

CASE STUDY



Lowe's Home Improvement: Putting Green Products In The Home

Lowe's Home Improvement grew from a one small-town hardware store into an international seller of home improvement materials, selling everything from appliances, to lumber, to lighting, paint, and other products. The Senior Director of Sustainability, Chris Cassell, leads a small team of four individuals, who focus on a wide variety of different sustainability initiatives, including reporting, disclosures, and among others; green chemistry engagements are led by Cassell.

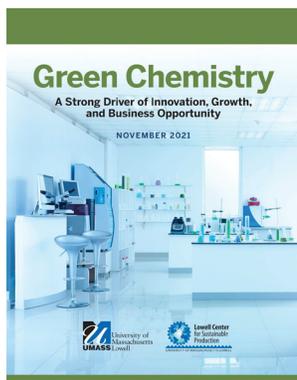
He notes that "I think that we are only beginning to delve into the possibilities for green chemistry at Lowe's. There is a gap to be bridged in consumer understanding and the difference between simply looking at a list of ingredients in a product and what it means in terms of the environment. The same goes for our merchandising team, and they are often striving to understand what the "six syllable" chemistry words mean in terms of a better buying decision for our customers."

Lowe's efforts in green chemistry were first prompted by concerns in 2014 about phthalates in vinyl flooring. Lowe's worked with several stakeholders, including advocacy groups, suppliers and trade associations, to better understand the potential human health impact of certain phthalate chemistries contained in vinyl flooring. To address those concerns, the team worked with suppliers to remove ortho-phthalate plasticizers from all residential vinyl flooring products by the end of 2015. This was considered a major issue, as small children are often crawling on floors,

and the off gassing from chemicals could impact them. Other products for which actions have been taken include:

QUICK FACTS

- Lowes was founded in 1921
- Leader in consumer hardware retailing.
- Based in Mooresville, NC
- Pre-acquisition revenue (2020) of \$72.1Bn



Excerpted from ***Green Chemistry: A Strong Driver of Innovation, Growth, and Business Opportunity***, University of Massachusetts Lowell, November 2021

<https://greenchemistryandcommerce.com/publications>

When Cassell arrived in 2015, a few of these products (see table on next page) were already in the portfolio, but he recognized the benefit of engaging with advocacy groups that already had a position on green chemicals. Recognizing Lowe's sells many products containing different chemicals, the

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| Product Category | Commitment |
|--------------------------|--|
| Insulation | <ul style="list-style-type: none"> All fiberglass insulation products are free of brominated flame retardants, halogenated flame retardants, antimony trioxide, formaldehyde, and added heavy metals |
| Flooring | <ul style="list-style-type: none"> All vinyl flooring is free of ortho-phthalates All indoor wall-to-wall carpet is free of triclosan, organotin, orthophthalates, vinyl chloride, nonylphenol ethoxylates, coal fly ash, formaldehyde, added heavy metals All indoor residential carpet and rugs are free of PFAS chemicals |
| Lawn & Garden | <ul style="list-style-type: none"> All of Lowe's live good suppliers have discontinued the intentional use of neonicotinoids in their operations, unless required by law All outdoor pesticide products, except Tree and Shrub Care, will be neonicotinoid-free by 2022 Lowe's will continue to work with its suppliers to explore alternative Tree and Shrub Care chemistries that do not rely on neonicotinoids |
| Paint | <ul style="list-style-type: none"> All paint remover products are free of methylene chloride and N-Methyl-2-Pyrrolidone (NMP) All interior and exterior water-based paints are free of triclosan, isocyanates, formaldehyde, lead, and heavy metals |
| Fabric Care | <ul style="list-style-type: none"> All fabric protection sprays are free of PFAS chemicals |

sustainability team joined the GC3 to become better informed and begin considering alternative, safer options without sacrificing quality, efficacy, and affordability. This collaboration started in 2015 and has expanded into an active engagement on the GC3 Retailer Leadership Council team.

An important component of Lowe's green chemicals strategy was to focus on the intersection of products of concern, where the exposure to unsafe chemicals was highest. One of the challenges in the industry at large involves simply understanding what chemicals are present in the more than 2 million products Lowe's stocks on their shelves for customers. Many of these products do not have the chemicals listed. Cassell made an important decision: "We could come up with a list of 100 unsafe chemicals that we are restricting in our products and put it out there; but the challenge is, if you don't have actual access to the information on the content of these chemicals, you can't really stand by that commitment. We took the position that if you say you are doing something, and will get rid of a certain chemical, you need to actually follow-up with that action." Lowe's thus went after the most important chemicals first. The team was able to highlight the worst chemicals by engaging with multiple NGO's, other retailers, conversations with suppliers, and the GC3 Retailer forum. This approach is defined in Lowe's formal green chemistry action plan.¹

- Lowe's will develop a framework to systematize the process of assessing chemicals and managing chemical risks. Chemical risks can be managed in several ways and may include requiring disclosure of chemicals in Lowe's products, reducing, or eliminating toxic chemicals

¹ <https://corporate.lowes.com/our-responsibilities/corporate-responsibility-reports-policies/lowes-safer-chemicals-policy>

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from Lowe's products or packaging, better educating consumers on product safety, and/or driving innovation by encouraging suppliers to transition to safer alternatives and green chemistry solutions.

