

What is a biobased product?

- Relies on plant or animal materials as the main ingredient.
- The plants or animals utilized are a renewable resource.
- With some exceptions, generally do not contain synthetics, toxins or environmentally damaging substances.

What is a biobased product?

Definition used for Federal Biobased Product Preferred Provider Program (FB4P)

"A product determined by the Secretary to be a commercial or industrial product (other than food or feed) that is composed, in whole or in significant part, of biological products or renewable domestic agricultural materials (including plant, animal, and marine materials) or forestry materials."

Benefits of Biobased Products

- Generally healthier and safer for the user
- Generally healthier for the environment
- Reduced dependence on imported oil (especially from the Middle East)
- Generally helpful to the U.S. economy
- Extremely helpful to the rural economy

A Stronger, Safer, Cleaner and Healthier America!

Biobased products fall into three broad categories:

- **Biofuels** (oils, biodiesel, ethanol)
- **Biochemicals** (specialty chemicals such as paints, inks, surfactants, polymers, lubricants, solvents, and plant-made pharmaceuticals)
- **Biomaterials** (fiber products, lumber, leather, processed foods, laminates, roofing, plastics, insulation, etc.)

BMA biobased product subclasses:

- Absorbents/Adsorbents
- Activated carbon
- Adhesives
- Ag chemicals
- Fibers, bonded fabrics, textiles
- Fuels & fuel additives
- Construction and composite materials
- Cleaning chemicals, surfactants, soaps, detergents
- Foods, beverages, nutrients
- Gases & vapor technology
- Paper and paper products
- Fertilizers & compost
- Inks, dyes, pigments
- Landscaping materials, soil amenders and remediation
- Lubricants, rust inhibitors, functional fluids
- Oils, waxes and binders
- Packaging
- Personal consumer items
- Pharmaceuticals and nutraceuticals
- Solvents & co-solvents
- Specialty chemicals, fatty acids and acetic acids
- Water & wastewater treatment

Current USDA Product Categories Under Federal Biobased Product Preferred Provider Program

(FB4P)

- Adhesives
- Construction materials and composites
- Fibers, paper and packaging
- Fuel additives
- Landscaping materials, compost & fertilizer
- Lubricants & functional fluids
- Plastics
- Paintings & coatings
- Solvents & cleaners
- Sorbents
- Inks

Examples: Adhesives

- Corrugated packaging
- Dust agglomeration
- Bricks and tiles
- Furnishings made from recycled material
- Laminated panels
- Carton sealants
- Insulation binders
- Straw tackifiers for erodible soils
- Wallpaper pastes
- Foamed plywood glue
- Furniture joint glues
- Remoistenable films
- Paper coatings
- Gypsum wallboard

Construction Materials & Composites

- Interior paneling simulated wood finishes
- Spray foam insulation with no emissions
- Replacement for polyurethane foam carpet backing
- Dimension lumber formed from composite materials
- Molded millwork, trim, etc•
- Molded reinforced composites
- Drywall gypsum substitutes
- Particle board plywood substitutes
- Acoustical ceiling tiles

Fibers, Paper & Packaging

- Biodegradable corrugated packaging
- Loose fill (peanut) packaging that dissolves in water or composting
- Paper coatings
- Biodegradable replacements for plastic bags of all kinds
- Facial tissues
- Carpets and carpet backing
- Sizing agents and pitch formation in papermaking
- Surface starches that improve opacity and enhance printability
- Paper & packaging strength retention agents
- Food service wraps
- Fiber fill for mattresses, pillows and pads
- Textiles & fabrics

Biofuels & Fuel Additives

- Biodiesel from soy, animal fats or both
- Fuel grade ethanol
- Charcoal briquettes
- Marine grade biodiesel
- Hi-performance biodiesel
- Additives to boost octane of petro-diesel

Landscaping materials, compost & Fertilizer

- Fertilizers
- Dust suppressants
- Embankment matting for erosion control
- Biodegradable gardening film for weed control
- Mulching products
- Composted materials for fertilizer
- Carrying agents for insecticides and fertilizers
- Composite landscape timbers and decking

Lubricants & Functional Fluids

- 100% soy-based motor oil
- High pressure oil barrier lubricants
- Liquid wax ester oils
- 2-cycle engine oil
- Hi-performance motor oils
- Heavy-duty truck grease
- 5 th wheel truck grease
- Industrial lubricants for salt spray or high humidity environments
- Multi-purpose machine shop grease
- Chain lubricant
- Wire cable corrosion inhibitors
- Slideway lubricants
- Rail curve lubricant with lithium thickeners
- Turbine lubricants
- Vacuum oils
- Penetrating oils

Plastics

- Biodegradable foam food containers
- Biodegradable foam insulation products
- Films for bags and wraps
- Compostable shopping bags
- Biodegradable fast food plates, cups, straws & eating utensils
- Biodegradable disposable diaper out layers
- Compostable pen barrels
- Thermoplastic polymers for injection molded products
- Polymers used in cosmetics and personal care products
- Biodegradable trash bags

Paints & Coatings

- Sealants for concrete, fiber cement and wood
- Tempura paints
- Glitter paints
- Washable paints
- Seed oil coatings
- Wall paints
- Deck sealer and waterproofer
- Concrete curing agents
- Glow-in-the-dark poster paints
- Poster paints
- Watercolor paints

Solvents & Cleaners

- Asphalt equip. cleaner
- Waterless hand cleaners
- Graffiti cleaners for glass, brick, concrete and metal
- Cleaners for polyurethane equipment and lines
- All purpose cleaners
- Adult shampoos & soaps
- Carpet shampoos
- Anti-allergen sprays
- Filter cleaners
- Fruit & vegetable washes
- Dishwasher and laundry detergents
- Mold, fungus, mildew cleaner
- Bath & shower gels
- Carpet spot removers
- Mastic removers
- Industrial parts washing fluids
- Textile and dyeing equipment cleaner
- Glue, adhesive, paint removers
- Biosolvents for cleaning beaches of oil spills
- Ink haze removers
- Reusable carburetor and parts cleaner
- Waterless electronic component cleaners
- Glass cleaners
- Fabric softeners
- Floor cleaning products
- Disinfectants
- Tub & tile cleaners
- Printing equipment cleaners
- Oil & grease emulsifiers
- HVAC cleaners
- Wood, leather, vinyl cleaners
- Ink removers
- Lip balms
- Trap and drain cleaners
- Fabric stain removers
- Oven cleaners
- Glass, fiberglass polishing agents
- Marine hull & cargo hold cleaners
- Hand creams & lotions
- Kitchen & bath cleaners
- Metal cleaners
- Concrete structure cleaners
- Char, grease and burnt residue cleaners

Sorbents

- Multi-sorbent for oils, coolants, solvents and water
- Animal bedding & litter
- Carrier agent for herbicides, insecticides and pesticides
- Knitted material to absorb oil, coolants, solvents and water
- Superslurper to clean soil contaminants

Inks

- Soy-based black news inks
- Soy-based color news inks
- Soy-based UV coating, foil stamping and laser printing ink
- Heat set inks
- Soy-based varnish for tory or press tek plates
- Soy-based flexographic ink
- Corn based stamping ink