

Section I: Sustainable Products at Walmart | Our Pledge to Customers

At Walmart, our customers trust us to provide access to affordable, safe and healthier products for them and their families. We work continuously to earn that trust by advocating for them among suppliers and encouraging innovation and transparency in product development and production.

Section II: Sustainable Chemistry

Chemicals are the building blocks of every manufactured product, including the products customers purchase and use every day. Modern scientific research continues to illuminate important relationships between chemical exposures and human and environmental health. Green chemistry is the design of chemical products and processes that reduce or eliminate the generation or use of substances that are hazardous to humans and the environment.¹ Sustainable chemistry is the design, manufacture and use of efficient, effective, safe and more environmentally benign chemical products and processes.²

Section III: Walmart's Position

Walmart customers and Sam's Club members have high expectations of the products they purchase; and they should. Our customers and members seek products that are safe, effective, affordable, and sustainable. In an effort to continue to exceed their expectations, Walmart U.S. and Sam's Club U.S. stores have established commitments to work with suppliers to encourage the incorporation of Sustainable Chemistry principles in the design of products sold in our stores. In working with suppliers, NGOs, academics, government, and industry stakeholders, we have developed this Commitment to Sustainable Chemistry.

Walmart Sustainable Chemistry Principles

- We embrace [the 12 Principles of Green Chemistry](#).
- We believe leadership is going above and beyond legal and regulatory compliance.
- We believe in the public disclosure of our goals and progress.
- We work with credible third party organizations and leverage regulatory and authoritative resources to guide our approach.
- We expect our products to meet or exceed our performance standards and deliver on our every day low price promise.

While we embrace these Sustainable Chemistry Principles, we know that Sustainable Chemistry is a complex topic. For instance, ingredients can pose greater or lesser risk depending on the product

¹Anastas, P.T. and Warner, J.C. Green Chemistry: Theory and Practice. Oxford University Press: New York, 1998.

² OECD <http://www.oecd.org/env/ehs/risk-management/29361016.pdf>

type or manufacturing context. Transparency can also be difficult given the many layers of the chemical supply chain, requiring disclosure of chemicals from many different manufacturers. Lastly, chemical innovation and change can sometimes take time, and this document signals our desire for acceleration from suppliers in reformulating products with informed substitution in mind.

Walmart focuses its efforts in three key pillars: Transparency, Advancing Safer Formulation, and Advancing our Assortment. We describe each in more detail below and are committed to publicly sharing our measurement progress through our Walmart Sustainability Hub website and through Walmart's participation in the Chemical Footprint Project Survey.³

Section IV: What we're encouraging of our suppliers

Transparency

Customers increasingly want to know more about the ingredients in their products. They read the labels on packaging and research ingredients to learn more about why they are used and if there are potential environmental or safety concerns.

Walmart's Actions

Beginning in 2017, Walmart will annually participate in the Chemical Footprint Project based on aggregated information it receives through the Sustainability Index and The WERCS. Participation in the Chemical Footprint Project helps to publicly benchmark progress towards greater transparency.

Since 2013, Walmart has encouraged full ingredient transparency, including transparency on the following: ingredients typically protected under trade secrets (e.g., fragrances); allergens; known residuals, contaminants, and by-products; hazard information; and identification of ingredient function.

Walmart had previously stated its expectation that all suppliers will provide full online public ingredient disclosure for formulated consumable items sold at Walmart U.S. and Sam's Club U.S. stores. Walmart further encourages suppliers of formulated consumables to expand their online and on-pack ingredient disclosure to international markets. Walmart expects online public disclosure to be easily accessible from the supplier's website and to be displayed at the per-product level.

³ www.chemicalfootprint.org

We encourage all our Walmart U.S. and Sam's Club U.S. stores national and private brand suppliers of formulated consumables to:

1. Disclose full product formulations to The WERCS through WERCSmart, above and beyond what is required by law
2. Disclose all product ingredients online by product
3. Specifically, for household cleaning products, disclose information required to be disclosed under California's Cleaning Product Right to Know Act of 2017 on-pack⁴
4. Encourage online and on-pack disclosure internationally

We will annually measure:

- Percentage of formulated consumable products by UPC with fully disclosed formulation provided by supplier to The WERCS through WERCSmart
- Percentage of suppliers reporting products with online ingredient disclosure through the Sustainability Index, a voluntary supplier survey
- Percentage of suppliers reporting products with on-pack ingredient disclosure through the Sustainability Index, a voluntary supplier survey

Advancing Safer Formulation

Safer chemicals are chemical products designed to preserve efficacy of function while reducing toxicity.⁵ As part of [the 12 Principles of Green Chemistry](#), Walmart embraces use of the principles of green chemistry and encourages informed substitution to mitigate, reduce, and eliminate potential hazards associated with product formulations.

