

Creating a Safe Environment

Toxics in Consumer Products

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New York State Pollution Prevention Institute



New York State Pollution Prevention Institute

New York State Pollution Prevention Institute (NYSP2I)

Vision:

The vision of the NYS P2I is to foster the transformation and development of sustainable businesses and organizations in New York State in a collaborative program committed to making the State a leader in environmental stewardship.

Mission:

The mission of the Institute is to provide a high-impact, comprehensive and integrated program of technology research development and diffusion, outreach, training and education aimed at making New York State more sustainable for workers, the public, the environment and the economy through:

- reductions in toxic chemical use
- reductions in emissions to the environment and waste generation
- the efficient use of raw materials, energy and water



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Focus

- Use of phthalates, Bisphenol-A, and heavy metals in consumer products
 - Potential human health and environmental effects
 - How to avoid them
 - Products that may contain them
- Overview of the CPSIA and its effects
- Product testing & information sources



Product Safety

- Companies do not have to disclose to consumers what is in their products
- Consumer Product Safety Commission
 - Charged with protecting the public from unreasonable risk from consumer products
 - Protect from products that pose fire, electrical, chemical, or mechanical hazard or can harm children
 - Operates voluntary recall program
- CPSC can't test toys before sale to ensure they are safe



Recalled due to magnets coming loose



Plastics

Soft, squishy, mouthed



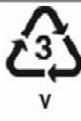






Hard, shatter proof



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Deciphering Plastics

PREFERRED		PETE Polyethylene Terephthalate	Soft drink & water bottles	Recyclable
PREFERRED		HDPE High Density Polyethylene	Milk jugs	Recyclable
AVOID		PVC Polyvinyl Chloride	Cosmetics, pacifiers, shower curtains, teething rings, pacifiers, soft toys, portable electronics	Can leach phthalates and lead Not Recyclable Creates dioxin during manufacture & disposal
PREFERRED		LDPE Low Density Polyethylene	Food storage, soft and pliable parts	Recyclable
PREFERRED		PP Polypropylene	Reusable microwaveable containers, food storage	Recyclable
AVOID		PS Polystyrene	Packing peanuts; disposable cups, plates, plasticware; Styrofoam	Can leach styrene Recyclable, but not usually recycled Most end up in landfills
UNCERTAIN		OTHER PC Polycarbonate PLA Poly Lactic Acid	Reusable water bottles Disposable cups	Can leach bisphenol-A; Not recyclable Not Recyclable; Can be composted



PVC and Phthalates

Phthalates - group of chemicals commonly used as plasticizers mainly to soften PVC

- Soft toys typically contain 15-20% phthalates
- New shower curtain smell
- Health effects are controversial



Products that may contain phthalates

- PVC & vinyl plastics, rubber, pesticides, adhesives, glue, caulk
- Soft plastic – bath toys, squeeze toys, teething rings, dolls
- Vinyl fabric – shower curtains, backpacks
- Vinyl fabric coatings – decals, bibs, doll clothes
- Personal care & body products – hair spray, perfumes, cosmetics, nail polish, lotions
- Food containers & plastic wrap (Glad & Saran wraps are phthalate free)
- Foamed PVC – flooring material



Phthalate Exposure

- People are mainly exposed through eating and drinking foods contaminated from their storage containers
- Phthalates are not chemically bound to PVC – this means they can easily leach out of the plastic and into the environment
- Phthalates are highly soluble in oils – leach at a higher rate when in contact with oils & fats (think food storage containers)
- Heat increases leaching
- Exposure is greater when containers/material starts to show signs of wear and break down
- Children have a greater risk of exposure due to hand to mouth behavior

*CDC, *National Report on Human Exposure to Environmental Chemicals*, Phthalates Fact Sheet



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Commonly Used Phthalates and their Potential Effects

Common Uses	Potential Effects
DEHP [di(2-ethylhexyl)phthalate]	
wall coverings, tablecloths, floor tiles, furniture upholstery, shower curtains, garden hoses, swimming pool liners, rainwear, baby pants, dolls, toys, shoes, automobile upholstery, packaging film, wire & cable sheathing, medical tubing, blood storage bags ^a	Limited evidence of reproductive toxicity ^b Strong evidence of endocrine disruption ^c Respiratory toxicant ^d Possible human developmental toxicant ^e
DBP (di-n-butyl phthalate)	
carpets, paints, glue, insect repellents, hair spray, nail polish, and rocket fuel ^a	Human immune system toxicant ^b Strong evidence of endocrine disruption ^c Possible human developmental toxicant ^e Limited evidence of reproductive toxicity ^b
Diethyl phthalate	
toothbrushes, automobile parts, tools, toys, food packaging, cosmetics, insecticides, and aspirin ^a	Human immune system toxicant ^b Strong evidence of endocrine disruption ^c Limited evidence of reproductive toxicity ^b

