



# The Future of Product Chemistry

April 13, 2022

# How did we get here?



In 2005 50K pairs sandals

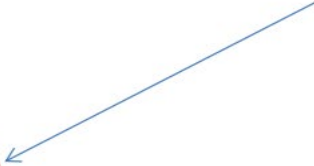


**Cadmium toxicity**  
Research has shown that cadmium affects the developing brain in children. Here are some other parts of the body it can affect.

**RELATED HEALTH ISSUES**

- A recent study has linked it to breast cancer.
- Cardiovascular disease
- Obstructive pulmonary disease
- The kidneys lose function, which can also cause gout, a form of arthritis.
- Bones lose density and fracture.

Exceeded 100ppm Cadmium



# Restricted Substances Program History

- **Scope of program:** initiated in 2006 for Asian Footwear
- **Objective:**

Minimize the amount of hazardous substances in our products that affect the:

- Production Worker
  - Consumer
  - Environment
- 
- Prohibit or restrict the use of substances in the RSL Manual (12.0)
  
  - Encourage NB Suppliers/Factories to take a proactive approach to RSL management
  
  - Protect the brand

**Why create an Restricted Substance List? Access to Global Markets!**



NEW BALANCE  
ATHLETICS, INC.

# Restricted Substances Manual

(RSM)



# Who is the Product Chemistry Department?

*The NB Product Chemistry Department is a team of subject matter experts providing resources to drive continuous advancement of product chemistry, product safety and chemical compliance and traceability best practices within the NB footwear, apparel and equipment supply chains. We do this based on transparency of our programs, science-based decision making and collaboration with relevant internal and external stakeholders to manufacture safer and sustainable product using preferred chemistry.*



Product Chemistry:  
Putting in the man hours  
to study the science of  
what you need, last week  
we put liquid paper on a  
bee...