Walmart's Actions

By 2022, Walmart aims to reduce its consumables chemical footprint for Walmart U.S. and Sam's Club U.S. stores by 10 percent. In furtherance of that goal, Walmart encourages suppliers to verify the purity of ingredients where contaminants of concern may exist.⁶ Walmart U.S. and Sam's Club U.S. stores have identified Walmart High Priority Chemicals (HPCs) and Walmart Priority Chemicals (PCs) to reduce, restrict, or eliminate from products in coordination with scientific experts and industry groups.

⁴ Walmart recognizes that disclosure on many consumable products is required by law. Walmart is encouraging those not required by law to disclose on-pack to provide disclosures.

⁵ American Chemical Society: <https://www.acs.org/content/acs/en/greenchemistry/what-is-green-chemistry/principles/gc-principle-of-the-month-4.html>

⁶ Contaminant of concern: A residual that meets the criteria for classification as a carcinogen, mutagen, reproductive toxicant; or is persistent, bioaccumulative, and toxic; or where there is "scientific evidence of probable serious effects to human health or the environment which give rise to an equivalent level of concern." ([REACH Title VII, Chapter 1, Article 57](#)). Residuals are "trace amounts of chemicals that are incidental to manufacturing...[and] include: unintended byproducts of chemical reactions that occur in product formulation and chemical synthesis, impurities in an ingredient that may arise from starting materials, incompletely reacted components, and degradation products." ([U.S. EPA Safer Choice Standard](#)).

We encourage all our Walmart U.S. and Sam's Club U.S. stores national and private brand suppliers of formulated consumables to:

1. Complete the Sustainability Index to track performance on chemical disclosure, risk assessment, and hazard avoidance
2. Reduce, restrict and eliminate use of HPCs and PCs
3. Verify purity of ingredients where contaminants of concern may exist, starting in 2019

We will annually measure:

- Completion of the Sustainability Index for relevant and available product categories
- Responses to relevant Sustainability Index key performance indicators of sustainable chemistry practices implemented by suppliers
- Weight volume of HPCs and PCs in aggregate
- Number of UPCs with HPCs and PCs
- Number of Suppliers with HPCs and PCs
- Weight volume of ingredients, known to often harbor contaminants of concern, that are verified to meet purity standards *

Advancing our Assortment

Sustainable chemistry is not only about removing priority chemicals from products and processes but also about meeting customer demand for more green chemistry and sustainable products.

Walmart's Actions

We encourage private and national brand suppliers to lead on sustainable chemistry by leveraging third party certifications that assess and recognize leadership in line with the principles of green chemistry and safer substitution. Third party certifications can help lend credibility and provide verification for how products are made, and can provide a signal of leadership to customers.

Walmart is encouraging the use of the following certifications that we believe align with our Commitment to Sustainable Chemistry, in particular certifications that:

- Prioritizes reduction of Priority Chemicals
- Robust alternative assessment methodology
- Publicly available methodology
- Data verification processes

Certifications: US EPA's Safer Choice; EWG verified; or Cradle to Cradle (Silver or above level).

We encourage all Walmart U.S. and Sam's Club U.S. stores national and private brand suppliers of formulated consumables to:

1. Credibly certify products

We will annually measure*:

- Number of UPCs that use credible certifications
- Number of Suppliers with credible certifications

* WERC Smart measurement enhancements are not yet available to suppliers

Supplier Guidance section

Sustainable Chemistry Implementation Guide

Purpose of Guide

The purpose of this document is to provide resources to suppliers and consumers so that they can understand the goals of the Walmart U.S. and Sam's Club U.S. stores Commitment on Sustainable Chemistry in Consumables. This document follows the organization of the Commitment and provides a description, resources, and measurement approach for each element of the Commitment.