- Lowe's will take a collaborative approach to understand and manage chemicals in the products Lowe's sells, including utilizing inputs from third-party subject matter experts, internal and external stakeholders, supply chain partners, and consumers. Lowe's has been working with trusted partners, such as the Green Chemistry & Commerce Council (GC3) to continuously support green chemistry initiatives as well as participating in the GC3 Retailer Leadership Council to better align the retail sector. Lowe's will also continue to partner with credible NGOs, associations, and industry partners.

In engaging with suppliers, when Cassell asked them about a particular chemical of concern, they very often responded that they were already aware of the problem, and if they hadn't already phased out the product, they were planning to do so in the next 6-12 months. In committing to getting unsafe chemistries out of their products, key suppliers ensured that such chemicals would not find their way into other products as well. A timeline for doing so was established, and discussions around different alternative chemistries became a discussion of focus.

One of the challenges in leading the green chemistry team is the challenge of working with the merchandising (purchasing) team. Merchandising is a very large team (>400 people) spread out across multiple categories. Many of them are constantly moving between product categories, and it is rare to have someone working in a single category for any length of time and to have the ability to develop a deep understanding of the green chemistry issues at stake. So, it is often up to the small sustainability team to be on the front line of scanning and prioritizing green chemistries, and to flag areas where changes need to be made. This led to the sequence of prioritized process analyses, involving picking out chemicals and product categories of priority, and engaging with key suppliers to remove chemicals of concern.

Many of Lowe's suppliers have dedicated chemists and toxicologists on staff. NGO's often have dedicated chemists looking at products, and federal regulators also have them on staff. Lowe's does not have dedicated chemists on staff, which puts them in a difficult spot. However, by relying on NGO input, as well as customer feedback and federal science, the team is able to convince the merchandising team to make changes to their supplier portfolio. Cassell notes that "We are not qualified to make decisions based on science, so my approach is to collect information from all sides. If there is a clear indication of unnecessary risk associated with a particular chemistry, we will make a move. Also, if there is a clear alternative chemistry, it makes it a lot easier to have that conversation. In some cases, if we don't have good signals and the EPA has not found definitive links to safety concerns, it is difficult to make decisions to remove a product which consumers believe is effective. There are often many different sides to the story, so our preference is to stick to the federal regulations and look at where that decisions lands.

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One of the product categories seeing the greatest growth in green chemistry is the cleaning products segment. Cassell believes that the customer focus on green chemicals is moving in proximity to their bodies—starting with organic food, and next in healthcare and beauty products, and finally into cleaning products, where people have to breathe in fumes. PFAS-free carpets are another high growth area which is being driven by the proximity rule, as suppliers, retailers, and regulators work together to make the safest decisions for the consumer and for society.

Developing a retail green chemicals strategy is a two-pronged approach for Cassell's team: first, is to do what they have been doing—trying to eliminate the unsafe chemicals from their product portfolio. This is currently happening through the process of elimination currently underway. The second approach, which is occurring in parallel, is to introduce a greater number of good, safer products. This means introducing suppliers who are innovating and developing natural and organic products, and to grow their market share of certain product categories. This second prong involves helping to educate Lowe's merchandisers on the types of products with chemistries they should be seeking out, and to introduce them to suppliers to have that conversation. This will lead to getting more eco-friendly products on the shelf.

One of the biggest shifts that is driving the push for safer chemicals in products is the generational shift in home ownership. Millennials represent the largest share of new home purchases, and this trend will likely continue. Both Millennials and Gen Z home buyers are more aware of sustainability in the products they buy, and that is a big driver in Lowe's decisions.

The other dimension is the socioeconomic factor. If green products are sold at a premium, a good segment of the population may choose not to purchase those products. It is thus imperative to be able to scale up volume to be able to offer green chemistries at the same price as others on the market. Anecdotally, Cassell sees that these products currently carry a premium, which may be on the order of 10 to 15% more expensive. The customers that really care about product safety will pay that premium, but it is going to be something that will need to be worked out over time.