# RESTRICTED SUBSTANCES

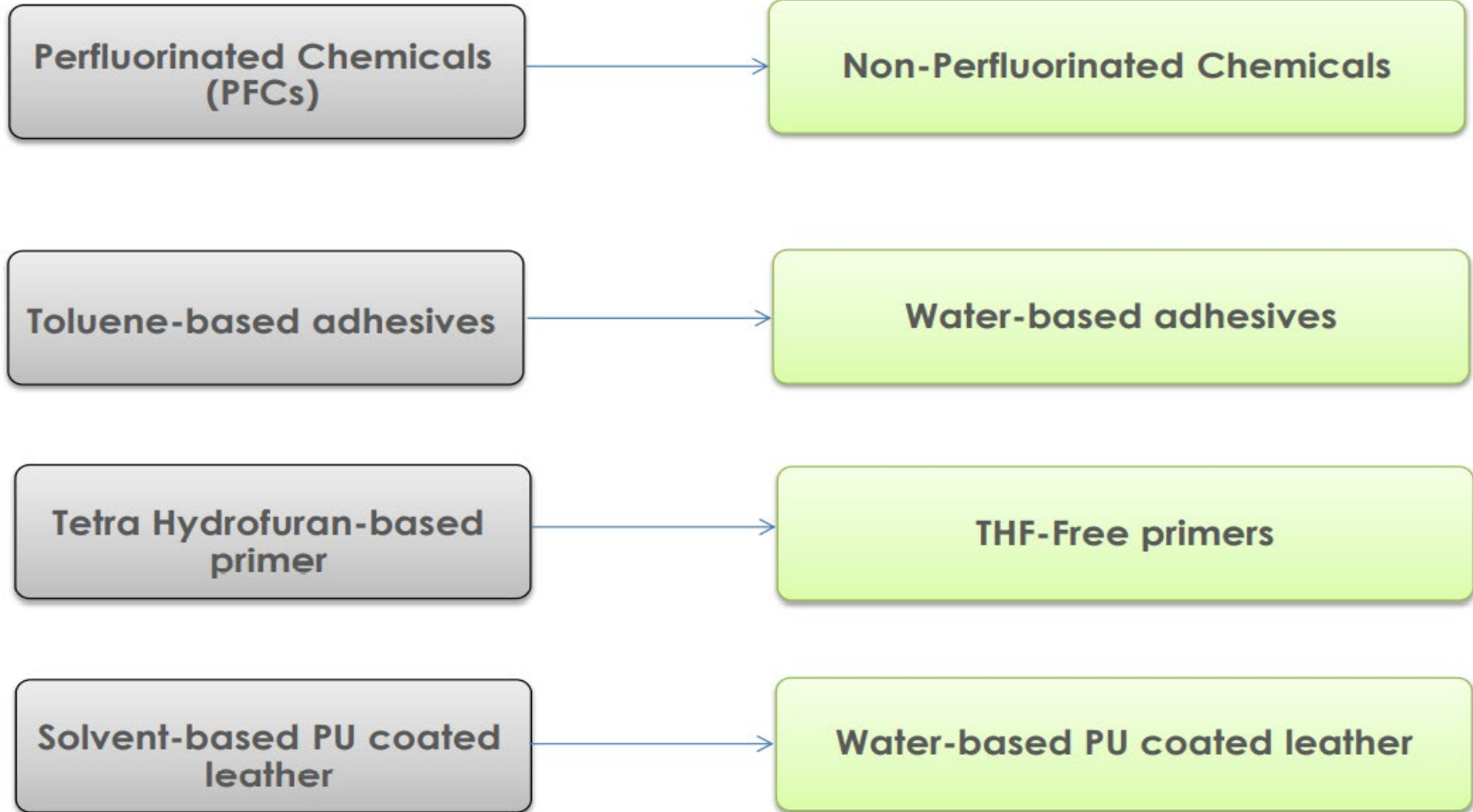
RESTRICTED SUBSTANCES TRAINING SUPPLIER CERTIFICATION PRODUCT SAFETY

The New Balance Restricted Substance Program is designed to protect the environment where we make our products, the health of workers in those manufacturing facilities, the health of our consumers, and our brand integrity. It applies to all footwear, apparel, accessories and equipment that New Balance makes (both in our own factories and our contract factories) as well as to all products made by our licensees.

## OUR PROGRAM COVERS FOUR CORE ELEMENTS

1. Restricted Substances Manual and Audits
2. Product Chemistry Training
3. Restricted Substances List (RSL) Certification
4. Product Safety

## Transitioning to Preferred/Safer Chemistry



# How Chemistry is used to market NB product

Glow in the dark ink

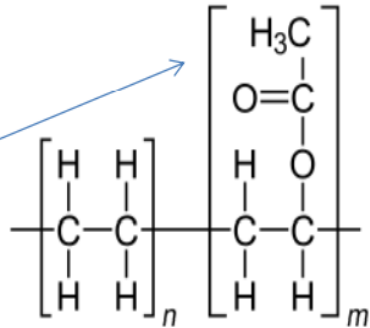
Durable Water repellency (DWR)



Anti-microbials



ole formulations





REPORT

# GOING OUT OF FASHION:

U.S. APPAREL MANUFACTURERS MUST ELIMINATE PFAS  
"FOREVER CHEMICALS" FROM THEIR SUPPLY CHAINS



APRIL 2022  
R-22-04-B

TABLE 3: SHOES AND SPORTS APPAREL BRANDS



## SHOES AND SPORTS APPAREL BRANDS

Company	Sample Apparel Brands	SCORING CRITERIA							Final Score	Final Grade
		Responded to Survey?	Timeline	Product Scope	Transparency	Validation	Baseline Score	Multiplier		
Keen Footwear	Keen	10	35	25	15	5	90	1	90	A-
Deckers Brands	Ugg, Teva	0	35	35	15	5	90	1	90	A-
New Balance	New Balance	10	35	35	10	5	95	0.6	57	C-
Nike, Inc.	Nike	0	35	35	15	5	90	0.6	54	D+
Under Armour	Under Armour	10	0	0	0	5	15	0	0	F
Skechers	Skechers	0	0	0	0	0	0	0	0	F

U.S. footwear brands surveyed, shown in Table 3, varied in their policies and commitments around PFAS use. Keen

# MATERIALS AND DESIGN

We're constantly learning and evolving our approach to create quality, long lasting design. That means making sustainability a priority in the process. We're building our portfolio of environmentally preferred materials, finding ways to use fewer materials, and driving toward more circularity through repair and recycling.

## **New Balance's green leaf standard**



New Balance's green leaf standard indicates environmentally preferred material adoption across our footwear and apparel products. For apparel that meet New Balance's green leaf standard, at least 50% of the materials in a garment are sourced as environmentally preferred. For footwear that meets New Balance's green leaf standard, at least 50% of the materials in its upper are sourced as environmentally preferred, and at least one material in the midsole/outsole uses approximately 3% bio based or 5% recycled content. We call a material environmentally preferred based on its physical characteristics (for example, recycled polyester) or based on its more sustainable sourcing practices (for example, Better Cotton).

## These \$13,000 Shoes Contain Real Bits of Meteorite



**Matthew Hart**

December 10, 2021 · 2 min read



Holy rich people, Batman! Netflix and New Balance have teamed up for a limited edition pair of sneakers that celebrates the upcoming release of [Adam McKay's \*Don't Look Up\*](#) and they cost \$13,200. The shoes do contain real meteorite fragments, however, which would be a perfect match for anybody with [an \\$8,600 \*T. rex\*-fossil phone](#).



Sotheby's



# GATEWAY

WATERZON

USERNAME

PASSWORD

LOGIN

[Forgot Password?](#) or [Forgot Username?](#)

[? Help](#)

Overview

Collections

My Collections

Shared Collections

Received Collections

Request

Sent Requests

Received Requests

Manage

My Chemicals

Tags

Chemical Names

Collections

3

CAS RNs Used

8

of

Unlimited

Lists

481

List Hits

110

List Alerts

0

Insight Alerts

0

Shares

0

# Footwear Life Cycle Assessment

## LCA

- Moving forward with SimaPro software
- Currently gathering data for baseline 574 LCA

## Low Carbon 574

- Exploring two opportunities for Regenerative Leather – Savory, Behumane
- Exploring plant/bio-based synthetic leather
- Durability and part reduction also a key focus– 34 parts/shoe today



BEHUMANE  
*Now you have a choice.*



## External Collaborations

The Zero Discharge of Hazardous Chemicals (ZDHC)



Apparel & Footwear International RSL Management Group (AFIRM)



American Apparel & Footwear Association (AAFA)



Green Chemistry & Commerce Council (GC3)