Section I: Background

Walmart customers and Sam's Club members expect products that are safe, affordable and sustainable. As part of its corporate mission to help people Save Money and Live Better, Walmart and Sam's Club believe that customers/members should not have to choose between products that they can afford and products that are better for them and the environment. Walmart and Sam's Club have worked with suppliers, NGOs notably the Environmental Defense Fund, academics, government, and industry stakeholders to develop a company commitment on sustainable chemistry for the consumables products that we sell. Sustainable Chemistry is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances, both to humans and the environment.

Section II: Scope & Definitions

The commitment covers formulated (chemical-based) consumables products sold through Walmart U.S. and Sam's Club U.S. stores, hereby referred to jointly as "Walmart." It includes the following departments/categories:

Walmart U.S. Accounting departments:

- 2-Health & Beauty Aids
- 4-Household Paper
- 8-Pets & Supplies
- 13-Household Chemicals
- 46-Cosmetics & Skincare
- 79-Infant Consumable Hardlines

Sam's Club U.S. categories:

- 2-Health & Beauty Aids
- 4-Tabletop & Bags
- 8-Pet Supplies
- 13-Laundry & Home Care
- 47-Baby Care
- 94-Paper Goods
- 98-Janitorial

The commitment excludes active ingredients that provide therapeutic benefit when present in a product approved by the FDA New Drug Application process.

Approximately 125000 SKUs and 900 suppliers are covered by the commitment.

Definitions

Chemical footprint: As defined by the [Chemical Footprint Project](#), a chemical footprint is "the total mass of chemicals of high concern (CoHCs) in products sold by a company, used in its manufacturing operations and by its suppliers, and contained in packaging."

Consumables chemical footprint: Walmart Priority Chemicals less than all the Sourcing Action List chemicals See Figure 1 below.

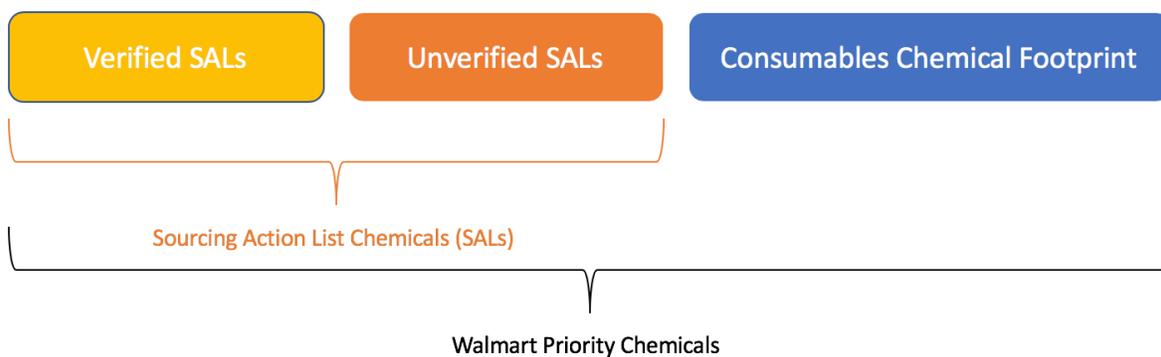


Figure 1.

Contaminant of concern: A residual that meets the criteria for classification as a carcinogen, mutagen, reproductive toxicant; or is persistent, bioaccumulative, and toxic; or where there is "scientific evidence of probable serious effects to human health or the environment which give rise to an equivalent level of concern." ([REACH Title VII, Chapter 1, Article 57](#)). Residuals are "trace amounts of chemicals that are incidental to manufacturing...[and] include: unintended byproducts of chemical reactions that occur in product formulation and chemical synthesis, impurities in an ingredient that may arise from starting materials, incompletely reacted components, and degradation products." ([U.S. EPA Safer Choice Standard](#))

Priority Chemical: Priority chemicals are substances with certain hazardous properties that can affect human health, and/or the environment. A priority chemical is defined as a chemical that meets the criteria for classification as a carcinogen, mutagen, reproductive toxicant, or is

persistent, bioaccumulative, and toxic; or any chemical for which there is "scientific evidence of probable serious effects to human health or the environment which give rise to an equivalent level of concern."⁷

Retail Link®: Retail Link® is an online decision support system that is a bridge between Walmart and its suppliers.

