

Using Purchasing Power to Phase out Halogenated Flame Retardants and PVC

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Halogenated* Flame Retardants & Polyvinyl Chloride

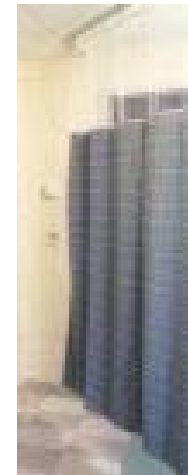
- Widely used
 - medical products
 - healthcare environment
 - the community
- Persistent and bioaccumulative
- Release toxins into the environment
- Toxic exposure can lead to serious
- Alternatives are available



***Halogenated flame retardants includes: bromine, chlorine, fluorine, iodine**

Products containing BFRs

- Computers & electronic devices*
 - IV pumps
 - Monitors
 - Pulse oximeters
- Polyurethane foams
 - Mattresses
 - Cushions
 - Upholstered furniture
 - Carpet padding
- Textiles
 - Cubicle curtains
 - Bedding



* Historically, 80% of Deca-BDE use in the United States is in electronic products

Common medical devices containing PVCs

- **Tubing**
- **Bags**
- **Gloves**
- **Catheters**
- **Trays for surgical kits**



PVCs in building materials

- Flooring
- Wall coverings
- Carpet backing
- Ceiling tiles
- Furniture
- Plumbing
- Wooden casework



75% of all PVC manufactured is used in construction materials

Toxic E-waste

- **Chlorinated plastics** (PVC) -- cable wiring
- **Brominated flame retardants** -- computer housing, circuit boards
- **Heavy metals** (lead, etc.) -- CRT monitors, solder
- **Mercury** -- liquid crystal displays
- **Cadmium** -- batteries, resistors, CRTs, plastics



Premier's Safety Institute

Resources and Tools for Patient, Worker, and Environment Safety

GreenHealthy
Program

Safety Share
GreenLink
Newsletters
45,000
subscribers

Educational
Programs for
Download

Green-Safer
Product
Lists

30 Safety
Topics- A to Z
Covered in
Depth

www.premierinc.com/safety



GreenHealthy™

Environmentally preferable purchasing (EPP) and **green** resources from Premier



GreenHealthy™ environmental leadership platform

GreenHealthy™ includes

EPP

**Environmentally
Preferable
Purchasing
Program**

Yes to Green

**Internal
corporate-wide
initiative**

SPHERE

**Collaborative
climate and
energy initiative
to reduce
healthcare's
carbon footprint**

**In partnership with our members to improve the health and safety
of patients, workers, environment, and communities.**

Premier's "GreenHealthy™" initiative

Highlights

- Champion for Change award from PGH – 7 consecutive years
- Environmentally Preferable Purchasing (EPP)
 - Safety Institute and Group Purchasing Collaboration
 - Standardized RFI information on EPP attributes and offerings
 - EPP Champions Team leads internal initiative
- Safety Institute Web site – publicly available resources to improve the health and safety of patients, workers and the environment
 - Self assessment tool for environmental purchasing & operations
 - Current news and trends on 15 “green topics”
 - >80 success stories on “green initiatives” from members and suppliers
 - Educational programs on green topics – CDs, Mp3, slides in Safety Store
 - “Green” contracted suppliers/products featured

Highlights of Premier's EPP Program

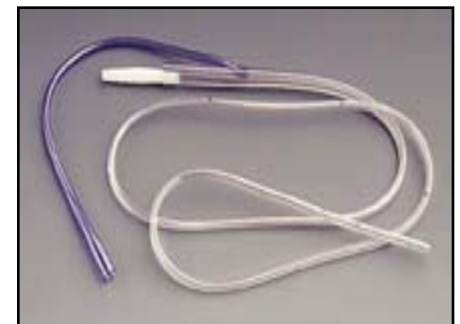
❖ Mercury Elimination

- 2001 – Pledged to eliminate mercury from contracted products; launched web site on mercury elimination
- 2002 – Developed list of pharmaceuticals with mercury to assist in identification, management and disposal of drugs with mercury
- 2006 – List of Mercury-free pharmaceuticals under contract



❖ DEHP

- FDA letter – support DEHP product labeling
- List of DEHP-free contracted products



Highlights of Premier's EPP Program

❖ **Standardized EPP attribute terminology – now used in electronic catalog to enhance searching**

- PVC-FREE for products without polyvinyl chloride
- LATEX-FREE for products without latex
- DEHP-FREE for products without DEHP (Di-2-ethylhexyl phthalate)
- MERCURY-FREE for products without mercury

❖ **Reuse of single use devices**

- Presented testimony to US FDA urging an evidence-based approach to any reuse of single use device policy
- Web site devoted to reuse
- No position for or against reuse of single use devices but support member efforts with contracts

❖ **Latex-free product catalog**

- 2008 published latex-free catalog for members
- Includes 16,675 items in 250 product groups from 445 suppliers

At Premier - EPP Integrated into the Sourcing Process

- EPP questions included in standard RFI sent to all suppliers
 - Corporate environmental and “green” initiatives
 - Energy efficiency
 - Impact on indoor-air quality
 - Recyclable/takeback programs for products and packaging
 - Availability of “green” product and/or packaging options
 - Environmental attributes of products including Mercury, **PVC**, **DEHP**, latex
- EPP information requested as applicable to product category
 - Additional product content such as hazardous chemicals and persistent, bio-accumulative and toxic pollutants
 - **Chlorinated-Brominated flame retardants**
 - “Green” product / packaging details
 - % Post consumer recycled, reusable, biodegradable
- Details of supplier responses included in supplier-product matrix for committee members to use in selection process

