

KNOW BETTER

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HEALTHYBUILDING.NET





OUR MISSION

To advance human and environmental health by improving hazardous chemical transparency and inspiring product innovation.

- Trust
- Independence
- Excellence
- Equity

- Innovation
- Transparency
- Collaboration
- Science-Based







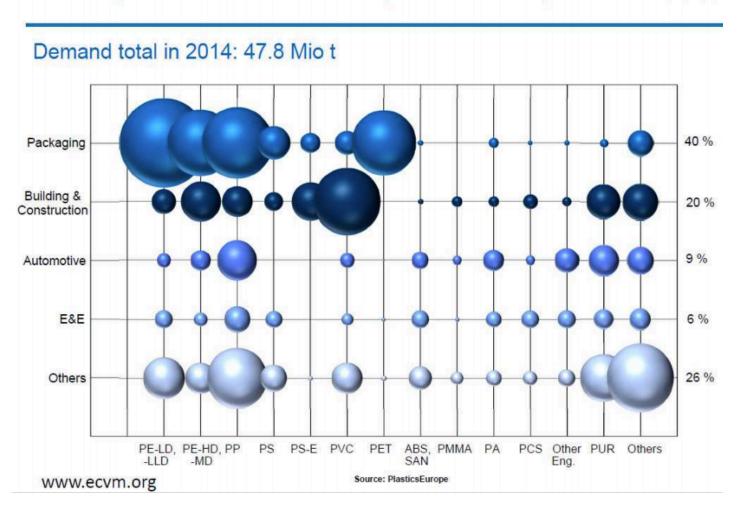


PVC BUILDING PRODUCTS



PVC: Largest market share of B&C plastics in Europe







PHASE ONE:

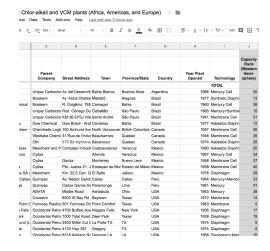
- Africa, Americas, Europe
- 86 chlor-alkali plants
- 56 PVC plants
- 1,000+ information sources
- Free, Open Access
- Maps, Spreadsheet, Report

PHASE TWO (Asia) underway

Chlorine and Building Materials A Global Inventory of Production Technologies, Markets, and Pollution Phase 1: Africa, The Americas, and Europe **HBN** KNOW BETTER







previously used asbestos cell technology to produce chlorine and caustic soda. Such technology can no longer be used in new petrochemical production facilities under Brazilian legislation and the global trend has been to ban this technology. As a result November 2016, we concluded our shift to newer diaphragm technology and banned asbestos technology from our plants. "¹⁶

- Markets: PVC produced at this plant is mainly used in building and construction.¹⁷
- Pollution:
 - A local union reported that three dichloroethane leaks from this plant on Octo 10, 2010, led to a large amount of the chemical overflowing a tank containme dam, "causing contamination of the soil and environment," according to Antior Freitas, director of Sindipetro AL / SE. The accident may have contaminated water table, according to the union."
 - In May 2011, there were two serious accidents, two days apart. In one, a pipe ruptured, injuring 5 workers. In the second, a chlorine leak sickened 130 peor, including 20 children. People reported smelling chlorine up to three kilometer away from the plant. Symptoms included "intoxication, respiratory problems, vomiting and severe headaches," according to a news report. In the Secretari Municipal do Meio Ambiente in Maceio fined Braskem \$1.1 million for these accidents. In the secretary of t
- Inventory Code: AMBRA02
- Plant name: Camaçari Petrochemical (Northeastern Complex)
- Owner: Braskem. Formerly Companhia Petroquímica Camaçari / Companhia Quím do Recôncavo (CQR).
- Location: Polo Petroquímico, Bahia, Brazil.
- Process: Mercury (as of 2016).

MAP

Google Map, includes:

- Close-up satellite views of each plant
- One click view of locations by technology
- Basic data
- Videos and photos

SPREADSHEET

Google Sheet, includes:

- Locations
- Capacities
- Ranking (by size)
- Technologies

REPORT

PDF with details on every plant, including:

- Capacities
- Technology Changes (past and planned)
- Markets Served
- Pollution





Plant name

Axiall

Parent Company

Westlake

Town

Proctor

Province or State

WV

Country

USA

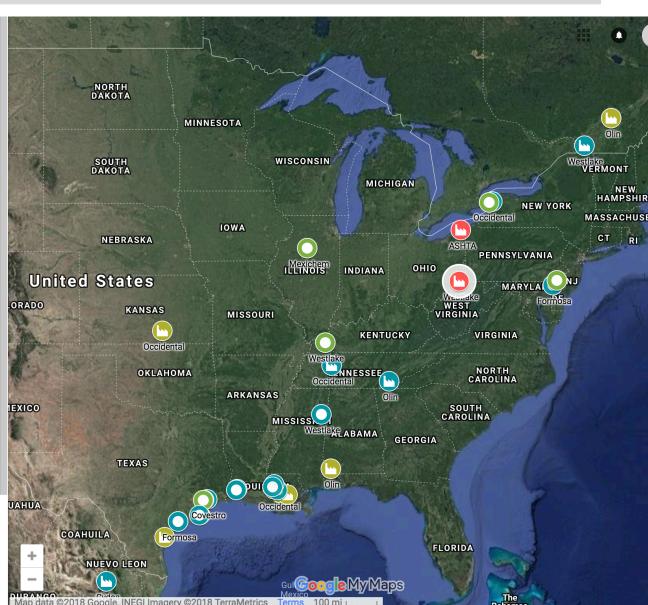
Inventory Code

AMUSA24

Year Plant Opened

1943

Technology













PFAS

Chlorine

Brine





Per- and poly-fluoroalkyl substances (PFAS)

The Washington Post

Opinions

These toxic chemicals are everywhere — even in your body. And they won't ever go away.