Safer Chemicals: Chemical products designed to preserve efficacy of function while reducing toxicity.⁸

Sourcing Action List Chemicals (SALs):

Petroleum-based chemicals on Walmart's Priority Chemical list that have been identified because of the potential presence of contaminants of concern. Walmart encourages suppliers to indicate if they are using a Verified Sourcing Action List Chemical. See Appendix 8 for list of SALs.

Transparency Score:

Defined within WERCSmart as:

$$\frac{\text{Number of publicly disclosed ingredients that resolve to a specific chemical identity}}{\text{Total number of ingredients in the full WERCSmart formulation}}$$

- If a formulation contains a generic ingredient name that is publicly disclosed, that will count as one ingredient in the denominator, but it will not contribute to the numerator, since it cannot be resolved to a specific chemical.
- If a formulation contains a third-party component, it will count as one ingredient in the denominator. If the supplier of that component has provided Tier 2 consent, the component can be screened against a Restricted Substances List and it may include constituents the supplier has indicated are publicly disclosed. In this case, the component's own Transparency Score will be included in the numerator of a product's overall Transparency Score. The component may contribute an amount to the numerator that ranges from 0 to 1, depending on whether no constituents in the component are marked as publicly disclosed (TS=0), some constituents are marked as publicly disclosed (e.g., TS = 0.5

⁷ [REACH Title VII, Chapter 1, Article 57](#)

⁸ Source: American Chemical Society: <https://www.acs.org/content/acs/en/greenchemistry/what-is-green-chemistry/principles/gc-principle-of-the-month-4.html>.

if half the component constituents are publicly disclosed), or all constituents present are marked as publicly disclosed (TS=1).

Unverified Sourcing Action List chemicals (Unverified SALs): A Sourcing Action List chemical for which the supplier has not indicated using a Verified SALs .

Verified Sourcing Action List chemicals (Verified SALs):

When a suppliers verifies their SALs do not contain any Walmart Priority Chemicals⁹.

Walmart High Priority Chemicals (HPCs): From among Walmart Priority Chemicals, Walmart U.S. and Sam’s Club U.S. stores have identified a subset of chemicals as a starting point for suppliers.

Those Walmart High Priority Chemicals are:

- Toluene (solvent)
- Dibutyl Phthalate (solvent, plasticizer)
- Diethyl Phthalate (solvent and plasticizer)
- Nonylphenol Exthoxylates (NPEs, surfactant), note: NPEs are a class of chemicals and not an individual CAS number
- Formaldehyde (bonding agent)
- Butylparaben (preservative)
- Propylparaben (preservative)
- Triclosan (antimicrobial)- Active ingredients that provide therapeutic benefit when present in a product approved by the FDA New Drug Application process-such as triclosan in toothpaste for treating plaque - are allowed

Walmart Priority Chemicals (PCs)¹⁰: Chemicals flagged in the WERCSmart system as being on Walmart U.S. and Sam’s Club U.S. stores’ defined authoritative and regulatory lists (see Appendix 1) within the scope of this commitment.

⁹ WERCSmart measurement enhancements are not yet available to suppliers

¹⁰ Eight chemicals on these authoritative lists have been excluded because product type and/or exposure scenario indicated in the authoritative determination(s) is not relevant. These chemicals include: ethyl alcohol, cellulose, isopropyl alcohol, wood dust (all soft and hard woods), sulfuric acid, sodium fluoride, hydriodic acid, and imiprothrin.

WERCSmart: The platform through which proprietary product formulations are provided to UL (a vendor to Walmart supporting chemical safety and regulatory compliance.)

Section II A: Transparency

A.1. Disclose full product formulations to UL through WERCSmart

Description

Proprietary product formulations provided through the WERCSmart platform (managed by UL) will remain confidential from Walmart.

In October 2017, UL's WERCSmart platform changed their terms of use and licensing and introduced four Data Use Tiers to give retailers an opportunity to request additional information from their suppliers.¹¹ All Walmart suppliers for in-scope formulated, consumable products were encouraged to grant Walmart permission to access Tier 2.1 and 2.2 data. Additionally, Walmart encouraged in-scope Private Brand suppliers to grant permission to Tier 4.2.