EPP Supplier Disclosure



Information for Supplier Disclosure of Product Attributes of Environmental Concern

Includes request for information on PVC and BFR content

PVC and DEHP

Polyvinylchloride (PVC) has been the most commonly used polymer in the production of plastic hospital products because of its cost effectiveness, flexibility, and optical properties. Two concerns have been raised about PVC: (1) Incineration of disposed PVC products can result in the formation of toxic dioxin; and (2) the health effects of DEHP, di-(2-ethylhexyl)phthalate, a plasticizer (softener) used for most PVC medical devices on high risk populations, including neonates, peripubertal males, and pregnant or lactating women. Both dioxin and DEHP have been identified by the EPA as probable carcinogens.

In July 2002, the FDA issued a *Public Health Notification* on medical devices made with polyvinylchloride (PVC) using the plasticizer di-(2-Ethylhexyl) phthalate or DEHP and provided advice on steps that can be taken to reduce the risk of exposure in certain high-risk populations. In September 2002, the FDA issued a Draft Guidance, *Medical Devices Made with Polyvinylchloride (PVC) Using the Plasticizer di (2-Ethylhexyl) phthalate (DEHP)* that encourages manufacturers to consider all mechanisms to reduce patient exposure to DEHP, including uses of alternative materials or use of coatings. In addition, FDA recommended that user labeling clearly indicate that the devices contain DEHP.

Polyvinyl Chloride and Halogenated Organic Chemicals except in Cabling & Wiring.

Polyvinyl chloride production and disposal contributes to the release of dioxin, a highly toxic, very persistent and bioaccumulative chemical. The last major obstacle to obtaining PVC-free electronics is in the wiring and cables.

Flame Retardants in Housings & External Enclosures. Most halogenated organic flame retardants are persistent, bioaccumulative, and toxic. It is believed that at this time all electronics manufacturers are still using halogenated organic flame retardants in printed circuit boards; however, the progressive companies are using alternatives in electronic housings and enclosures. Thus, responsible manufacturers should be able to provide products without halogenated organic flame retardants in electronic housings and enclosures. For more information on these problematic flame retardants, see *What Health Care Purchasers Can Do to Reduce Flame Retardants at* <http://www.noharm.org/details.cfm?type=document&id=1108>.

Flame Retardants in Printed Circuit Boards. At this time electronics manufacturers have identified alternatives to halogenated organic flame retardants for most electronic applications but are still researching suitable alternatives for TBBPA (Tetrabromobisphenol A), which is used in printed circuit boards. Responsible companies should be able to provide products without halogenated organic flame retardants in all electronic applications except for circuit boards at this time.

[There are more recent studies suggesting that TBBPA, which was considered the least toxic of the brominated flame retardants, is actually more harmful than previously thought.

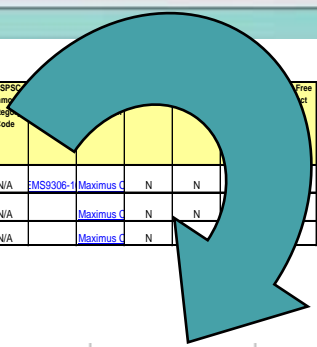
The “Information for Supplier Disclosure of Product Attributes of Environmental Concern” is included in the RFI.

Provides supplier with information regarding Premier’s goals and rationale for requesting information on the following:

- *Mercury*
- *PBTs and other EPA priority chemicals*
- *Halogenated flame retardants, including BFRs*
- *PVC*
- *DEHP*
- *Latex*
- *Carcinogen or reproductive toxins*
- *Resource conservation (recycled materials/recyclability, energy efficiency and water consumption)*
- *Packaging*
- *Impact on indoor air quality*
- *Product attributes of computers and electronics (EPEAT, RoHS standards)*
- *“Green” certifications, eg Green Seal*
- *other EPP attributes (raw materials, production, manufacturing, packaging, distribution, maintenance, or disposal)*

EPP Product Attributes in Standard RFI

Sub-Category	Annual Quantity Sold to Premier Members	Average Selling Price	Total Sales Volume	File Version Code	Vendor Type	Manufacturer Name	Manufacturer ID	Manufacturer Catalog Order Number	Distributor Name	Distributor ID	Distributor Catalog Order Number	NDC	UPN_UCC	UPN_HIBCC	Replaced UPN	Detailed Product Description	Brand Name	Buy Unit of Measure	Package Quantity	Smallest Pack UOM	Unit of Use- Smallest Trackable UOM	Sub Unit of Use	Packaging String	List Price	UNSPSC Commodity Code	Recyclable	PVC Free	DEHP Free	Pediatrics			
IV Therapy Tubing/IV Sets (including extension tubing and sets)	9	\$ 1.80	\$ 810.00	PDC050111	M	Medegen In	615250	EMS9306-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	96-IN 10 DR	Maximus	CA	50	EA	EA	1CA/1X/50E	\$ 3.60	N/A	EMS9306-1	Maximus C	N	N	N	Y	N	N
IV Therapy Tubing/IV sets (including extension tubing and sets)	99	\$ 4.70	\$ 23,265.00	PDC050111	M	Medegen In	615250	IMS126	N/A	N/A	N/A	N/A	N/A	N/A	N/A	84-IN 15 DR	Maximus	CA	50	EA	EA	1CA/1X/50E	\$ 9.40	N/A	Maximus C	N	N	N	Y	N	N	
IV Therapy Tubing/IV sets (including extension tubing and sets)	267	\$ 1.00	\$ 13,350.00	PDC050111	M	Medegen In	615250	M4058	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36-IN EXT. S	Maximus	CA	50	EA	EA	1CA/1X/50E	\$ 2.00	N/A	Maximus C	N	N	N	Y	N	N	