By Joseph G. Allen January 2

Joseph G. Allen is assistant professor at Harvard T.H. Chan School of Public Health and faculty adviser to the Harvard Healthier Building Materials Academy.



- "Forever chemicals" under increasing scrutiny
- Currently not required to be reported as chemical release
- European study suggests 4-6.7 grams released per ton of annual chlorine production
- PFAS documented in Cape Fear River, downstream of the leading supplier of membranes for chlorine plants







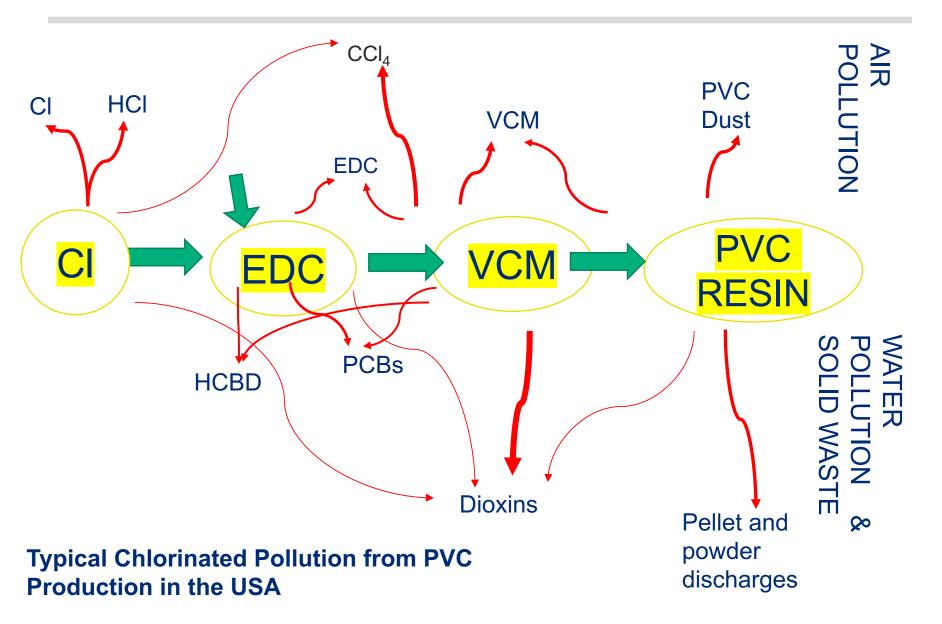
Figure 1: Coal-Based versus Petroleum-Based PVC Process

Limestone
Calcium
Carbide
Acetylene
Carbide
VCM
PVC
Salt

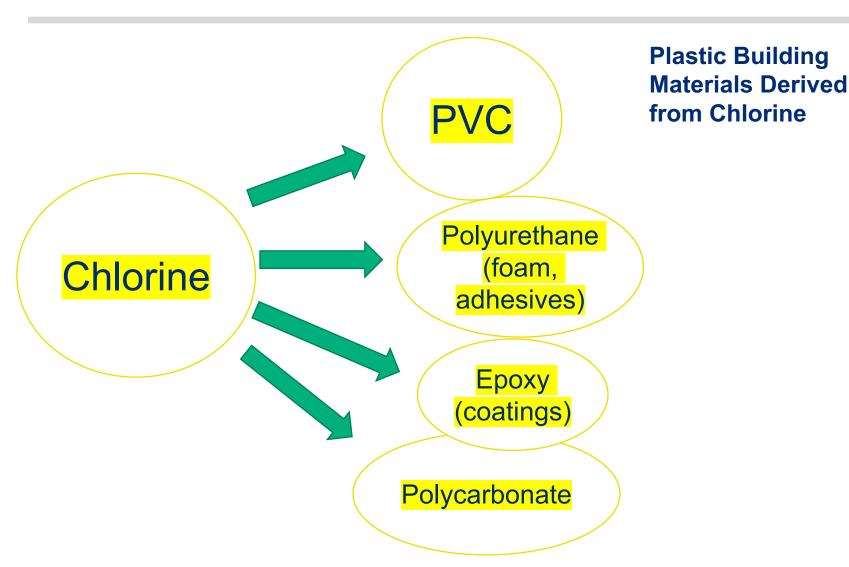
Naphta
Ethylene
EDC

Source: Chemical Industry Energy Efficiency and Emission Reduction Project (RRP PRC 47051), Asian Development Bank, 2015











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THANK YOU!

For more info, please visit our Chlorine & Building Materials Project

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