^a Agency for Toxic Substances and Disease Registry, Public Health Statements

^b National Library of Medicine, HazMap — Occupational Exposure to Hazardous Agents

^c European Commission on Endocrine Disruption

^d EPA, Hazardous Air Pollutants

^e California, Proposition 65



Avoiding Phthalates

Use	Good	Better
Shower curtain	Air out PVC curtains outside/well ventilated area for at least 1 week before installing in bathroom	Switch to fabric
Food containers	Avoid microwaving fatty foods in them Use a paper towel or wax paper instead of plastic wrap when microwaving food Handwash only – do not use dishwasher Replace containers when they show signs of wear	Use glass or ceramic food storage containers
Toys & children's products	Replace all mouthed items with safer plastics	Use PET (#5) or PE (#2 & #4) instead
Soft plastic products	Avoid soft plastics that you or food will come into contact with	Avoid all products labeled "vinyl"
Cleaning products, air fresheners, scented products	Only use air fresheners when they are necessary Avoid scented products	Eliminate the use of air freshener type products Avoid cleaning products with "fragrance" as a listed ingredient
Vinyl floors	When replacing floors, do not use vinyl	Replace vinyl floors with non offgassing, sustainable materials such as bamboo



PVC Free Retailers & Manufacturers



Comprehensive list at <http://www.besafenet.com/pvc/companypolicies.htm>

Polycarbonate & BPA

Bisphenol A (BPA) – building block of polycarbonate and epoxy resins

- Endocrine disruptor
- Toxic to aquatic environment



most Playskool products are BPA free

Products that may contain BPA

- Polycarbonate products
 - Baby bottles, sippy cups
 - Water bottles, water cooler bottles
 - Medical & dental devices
 - Food storage containers
 - Eyeglass lenses, CDs, DVDs
- Epoxy resins containing BPA are used to coat the inside of most metal food and beverage cans (ie. vegetables, tomatoes, soda, etc)
- Can be used as an antioxidant (slow degradation due to heat and oxygen) in flexible PVC
- Thermal receipt paper



BPA Exposure

- People are mainly exposed through eating and drinking foods contaminated from their storage containers
- BPA is water soluble
- Leaching is increased when
 - Container is heated (avoid hot liquids and dishwasher)
 - The container is cleaned with bleach or ammonia
 - The contents are acidic
- Exposure is greater when containers/material starts to show signs of wear and break down



No Silver Lining

An Investigation into Bisphenol A in Canned Foods

- Tested 50 canned food samples for BPA; 92% (46 of 50) had detectable levels of BPA
- Tested off the shelf and pantry cans; no correlation between age of the product and BPA amount
- No correlation between where the product was purchased and BPA content
- The current U.S. human exposure limit set by the EPA is 50 µg/kg/day amount

Product	Detected Level per serving	DAILY BPA EXPOSURE IN (µg/kg body weight)	HEALTH EFFECTS OBSERVED IN LABORATORY STUDIES ⁵¹
Campbell's chicken noodle soup	38.89 µg	0.0001	Alterations in cell signaling pathways ⁵²
Chef Boyardee beef ravioli	2.44 µg	0.025	Persistent changes to breast tissue, predisposes cells to hormones ⁵³
Coca Cola Classic	0.07 µg	0.025	Permanent changes to genital tract ⁵⁴
Del Monte french style green beans	35.84 µg	0.2	Decreased antioxidant enzymes ⁵⁵
Diet Coke	0.25 µg	0.25	Altered development of fetal mammary glands ⁵⁶
Eagle Brand condensed milk	Non Detect	1	Long-term adverse reproductive and carcinogenic effects ⁵⁷
Star-Kist tuna	0.35 µg	2	Increased prostate weight ⁵⁸
		2	Increased aggression ⁵⁹
		2.4	Weight gain and early onset of puberty ⁶⁰
		2.4	Signs of early puberty, increased anogenital distance ⁶¹
		2.4	Decline in testicular testosterone ⁶²
		2.5	Predisposes breast cells to cancer ⁶³