Recyclable	Reprocessed	Mercury Free	Latex Free Product	PVC Free	DEHP Free
		Y/N	Y/N	Y/N	Y/N
N	N	Y	Y	Y	N
N	N	Y	Y	Y	N
N	N	Y	Y	Y	N

- Included in item level spend data request
- Described in RFI instructions
- Detailed rationale in supplier disclosure

The Product Planning Lead accesses EPP recommendations when sourcing product categories

Contract ID	Category / Contract Title	Start Date	End Date	Bid Mail Date Calendar Quarter	Current Supplier	Related Contracts:	Program Line	Contract Manager/Director	Technical Manager/Director	Mercury Content	Latex Content	PVC Content	DEHP Content	Use electronics questions	Other Environmental Issues:	Comments
PP-FA-044	Televisions, Systems and Services	10/1/2006	2/29/2008	2Q2007	TeleHealth Services	PP-FA-042, 043 & 044	Facilities	Roy Reuter	Lynn Dillavou	X				X	Prefer vendor offer and provide Energy Star and Federal Management (FEMP) design products-see http://www1.ea.gov/femp/ent/index.htm	Ask about mercury content for products with switches and printed wiring and circuit boards; Electronics questions apply for any equipment, other than conventional desktop computers, laptops or computer monitors, that plug in or uses batteries-see non-com
PP-OR-172	Orthopedic Bone Cement Accessories & Pulse Lavage Products	7/1/2004	3/31/2008	4Q2006	Zimmer US, Inc.	PP-OR-173, PP-OR-174,	Surgical Services	Kimberly Diewald	Gloria Izral	X	X	X	X	X		EPP recommendations apply to pulse lavage products-ask about: mercury content for products with switches and printed wiring and circuit boards; latex, PVC and DEHP content for tubing and other plastic accessories; Electronics questions apply for any equip

This document is created especially for Premier through collaboration between the Safety Institute, Group Purchasing and Practice GreenHealth

EPP Questionnaire Computers and Peripherals

- Number of EPEAT certified products, each level
- Availability of RoHS compliant products
- Energy Star compliance
- Packaging take-back, recovery and recycling programs
- End of life product take back and recycling programs
- Line item information regarding specific product content
 - Mercury
 - Lead
 - PVC
 - Cadmium
 - Hexavalent
 - Brominated chemicals content (BFRs)
 - Other PBTs (CA prop 65)

Search capabilities - On-line catalog

PVC DEHP latex and mercury-free products and contracts

PREMIER

Supply Chain Advisor

Welcome: Gina Pugliese
Facility : All Facilities

Contracts Products News/Resources Tasks/Alerts Reports

Contract Search

PVC-free IV catheters

SEARCH CLEAR ?

Advanced Search

Customize Search

42 Contracts 1 2 3 Page 1 of 3

+ Category

Expand All | Collapse All

+ Activation Available

+ Price Activated

+ Contract Type

Fav	Contract	Contract Name	Contract Type	Price Activated	Contracted Supplier	Contract Effective	Contract Expiration	Contract Status	Diversity
★	PP-NS-472	Safety IV Catheters		No	Becton Dickinson and Company	10/01/07	09/30/10	Active	
★	PP-NS-473	Safety IV Catheters		No	Smiths Medical ASD	10/01/07	09/30/10	Active	
★	PP-NS-471	Safety IV Catheters IV Site		No	B. Braun Medical Inc. Medical Action	10/01/07	09/30/10	Active	

Product Search

PVC-free

SEARCH CLEAR ?

Advanced Search

Customize Search

17,613 Products 1 2 3 4 5 6 7 8 9 10 11 Page 1 of 1,175

+ Category

Expand All | Collapse All

+ Price Activated

+ Price Status

+ Contract Type

+ Diversity

+ Group Specific Pricing

+ My Favorites

Expand All | Collapse All

Fav	Product/NDC	Product Description	Contract Type	Manufacturer Name	UOM / Package	Qty / UOM	Diversity	Alt Equip Gen
★	3118	WRAP HYPERTHERMIA HYPOTHERMIA WATER 86-104FDEGF INFANT SMALL NON-WOVEN FABRIC/PVC-FREE LATEX FREE ATTACHED ADHESIVE STRIPS DISPOSABLE		Adroit Medical Systems Inc	Carton	24	V	A E
★	3121	WRAP HYPERTHERMIA HYPOTHERMIA WATER 86-104FDEGF INFANT MEDIUM NON-WOVEN FABRIC/PVC-FREE LATEX FREE ATTACHED		Adroit Medical Systems Inc	Carton	24	V	A E