Tier 2.1 and tier 2.2 permissions:

- Encouraged of all in-scope suppliers, Tier 2.1 authorizes UL to use confidential supplier data to provide WMT with reports on chemical usage and prevalence in formulated products.
- Encouraged of all in-scope suppliers, Tier 2.2 authorizes UL to provide WMT with the chemical identities of publicly disclosed ingredients in a product and a product's transparency ratios.

Tier 4.2 permissions:

- Encouraged of private brands suppliers, authorizes Walmart to publish a product's disclosed ingredient list online.

The change in UL WERCSmart's terms of use and licensing, and Walmart's request to suppliers to grant permission to Tier 2.1 and 2.2 will allow Walmart to more accurately report progress on a product's Transparency Score.

Measurement

- Percentage of suppliers, products (by UPC), and weight of products (by sales volume) which have granted consent for Tier 2.1 data uses
- Percentage of products (by number of UPC) with at least 50% of the ingredient identities in a product disclosed with associated specific chemical IDs (e.g. CAS numbers).

¹¹ UL's WERCSmart® Terms of Use, including the Data Use Tier Disclosure, are available here: <https://secure.supplierWERCS.com/Help/TermsService#dutd>.

- Percentage of products (by number of UPC) with 100% of the ingredient identities in a product disclosed with associated specific chemical IDs (e.g. CAS numbers).

To generate these data points, Walmart shares internal inventory data from Retail Link to The WERCS. The WERCS combines the Retail Link data with formulation data submitted by all our suppliers (for compliance purposes) into the WERCSmart system.

Based on the new Data Tier agreements, we now have more visibility into the type of information being shared with The WERCS. This is a positive move to more accurately measure if suppliers are providing full ingredient disclosure within the WERCSmart system. We previously reported higher percentages of suppliers providing the WERCSmart system full ingredient disclosure because we did not have this improved level of visibility. Walmart will continue to encourage suppliers to provide full disclosure of their ingredient formulations.

Walmart: Data Tier Permissions				
Metric	Permissions Granted	2017	Percentage Point Change vs Last Year	Percentage Point Change vs Baseline
Suppliers	Permission granted to at least Tier 2.1	58%	N/A	N/A
UPCs	Permission granted to at least Tier 2.1	95%	N/A	N/A
Sales Volume	Permission granted to at least Tier 2.1	95%	N/A	N/A

Sam's Club: Data Tier Permissions				
Metric	Permissions Granted	2017	Percentage Point Change vs Last Year	Percentage Point Change vs Baseline
Suppliers	Permission granted to at least Tier 2.1	67%	N/A	N/A
UPCs	Permission granted to at least Tier 2.1	95%	N/A	N/A
Sales Volume	Permission granted to at least Tier 2.1	97%	N/A	N/A

Transparency Score – Walmart 2017			
	% Products with at least 50% ingredient transparency for screening	% point change vs. Last Year	% point change vs. Base Year
Total Consumables	93%	N/A	N/A

Transparency Score – Walmart 2017			
	% Products with 100% ingredient transparency for screening	% point change vs. Last Year	% point change vs. Base Year
Total Consumables	11%	N/A	N/A

Transparency Score – Sam’s Club 2017			
	% Products with at least 50% ingredient transparency for screening	% point change vs. Last Year	% point change vs. Base Year
Total Consumables	86%	N/A	N/A

Transparency Score – Sam’s Club 2017			
	% Products with 100% ingredient transparency for screening	% point change vs. Last Year	% point change vs. Base Year
Total Consumables	8.6%	N/A	N/A

A.2 & A.3 –Disclose all ingredients online by product beginning January 2015. Specifically for household cleaning products, disclose information required to be disclosed under California’s Cleaning Product Right to Know Act of 2017 on-pack¹¹

Description

Walmart aims to create more transparency about ingredients contained in the products on its shelves by encouraging all suppliers to provide full online ingredient disclosure beginning January 2015 and, specifically for household cleaning products, disclosing information required to be disclosed under the Cleaning Product Right to Know Act of 2017. Walmart encourages online public disclosure to be accessible from the supplier’s website and to be displayed at the per-product level.¹²

- For online disclosure content, Walmart encourages suppliers to consult leading guides on public ingredient disclosure. Walmart recommends that suppliers, at a minimum, utilize the recognized elements of public ingredient disclosure provided by the US EPA, referenced below.

