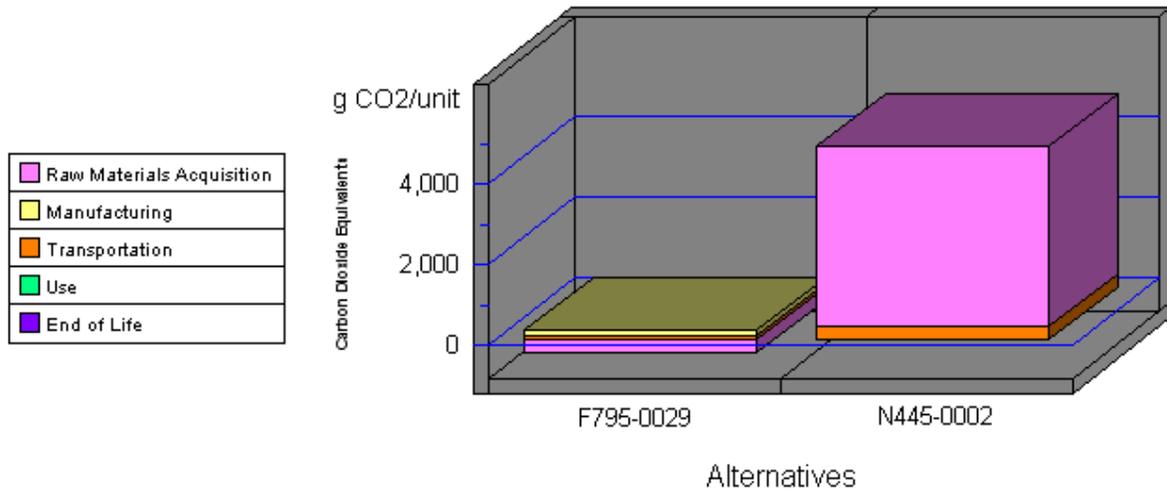
Economic Performance



Category	F795-0029	N445-0002
First Cost	2.73	0.54
Future Cost-- 3.0%	0.00	0.00
Sum	2.73	0.54

*This is a consumable product. Therefore, future costs are not calculated.

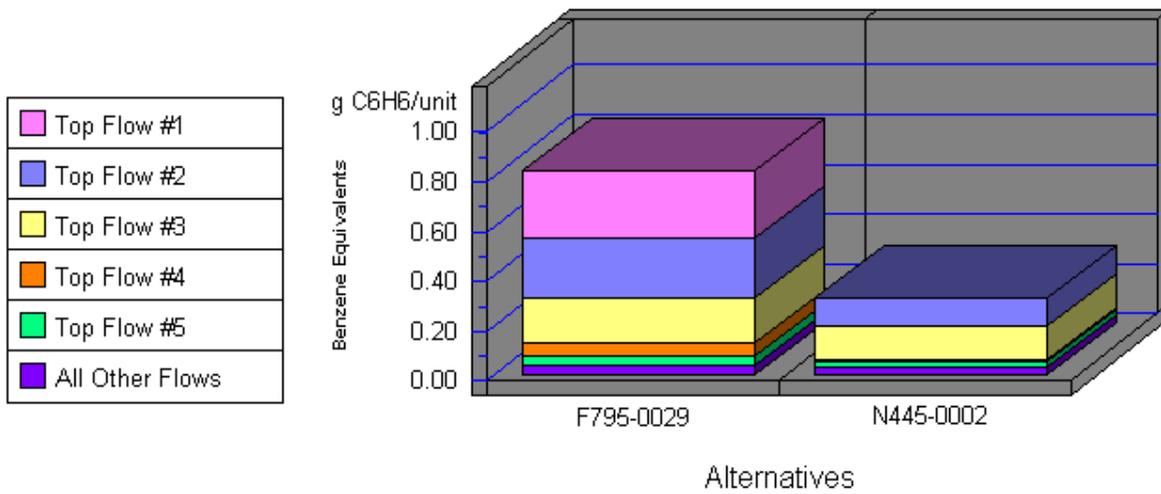
Global Warming by Life-Cycle Stage



Note: Lower values are better

Category	F795-0029	N445-0002
1. Raw Materials	-338	4456
2. Manufacturing	100	2
3. Transportation	120	351
4. Use	0	2
5. End of Life	0	0
Sum	-117	4811

Human Health Cancer by Sorted Flows*

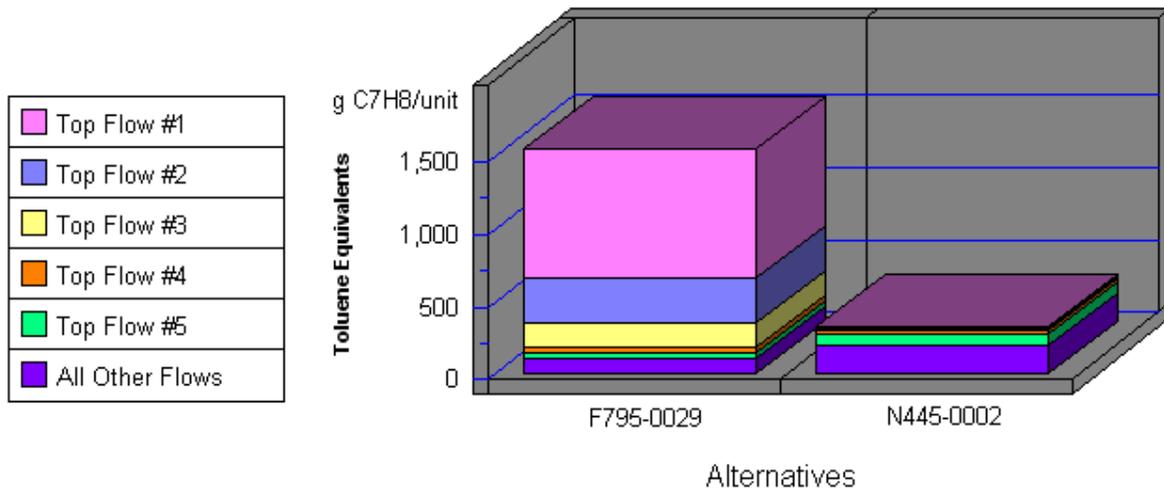


Note: Lower values are better

Category	F795-0029	N445-0002
Cancer--(a) Atrazine (C8H14ClN5)	0.27	0.00
Cancer--(w) Phenol (C6H5OH)	0.24	0.12
Cancer--(w) Arsenic (As3+, As5+)	0.19	0.13
Cancer--(a) Arsenic (As)	0.05	0.01
Cancer--(a) Dioxins (unspecifie	0.04	0.02
All Others	0.04	0.04
Sum	0.82	0.31

*Sorted by five topmost flows for worst-scoring product

Human Health Noncancer by Sorted Flows*



Note: Lower values are better

Category	F795-0029	N445-0002
Noncancer--(a) Mercury (Hg)	887.92	9.51
Noncancer--(w) Mercury (Hg+, Hg)	315.71	9.33
Noncancer--(a) Lead (Pb)	156.09	4.00
Noncancer--(a) Dioxins (unspeci)	49.16	23.83
Noncancer--(w) Barium (Ba++)	36.95	78.38
All Others	105.56	199.44
Sum	1,551.39	324.48

*Sorted by five topmost flows for worst-scoring product