Premier's Safety Institute Web Site

Resources and Tools for Patient, Worker, and Environment Safety

GreenHealthy
Program

Safety Share
GreenLink
Newsletters
45,000
subscribers

Educational
Programs for
Download

Green-Safer
Product
Lists

30 Safety
Topics- A to Z
Covered in
Depth

www.premierinc.com/safety



Safety topics A to Z

17 Rank in top five in Google Search

- *Back Injury Prevention
- *Bar Coding - UDI
- *Bundling - Evidence-Based Practices
- *Cell Phones and EMC
- Cleaners - Green
- **Clostridium difficile*
- CPOE
- *Computers and Electronics
- Construction, ICRA, Risk Assessment
- Culture - Patient Safety
- Deep Vein Thrombosis
- Emergency Preparedness
- *Energy Conservation, Cleaner & Renewable
- Environmentally Preferable Purchasing (EPP)
- Environmental - Safety Products
- *Fall Prevention
- *Guidelines - Infection Prevention / Safety
- Green Cleaners
- Green Corner Case Studies
- *Green, Safer Building Design
- *Hand Hygiene
- *Health Care Associated Infections
- Influenza - Pandemic, Seasonal
- Latex Allergies
- Multidrug-resistant, eg MRSA
- *Mercury Pollution Prevention
- Occupational TB Risks
- Patient Safety
- Pharmaceutical Waste
- Pressure Ulcers
- Public Health Updates
- *Recalls- Product Notifications
- *Reuse of Single-Use Devices
- Surgical Care Improvement (SCIP)
- *Sharps Injury Prevention
- *Tubing Misconnections

Highlights Safety Web Site

A to Z Topic Computers & Electronics in Healthcare

- Environmentally conscious purchasing
- End-of-life solutions
 - Reduce, Reuse, Recycle
- Searchable database-recyclers
- Sample procedures and tools
- Premier Contracted suppliers
 - Environmental initiatives
 - Asset Recovery Services

The screenshot shows a web page with a dark blue navigation bar at the top containing the following menu items: REDUCING COSTS, IMPROVING QUALITY & SAFETY, MANAGING RISK, and ABOUT PREMIER. Below the navigation bar is a breadcrumb trail: Home > Improving Quality & Safety > Tools & Services > Safety Institute > Safety topics A to Z. The main heading of the page is 'Computers & electronics in healthcare'. To the right of the heading are two buttons: 'PRINT PAGE' and 'EMAIL PAGE'. The main content area features the sub-heading 'Informed choices for asset management' followed by a bulleted list of links: 'Overview', 'Strategies for environmentally conscious purchasing', and 'End-of-life solutions: Reduce, reuse, recycle'. Below this list is a section titled 'Overview of computers and electronics in healthcare' with a short paragraph: 'High-tech manufacturing produces millions of electronic products that provide the healthcare industry with greater efficiency,'. To the right of the main content is a 'Related links' box containing three links: 'Searchable national database of recyclers', 'Basel Action Network (BAN): Responsible electronic recyclers', and 'Premier's industry guide ends up driving safe disposal of three tons of IT equipment'. At the bottom of the page, a partial link 'More on EDR-green' is visible.

Products and Contracted Supplier Lists

Safety Institute Web site

www.premierinc.com/saferproducts

Greener, safer, environmentally preferable products and contracted suppliers

NEW

[Latex Free Catalog](#) (members only).

 PRINT PAGE

 EMAIL PAGE

Premier receives Champions for Change national award for environmental leadership for fifth consecutive year.

[Click here to learn more.](#)

The following products and suppliers are under contract with Premier and are provided to assist Premier members with identification of products that are environmentally preferable or safety-related. Premier's [Supply Chain Advisor](#) should be consulted for detailed information on the products in each list.

[Download directions for searching Supply Chain Advisor for environmentally preferable products](#) (.pdf) (28 KB). Contracted

More on EPP-green

[Premier's program](#) (.pdf)

[CEO - assessment tool](#)

[Computers and electronics](#)

[Educational programs](#)

[Green building](#)

[Green - EPP products](#)

Greener, Safer, Environmentally Preferred Products, Supplier lists

- Emergency preparedness
- Back injury and fall prevention equipment
- Hand hygiene products
- IV systems - product specific information
 - PVC
 - DEHP
 - Latex
- Latex-free products
- Medical device reprocessing
- Mercury-free products
- Mercury-free and latex-free pharmaceutical report
- Personal protective attire (PPA)
- PPA (masks, respirators, gowns, gloves, etc.) contracts and suppliers
- Pesticide management - environmentally preferable
- PVC-DEHP-free products
- Recycling and waste reduction products and services
- Sharps injury prevention devices

Safety Institute Web site
www.premierinc.com/epp

Product, supplier list PVC-DEHP-free products

www.premierinc.com/safety



PVC-DEHP Free Product List Summary of items under Premier contract

December, 2008

This list is a summary of PVC-DEHP-free products under contract for those products/procedures that FDA has identified as posing the highest risk of exposure to DEHP (FDA July 12, 2002). Detailed information on products in each category is provided in accompanying downloadable files. Premier's electronic catalog, [Supply Chain Advisor](#) (formerly eSourcing), should be consulted to verify DEHP-PVC content for the individual products in each contract. Vendors may also be contacted for complete product information.

Information in Supply Chain Advisor (SCA) regarding PVC-DEHP content for individual products on the contracts listed below may be found in the product descriptions or in product cross-reference files included in the "Attachments" or "News" sections. Attachments and news can be found by:

- 1) Searching on the contract number in SCA catalog,
- 2) When contract is located, click on the contract number link
- 3) View the "attachments" or "news" to review the files.