Avoiding BPA

Use	Good	Better
Canned foods	Limit the amount of canned foods you consume each day Avoid purchasing canned acidic foods	Purchase food in glass or paper containers or frozen vegetables in plastic bags Look for foods in containers labeled "BPA free"
Food & beverage containers	Hand wash PC containers, do not wash in the dishwasher Do not store hot liquids in them Do not clean with bleach Replace containers when they start to degrade	Replace polycarbonate containers with PETE (#1), PET (#5), or PE (#2 & #4), or stainless steel (some metal containers are lined with epoxy resins, so choose wisely)
Baby bottles and children's beverage containers	Same as food and beverage containers above Do not allow children to chew on containers	Replace with PET (#5) or PE (#2 & #4) instead Look for containers labeled "BPA free"



Metals

Lead

Uses: stabilizer in PVC; pigmentation in paint, rubber, plastics, ceramics; cheap metal jewelry

Found in: jewelry, paint, PVC

Concern: neurotoxicity

Cadmium

Uses: stabilizer in PVC, coatings & pigments in plastic and paint

Found in: jewelry, PVC

Concern: developmental effects, known carcinogen

Bromine

Uses: flame retardants, most often listed as “brominated flame retardant”

Found in: furniture, textiles, plastic encasing electronics

Concern: persistent and toxic, possible carcinogen, may affect brain development, may cause reproductive problems

Arsenic

Uses: pressure treated wood (discontinued for residential & consumer construction in 2003), dye in plastics & textiles, fruit tree insecticide

Found in: wood, textiles, plastics

Concern: known carcinogen, kidney damage



406,510ppm lead



3,847ppm cadmium



seat 997ppm bromine
clip 1,042ppm bromine

Metals

Mercury

Uses: catalyst to form polyurethanes, antifungal agent in mascara, CFL light bulbs, was used as fungicide in water based latex paints until 1990s

Found in: inks, adhesives, mascara, jewelry

Concern: persistent, toxic, kidney damage

Chromium

Uses: pigments, wood preservatives, dyes and pigments

Found in: stainless steel, pigments, wood

Concern: some are known carcinogens, cause birth defects and reproductive problems

Tin

Uses: stabilizer for rigid PVC products, catalysts in silicone production, pesticides

Found in: PVC

Concern: organotins toxic at low exposure, cause nervous system damage

Antimony

Uses: catalyst in polyester production, used in combination with brominated flame retardants to increase fire resistance

Found in: flame retardant, polyester

Concern: weakly mimics estrogen, high levels can cause fertility problems and lung cancer in animals



Pink elephant
headphones
3,048ppm mercury



Red guitar
2,693ppm lead
34,775ppm chlorine
319ppm arsenic
chromium, tin, antimony
also detected

Brominated Flame Retardants



Road Racers with Play Mat
By Fun Club

Mat: Bromine 30,831ppm



Princess Jewelry
By Dollar Tree

Necklace: Lead 257ppm

Bromine 12,550 ppm

Chlorine/PVC 257,196 ppm

Hair Clip: Lead 57ppm

Bromine 25ppm



Lightning McQueen Racing Chair
By Disney

Seat: Bromine 14,905

Mercury 39ppm

Base: Lead 34ppm

Bromine 25,562ppm

Mercury 156ppm



Lead, cadmium, mercury, arsenic are common PVC stabilizers



Green

1,589ppm lead
282ppm chromium

Orange

2,446ppm lead
586ppm chromium
175ppm arsenic
58ppm mercury

Red

1,075ppm lead
274ppm chromium
83ppm arsenic

Kids' Boots (Style 443449)

Brand: Circo
Retailer: Target



YELLOW PVC

Lead: 1,687 ppm
Chromium: 994 ppm
Mercury: 26 ppm
Cl/PVC: 29-40% by weight



Consumer Product Safety Improvement Act

Enacted Jan 2008 to protect children from lead and phthalate hazards by

1. Reduce lead allowed in children's products and paints
2. Establish phthalate limit
3. Require product testing to ensure products meet limits

1. Lead paint ban strengthened - 1977 limit 600ppm to 90ppm by Aug 2009

2. Lead in children's products is a banned hazardous substance

600ppm Feb 2009 | 300ppm Aug 2009 | 100ppm Aug 2011

3. Ban on phthalates in toys & children's products

- ✓ Products with DEHP, DBP, BBP higher than 0.1% are permanently banned Feb 2009
- ✓ Products children can put in their mouth with DINP, DnOP, & DIDP higher than 0.1% are provisionally banned Feb 2009