Vendor	Product category	Contract number	PVC-DEHP Free
Pharmaceuticals			
Hospira	<ul style="list-style-type: none"> • Cardiovascular premix: Nitroglycerine, Dopamine • Therapeutic premix: Heparin and Morphine IV solutions, • Specialty IV solutions: Tromethamine; Sodium Bicarbonate 	PP-PH9ABB01	PVC-DEHP Free
Intravenous bags, solutions, parenteral nutrition, pumps & tubing			
Baxter Health Care	• Large volume pumps, pump sets, gravity sets and needleless	PP-NS-112	PVC-DEHP Free (Individual product codes should be verified for DEHP-PVC content) See Supply Chain Advisor for detail
	• IV Fluids	PP-NS-113	
	• Bag-based drug delivery	PP-NS-114	
	• Compounders and accessories	PP-NS-115	
	• Pain management pumps and sets	PP-NS-116	
	• Syringe pumps and tubing,	PP-NS-118	

PVC-DEHP-free product lists include:

- Pharmaceuticals
- IV bags, solutions, nutrition, pumps, tubing
- GI –enteral
- Respiratory, ventilator, humidification, chest drain devices
- Wound care
- OR – urologics, neuro, trocars, catheters, ports

Highlights

Success stories, suppliers and members

www.premierinc.com/greencorner

The screenshot shows the Premier website's 'Green Corner' page. At the top left is the Premier logo. A navigation bar contains links for HOME, CONTACT, and SITEINDEX, along with a search box. A green banner below the navigation bar reads: 'Welcome to Premier. If you have an account, please [login](#). Need to [register](#)?'. Below this is a dark blue menu with four items: REDUCING COSTS, IMPROVING QUALITY & SAFETY, MANAGING RISK, and ABOUT PREMIER. The 'IMPROVING QUALITY & SAFETY' item is selected. A breadcrumb trail reads: [Home](#) > [Improving Quality & Safety](#) > [Tools & Services](#) > [Safety Institute](#) > Green Link. The main heading is 'Green corner'. Below it is a horizontal line. To the right of the heading are 'PRINT PAGE' and 'EMAIL PAGE' buttons. The main content area features the title 'Success stories on green purchasing, products, and healthcare practices' followed by a paragraph: 'This Web site is dedicated to showcasing **success stories** in environmental or "green" initiatives, or programs that contribute to a safer and healthier environment, with particular emphasis on Premier members and contracted suppliers. [Guidelines for submission of success stories](#).' Below this is the text 'Read success stories on the following topics:' and a note: 'Note: All files less than 2MG unless indicated.' On the left side, there is a vertical menu with items: 'Back to [Safety Institute](#) ↑', 'GREEN LINK NEWSLETTER', 'Subscribe', 'Current issue', 'Articles', '➔ Green corner', and 'Archive'. On the right side, there is a box titled 'More on EPP-green' containing links: '[Premier's program](#) (.pdf)', '[CEO - assessment tool](#)', '[Computers and electronics](#)', '[Educational programs](#)', '[Green building](#)', and '[Green - EPP products, suppliers](#)'.

Green Corner

- More than 90 success stories-case study topics
 - Computers-electronics
 - Construction: green, evidence based, LEED
 - Energy efficiency; Energy Star winners
 - Environmental purchasing
 - Environment of care
 - Food
 - Green cleaners
 - Indoor air pollution
 - Leadership - corporate
 - Reducing carbon footprint
 - Recycling and waste reduction
 - Toxic chemicals
 - Water conservation

BFR Alternatives

- Many manufacturers of TVs and computers have been moving away from BFRs in recent years
 - BFR (decaBDE) free product available
 - 2010 goal for complete elimination
- Medical equipment - slower response to eliminate BFRs
- Furniture manufacturers – responding eg, PBDE-free polyurethane foam
- More products available in Europe
 - Began banning some BFRs in the 1990's
 - U.S. only has bans in a few states

PVC alternatives in medical devices, office supplies, building materials, building materials, medical devices for NICUs

- Medical Devices
- Office supplies
- Building materials
- Medical Devices

Source: Sustainable Hospitals Project, 2000, “Alternative Products.”

PVC alternatives in medical equipment ...

Examples:

- Ambulatory products
- Bedding products
- Blood bags
- Body bags
- Breast pump collection kits
- Central line catheters, PICC Lines
- Enteral feeding sets
- Enteral feeding nasogastric tubes
- Epidural vessel catheters
- Gloves, examination
- IV products
- Irrigation/drainage
- Patient ID bracelets



SH Sustainable **HOSPITALS**

REGISTER
GLOSSARY
FEEDBACK
SITE MAP

Providing technical support to the healthcare industry for selecting products and work practices that reduce occupational and environmental hazards, maintain quality patient care, and contain costs.

Here are four ways to find alternative products:

1. Find products by category

- [Barometers](#)
- [Batteries](#)
 - [Disposable Batteries](#)
 - [Rechargeable Batteries](#)
 - [Recycling Options](#)
- [Bedding Products](#)
- [Blood Bags](#)
- [Body Bags](#)
- [Catheters](#)
- [Cleaning](#)
 - [Microfiber Mops and Cloths](#)
- [Dental Mercury Removal Systems](#)
- [Dialysis](#)
- [Disinfection and Sterilization](#)
 - [High Level Disinfectants & Sterilants](#)
 - [Intermediate Level Disinfectants](#)
- [Electrodes](#)

SHP receives 4-year NIOSH grant to study Sharps Injuries and Blood Exposure in Home Health Care. More information coming soon.

[Background Information: Latex, Mercury and PVC](#)

Case Studies & Fact Sheets

- [Complain about Products and Get Heard](#)
- [Environmentally Preferable Purchasing \(EPP\)](#)
- [Glutaraldehyde](#)
- [Laboratory Practices](#)
- [Latex & Gloves](#)
- [Mercury](#)

Source: Sustainable Hospitals Project, 2000, "Alternative Products."

Alternatives to PVC-DEHP

Health Care Without Harm www.noharm.org

Green Building: Alternatives to Polyvinyl Chloride (PVC) Building Materials for Health Care

Products detailed in this publication include:

Acoustical Ceiling Tiles (09 51 23)

Carpet (09 68 00)

Furniture (12 50 00)

Paints and Coatings (10 21 23)

GREEN BUILDING: ALTERNATIVES TO POLYVINYL CHLORIDE (PVC) BUILDING MATERIALS FOR HEALTH CARE (PAGE 1 OF 11)

Products (CSI Division)	Manufacturer/ brand	Telephone #	Webpage	PVC-Free Brand products	Material	IAQ ¹ Testing or Certification	HFR ² -Free	PFC ³ -Free	Anti-microbial Free	Heavy Metal Free	Comments
Acoustical Ceiling Tiles (09 51 23)	PVC is primarily used solely as a scrubbable finish layer on some ceiling tile products. Request PVC-free scrubbable finishes, which are available from most manufacturers.										
Carpet (09 68 00)	PVC is frequently used as a backing on commercial grade carpets. Some manufacturers have both PVC-backed and PVC-free-backed carpet lines. (*) Most commercial products include PFCs and other fluorochemicals as stain resistant treatments in the fibers and not in the carpet backing.										
	Bolyu Contract	800.451.1250	www.bolyu.com	Nexterra backing	Recycled polyethylene terephthalate (PET) & glass carpet backing	Yes - GLP	Yes	* (see note above)	Yes	Yes	Tile. 85% post-consumer recycled content (35% PET bottles; 50% glass). Contains about 10% petroleum.
	Bolyu Contract	800.451.1250	www.bolyu.com	iLoc backing system	Woven primary carpet backing; anti-microbial pre-coat, laminate coating, woven stabilizer	Yes - GLP	Yes	* (see note above)	Yes	Yes	Broadloom. Seven to 20% post-consumer recycled content. Company purchases 110% wind power to run plants.
	Construction Specialties	908.236.0800	www.c-sgroup.com	non-PVC backed carpet tile	Composite rubber or bitumen backing	No	Yes	* (see note above)	Yes	Yes	Tile. Introduced to market in early 2008.
	Fortune Contract	800.359.4508	www.fortunecarpet.com	EnviroCel and BioCel backing	Polyurethane laminate and foam backing using soy-based polyols, with recycled content.	Yes - GLP	Yes	* (see note above)	No	Yes	Fortune sells broadloom with EnviroCel or BioCel backing, some include attached cushion. These backings are manufactured by Universal Textile Technologies. Recycled content (post-consumer; post-industrial): BioCel laminate and foam (7 to 12%; 50 to 55%); EnviroCel laminate (0 to 10%;

Alternatives* to Polyvinyl Chloride (PVC) and Di(2-Ethylhexyl) Phthalate (DEHP) Medical Devices (Part 1 of 14)

Products	Manufacturer	Telephone #	Website	Material	Comments
Accessories - NICU	CAS Medical	800.580.7032	www.casmedical.com	Polyethylene and polyolefins	Light-permeable diapers for phototherapy
	Covidien / Kendall Healthcare	800.962.9888	www.kendallhealthcare.com	Fabric foam, DEHP-free, latex-free	Baby boards (positioners)
	Covidien / Kendall Healthcare	800.962.9888	www.kendallhealthcare.com	Fabric; DEHP-free	Baby shades eye protectors
	Marian Medical, Inc.	502.895.6991	www.marianmedicalonline.com	Silicone; Non-DEHP PVC	Neonatal procedure kits
	Natus Medical	800.255.3901	www.natus.com	Polyolefin foam with polyethylene coating	Neonatal noise attenuators (MiniMuff)
	Tarry Manufacturing	800.688.2779	www.tarrymfg.com	Polyurethane boards, cotton/polyester fabric covering	Armboards
	Utah Medical Products, Inc.	800.533.4984	www.utahmed.com	100% cotton covering	Phototherapy eye protectors
Ambulatory Products	Many Manufacturers, including: Merry Walker Corp.	847.837.9580	www.merrywalker.com	Steel	
Bags, Non-sterilized	Cryovac	800.391.5645	www.cryovacmedicalfilms.com	Polyolefins	Medical film for packaging pharmaceutical bags and ostomy pouches
	Qosina	631.242.3000	www.qosina.com	Ethylene vinyl acetate	Bags with graduations
	Qosina	631.242.3000	www.qosina.com	Low-density polyethylene	Specimen transport bags
	Qosina	631.242.3000	www.qosina.com	Polyethylene	Bags and pouches
	Qosina	631.242.3000	www.qosina.com	Polyolefin-based film	Bags
	Qosina	631.242.3000	www.qosina.com	Polypropylene	Autoclave bags
Bags, Sterilized	General Econopak	888.871.8568	www.generaleconopak.com	Polyolefin/Kraft paper	Sterilization pouches

Alternatives* to Polyvinyl Chloride (PVC) Medical Devices for the Neonatal Intensive Care Unit (NICU) (Part 1 of 10)