4. CPSC significant funding & staff increases

5. Increased penalties for non compliance



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CPSIA Timeline

- Jan 8, 2009: resellers do not need to certify products against lead and phthalate requirements
- Feb 10, 2009: Lead limit reduced to 600ppm, limit for certain phthalates set to 0.1% (100ppm)
- Aug 14, 2009
 - Lead limit in toys and children's articles reduced to 300ppm
 - Lead limit in paints and other surface coatings reduced to 90ppm
 - Civil penalties for manufacturers not in compliance increased to \$100,000 per violation (from \$8,000)
 - Manufacturers must place a tracking label on any consumer product intended for children under 12
 - Advertising for certain toys and games intended for use by children from 3-6 years old must have warnings regarding potential choking hazards to children under 3
- Feb 10, 2011: manu. must certify products for 300ppm lead limit
- Aug 2011: lead limit in toys & children's articles reduced to 100ppm





- Created and maintained by the Ecology Center
- Contains testing results from 5,000+ products in the following categories:
 - Toys
 - Children's products
 - Pets
 - Cars
 - Apparel & Accessories
- Searchable database of results



Rankings

Using the product search

Car Seats List

2009 Best/Worst Picks

List by brand

List by type

List by Level of Concern

Vote for a product

Test my Stuff!

My list

Test my stuff results

Click [HERE](#) to **tweet** this result!



Your List

[Need help?](#)

Add the Product on This Page to Your List

Your list is empty! Click "Need Help?" for instructions.

Save/Load/Share Your List

Product Details for Children's Products

Alpha Omega Convertible Blue Steel

Cosco



Bromine 5.0 Chlorine 0.0 Lead 1.0 Others 1.0

Test Method
XRF

UPC/EAN
44681229008

Manufacturer Code
44681229008

Type
Car Seat (Convertible)

IMPORTANT NOTE: HealthyStuff.org ratings do not provide a measure of health risk or chemical exposure associated with any individual product, or any individual element or related chemical. [Follow this link to read more.](#)

Components [†]	Bromine	Chlorine	Lead
Base	2	0	0
Seat	18,754	0	0
Clip	1,503	0	12

[†] Note: numbers in this table represent parts per million of the given chemical.

You may also view [complete chemical results](#) for this product.



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[The Campaign for Safe Cosmetics](#)

MERCURY IN MASCARA!?

It's true. EWG's researchers list the products and ingredients you should avoid in [What Not to Buy](#).

[Company/User Login](#)

Skin Deep is a safety guide to cosmetics and personal care products brought to you by researchers at the [Environmental Working Group](#).

- Search for a **product, ingredient, or company**

search

- [Login to get a provisional report on a product not yet in Skin Deep](#)
- [Create your own custom shopping list with an advanced search](#)

Online shopping?

Shop on Amazon and up to 8.5% of your total will be donated to EWG.

It's a free and easy way to help keep our work going.

Shop Now ▶



EWG'S 2010 SUNSCREEN GUIDE

You know the drill: when the sun's rays are fierce, duck and cover. But sometimes, you're going to be out there in it. **EWG's Sunscreen Guide** to *1,400 sunscreens*, lip balms and moisturizers tells you what you need to know to find safe and effective sunscreens. [Read more...](#)



NOT SO SEXY: HIDDEN CHEMICALS IN PERFUME AND COLOGNE

A rose may be a rose. But that rose-like fragrance in your perfume may be something else entirely, concocted from any number of the fragrance industry's 3,100 stock chemical ingredients, the blend of which is almost always kept hidden from the consumer. [Read more...](#)



No items in basket.
Add this product

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COVERGIRL FANTASTIC LASH LASTING WATERPROOF MASCARA, BLACK 825

brand: [Cover Girl](#) by Procter & Gamble

last updated: 03/15/09

Given the incomplete information made available by companies and the government, EWG provides additional information on personal care product ingredients from the published scientific literature. The chart below indicates that research studies have found that exposure to one or more ingredients in this product -- not the product itself -- caused the indicated health effect(s) in the studies reviewed by Skin Deep researchers. Actual health risks, if any, will vary based on the level of exposure to the ingredient and individual susceptibility -- information not available in Skin Deep.

Ingredients in this product are linked to:

- Cancer
- Developmental/reproductive toxicity
- Violations, restrictions & warnings
- Allergies/immunotoxicity
- Other concerns for ingredients used in this product: Endocrine disruption, Persistence and bioaccumulation, Organ system toxicity (non-reproductive), Multiple, additive exposure sources, Irritation (skin, eyes, or lungs), Contamination concerns, Occupational hazards, Biochemical or cellular level changes

Ingredients from packaging: Petroleum Distillates, Polyethylene, Quaternium 18 Hectorite, Copernicia Cerifera Wax (Carnauba), Trihydroxystearin, Propylenecarbonate, Tall Oil Glycerides, Pentaerythrityl Hydrogenated Rosinate, BHA, Phenoxyethanol, Propylparaben, Iron Oxides, May Contain: Ultramarines, Titanium Dioxide.