Products	Manufacturer	Telephone #	Website	Material	Comments
Accessories - NICU	CAS Medical	800.580.7032	www.casmedical.com	Polyethylene and polyolefins	Light-permeable diapers for phototherapy
	Covidien / Kendall Healthcare	800.962.9888	www.kendallhealthcare.com	Fabric foam, DEHP-free, latex-free	Baby boards (positioners)
	Covidien / Kendall Healthcare	800.962.9888	www.kendallhealthcare.com	Fabric; DEHP-free	Baby shades eye protectors
	Marian Medical, Inc.	502.895.6991	www.marianmedicalonline.com	Silicone; Non-DEHP PVC	Neonatal procedure kits
	Natus Medical	800.255.3901	www.natus.com	Patented latex-free material	Phototherapy eye shield
	Natus Medical	800.255.3901	www.natus.com	Polyolein foam with polyethylene coating	Neonatal noise attenuators (MiniMuff)
	Tarry Manufacturing	800.688.2779	www.tarrymfg.com	Polyurethane boards, cotton/polyester fabric covering	Armboards
	Utah Medical Products, Inc.	800.533.4984	www.utahmed.com	100% cotton covering	Phototherapy eye protectors
Bags, Non-sterilized	Cryovac	800.391.5645	www.cryovacmedicalfilms.com	Polyolefins	Medical film for packaging pharmaceutical bags and pouches
	Qosina	631.242.3000	www.qosina.com	Ethylene vinyl acetate	Bags with graduations
	Qosina	631.242.3000	www.qosina.com	Low-density polyethylene	Specimen transport bags
	Qosina	631.242.3000	www.qosina.com	Polyethylene	Bags and pouches
	Qosina	631.242.3000	www.qosina.com	Polyolefin-based film	Bags
	Qosina	631.242.3000	www.qosina.com	Polypropylene	Autoclave bags
Bags, Sterilized	General Econopak	888.871.8568	www.generaleconopak.com	Polyolefin/Kraft paper	Sterilization pouches

Alternatives to Polyvinyl Chloride (PVC) in Office Supplies (Part 1 of 5)

Products	Manufacturer	Telephone	Webpage	Material	Comments
3-Ring Binders PVC used for plastic cover of binder	Avery	800.462.8379	www.avery.com	Aluminum	Aluminum binder
				Polypropylene	Poly and clear trends binder
				Pressboard	Pressboard binder
	Mead	NA	www.meadwestvaco.com	Pressboard	Pressboard binder
	Smead	651.437.4111	www.smead.com	Polypropylene	InnDura binder
	Storex Industries Corp.	888.402.2345	NA	Polypropylene	Duratech binders
	Acco (Wilson Jones)	800.989.4923	www.wilsonjones.com	Polypropylene	Poly binders
Account Books PVC used for cover of account book	Avery	800.462.8379	www.avery.com	Cloth cover	
	Esselte (Boorum & Pease)	NA	www.esselte.com	Canvas	
	Esselte	NA	www.esselte.com	Canvas	
Adhesive Backed Rolls for Banners PVC used for banner material	Imaging and Finishing	416.804.3300	www.imagingandfinishing.com	Polyester, acrylic, and polypropylene	Econo-Lam polyester film
	Hewlett Packard	888.999.4747	www.hp.com	Paper	Banner Paper not adhesive b

Resources from Healthcare Without Harm

www.no-harm.org

- Why healthcare is moving away from the hazardous PVC
- The Weight of Evidence: Exposures are a cause for concern, especially during medical care
- A PLEDGE: for hospitals and health systems in support of reducing PVC and DEHP from Neonatal ICUs
- PVC Medical Devices containing the plasticizer DEHP: guidelines for an audit

Additional resources from HCWH www.noharm.org

A FACTSHEET BY HEALTH CARE WITHOUT HARM EUROPE



How to survey PVC use in your hospital and begin a successful PVC phase-out programme

This factsheet explains the following:

- How to do a PVC Audit
- After the audit: Piloting alternatives
- Which PVC products should be replaced first?
- Examples of product labels and what they mean
- List of products used in hospitals which are commonly made from PVC
- Template for recording results of PVC/DEHP audit
- 10 Tips for a successful PVC elimination programme

A FACTSHEET BY HEALTH CARE WITHOUT HARM EUROPE



PVC/DEHP phase-out is possible anywhere in Europe: Model hospitals show how to succeed

Experience at Karolinska University Hospital (Sweden), the Vienna Hospital Association (Austria), Na Homolce and Olomouc Hospitals (Czech Republic), Kosice Saca Hospital (Slovakia) and Clinique Champeau (France) provide ample evidence for the claim that PVC phase-out is not only possible – it is realistic.

This factsheet describes the common lessons learned from across Europe to show how PVC phase-out is possible, whatever the political and economic climate. It also lists hospitals which are phasing out PVC and the devices with which they are having most success.

How to eliminate PVC-DEHP

- Conduct an audit
- Commit to eliminate
- Educate on the risks
- Communication that commitment
- Collaborate house wide

From: HCWH Pledge to reduce PVC-DEHP in NICUs

Steps hospitals can take towards purchasing products free of BFRs and PVC

- Conduct an audit; commit; educate; prioritize elimination;
- Purchase products that are free from PVC and BFRs
- Tell suppliers your requirements – NO PRODUCTS with persistent, bioaccumulative toxins
- Use EPEAT registered products when purchasing PC's and related products – www.epeat.net
- Work with your GPO to include EPP requirements in the contracting process
- Require line item detail regarding product content in RFIs before making contracting and purchasing decisions
 - Disclosure of BFRs by chemical name
 - Disclosure of PVC **and** DEHP

Premier's Employee Yes to Green Pledge



I pledge to replace 4 lightbulbs with compact fluorescent lightbulbs

I will eliminate 1800 pounds of carbon dioxide; Together, all of us at Premier will prevent 900 tons of carbon dioxide emissions a year.