Warnings from packaging: Eye cosmetics in a scratched, infected or irritated eye and scratches from eye cosmetic applicators can lead to eye damage and in extreme cases even blindness. If your eye is scratched, infected or irritated, stop using all eye cosmetics and go to an eye doctor immediately.

SCORE

 6 [moderate hazard \(out of 10\)](#)

82% [data gap](#)

[BUY ONLINE](#) / BETTER PRODUCTS

[see online retailers](#)

77% of [mascaras have lower concerns](#)

COMPANY POLICIES

[Compact for Safe Cosmetics](#)

Non-signer: This company has not signed the Compact.



[Animal Testing Policy](#)

This company **conducts** animal tests.

USER REVIEWS & COMMENTS

NEW! No reviews or ratings yet. [Log in and be the first to leave a comment!](#)

INGREDIENTS

	score	data gap	concerns
BHA	 10	49%	Violations, restrictions & warnings, Endocrine disruption, Allergies/immunotoxicity, Persistence and bioaccumulation, Organ system toxicity (non-reproductive), Biochemical or cellular level changes
POLYETHYLENE	 6	69%	Allergies/immunotoxicity, Organ system toxicity (non-reproductive), Irritation (skin, eyes, or lungs), Contamination concerns (ETHYLENE OXIDE , 1,4-DIOXANE)

Concerns: Violations, restrictions & warnings, Persistence and bioaccumulation, Organ system toxicity (non-reproductive), Irritation (skin, eyes, or lungs), Contamination concerns

CPSC Voluntary Product Recalls

Categories

1. Child products (not including toys)
2. Toys
3. Household products
4. Outdoor products
5. Sports & recreation products
6. Specialty products


PUT CPSC RECALLS ON YOUR WEBSITE

NEWS from CPSC

U.S. Consumer Product Safety Commission

Office of Information and Public Affairs Washington, DC 20207



FOR IMMEDIATE RELEASE
June 17, 2010
Release #10-268

Firm's Recall Hotline: (800) 440-0680
CPSC Recall Hotline: (800) 638-2772
CPSC Media Contact: (301) 504-7908

Target Recalls Children's Belts Due to Violation of Lead Paint Standard

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission, in cooperation with the firm named below, today announced a voluntary recall of the following consumer product. Consumers should stop using recalled products immediately unless otherwise instructed. It is illegal to resell or attempt to resell a recalled consumer product.

Name of Product: Boys' and girls' belts

Units: About 105,150

Importer: Target Corp. of Minneapolis, Minn.

Hazard: The belt buckles contain excessive levels of lead, violating the federal lead paint standard.

Incidents/Injuries: None reported

Description: This recall involves two types of belts: The Cherokee boys' belts and Circo girls' belts. The Cherokee belts are black and brown reversible belts with heavy stitching in sizes M-XL. The belts came in a pack of two with the numbers 202/08/0018, 202/08/0019 or 202/08/0020 embossed on the belt. The girls' Circo belts are pink and white with heart buckles in sizes XS-L. They were sold in a 2-pack with the numbers 202/05/0011, 202/05/0012, 202/05/0013 or 202/05/0014 listed on the product label attached to the inside of the belt.

Sold exclusively at: Target stores and on Target.com nationwide from December 2008 through December 2009 for between \$7 and \$9

Manufactured in: China

Remedy: Consumers should immediately stop using the recalled belts and return them to any Target store to receive a full refund.

Consumer Contact: For additional information, contact Target at (800) 440-0680 between 7 a.m. and 6 p.m. CT Monday through Friday or visit the firm's website at www.target.com





Information Sources

Product Recalls: CPSC www.cpsc.gov & Recalls.gov www.recalls.gov

Washington State Toxics Coalition

Safe Start for Kids <http://www.watoxics.org/safer-products/safe-start-for-kids>

Toxic Free Toys Campaign <http://www.watoxics.org/issues/saferproducts>

Environment California Stop Toxic Toys

<http://www.environmentcalifornia.org/environmental-health/stop-toxic-toys>

Healthy Child Healthy World <http://healthychild.org>

US PIRG (Public Interest Research Group) www.uspirg.org/issues/toy-safety

Environmental Working Group www.ewg.org

Skin Deep Cosmetics Database www.cosmeticsdatabase.com



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Questions?

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