I pledge to replace at least one car trip a month with walking, bicycling, or public transit

I will decrease carbon emissions by 1000 pounds; Together, all of us at Premier will decrease emissions by 500 tons per year.



I pledge to turn off the tap when brushing my teeth

I will save 4 gallons of water a day; Together, all of us at Premier will save 1.4 million gallons a year or enough water to fill 165 Olympic sized pools.



I pledge to plant or care for a tree by watering, mulching, and removing litter

I will help to capture 3.6 pounds of carbon dioxide per year from the atmosphere; Together, all of us at Premier will help capture more than 1.8 tons of carbon dioxide in a year.



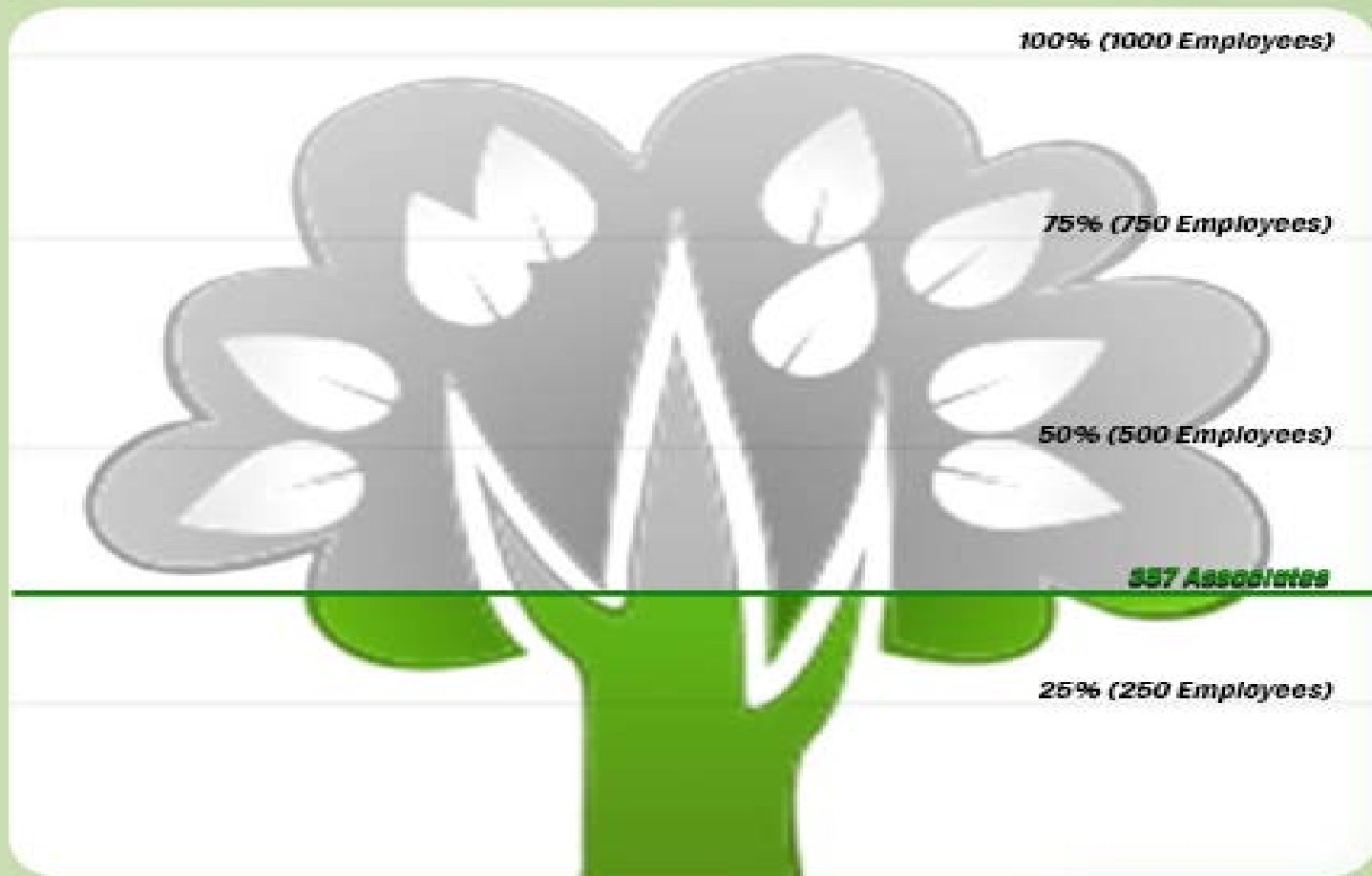
I pledge to replace plastic shopping bags with reusable shopping bags

I will eliminate 208 plastic bags per year; Together, all of us at Premier will eliminate 208 thousand bags and save about 1.5 tons of waste going to the landfill.

Yes to Green Employee Pledge

Goal: 100% of Premier employees make a commitment to help the environment and reduce our carbon footprint by eliminating 1400 tons of CO2, diverting 208,000 plastic bags from landfill, and saving 1.4 million gallons of water

PREMIER



Visit Inside Premier and make your pledge today to make these changes for 2009

- Use 4 energy efficient CFL bulbs
- Replace one car trip a month with biking, walking
- Plant or care for one tree
- Turn off water when brushing teeth
- Use reusable shopping bags

Premier's Yes to Green Team



Thank You

Contact us:

Email: ***safety_institute@premierinc.com***

Phone: 704 733 5865