¹¹ Walmart recognizes that disclosure on many consumable products is required by law. Walmart is encouraging those not required by law to disclose on-pack to provide disclosures.

¹² Public Disclosure for Walmart’s Private Brands will be available on the Walmart.com

- For on-pack disclosure content, Walmart encourages suppliers to list ingredient information, beginning in 2018. Walmart recommends that suppliers, at a minimum, utilize the California’s Cleaning Product Right to Know Act of 2017, referenced below.

Resources

Guides for ingredient disclosure are:

Online Ingredient Disclosure

- [U.S. EPA's Safer Choice](#) Standard

See Appendix 2 for a table outlining the U.S. EPA recognized elements of public ingredient disclosure

Walmart recognizes that best-in-class online disclosure often goes beyond the minimum recommendations found in the guides listed above, and includes additional ingredient information, such as the following:

- Ingredient CAS numbers
- Full disclosure of all ingredients including those typically protected under trade secrets (e.g. fragrances)
- Known residuals, contaminants, and by-products
- Identification of ingredient function and uses
- Product formula number
- Hazard information (e.g. MSDS/SDS data)
- Information made available in Spanish

On-pack Ingredient Disclosure

- Walmart FAQ [document](#)
- California’s Cleaning Product Right to Know Act of 2017

Measurement

- Percentage of reporting supplier's products with online ingredient disclosure
- Completion of the Sustainability Index for relevant and available product categories
- Responses to relevant Sustainability Index Key Performance Indicators

Walmart uses the Sustainability Index to capture data on supplier practices regarding product ingredients disclosure online. The Sustainability Index uses questionnaires that are based on Key Performance Indicators (KPIs) developed by The Sustainability Consortium (TSC), a multi-stakeholder organization working to develop a science-based, sustainability measurement and

reporting system for consumer goods. The Sustainability Index asks suppliers to answer questions based on their global activities. The table below summarizes supplier responses to ingredient disclosure KPIs for the departments covered by our Sustainable Chemistry Commitment.

For the Consumables business in 2017, Walmart U.S. suppliers who represent 90% of sales and Sam's Club U.S. suppliers who represent 94% of sales have participated in the Index, where surveys are available. The Index does not cover all product categories for the commitment and participation is voluntary.

2017 Walmart Departments	% of respondents who claim disclosure for 100% of their products online	Percentage point change vs. 2016
2-Health & Beauty Aids	69%	22%
4-Household Paper	0%	0%
8-Pets & Supplies	54%	21%
13-Household Chemicals	59%	1%
46-Cosmetics & Skincare	65%	5%
79-Infant Consumable Hardlines	50%	-7%

Annual fluctuations in the number of respondents impacts results.

2017 Sam's Club Categories	% respondents who claim disclosure for 100% of their products online	Percentage point change vs. 2016
• 2-Health & Beauty Aids	88%	21%
• 4-Tabletop & Bags	0%	0%
• 8-Pet Supplies	0%	0%
• 13-Laundry & Home Care	86%	12%
• 47-Baby Care	0%	0%
• 94-Paper Goods	0%	0%
• 98-Janitorial	50%	-13%

Annual fluctuations in the number of respondents impacts results.

In previous years, all survey respondents answered one of two responses, making it possible to measure the response rate for the online ingredient disclosure KPI. This year, survey respondents answered a mixture of response options beyond these two responses. Therefore it was not possible to measure and compare response rate to previous years.

WMT Departments - 2017	% all 2017 respondents who claim on-pack disclosure for 100% of their products
2-Health & Beauty Aids	44%
4-Household Paper	0%
8-Pets & Supplies	23%
13-Household Chemicals	27%
46-Cosmetics & Skincare	40%
79-Infant Consumable Hardlines	38%

No YOY data for on-pack or ingredient function disclosure because this is the first year anyone filled out those response options.

Sam's Club Departments - 2017	% all 2017 respondents who claim on-pack disclosure for 100% of their products
· 2-Health & Beauty Aids	56%
· 4-Tabletop & Bags	0%
· 8-Pet Supplies	0%
· 13-Laundry & Home Care	29%
· 47-Baby Care	0%
· 94-Paper Goods	0%
· 98-Janitorial	67%

No YOY data for on-pack or ingredient function disclosure because this is the first year anyone filled out those response options.

NOTE: Surveys are conducted on a product category basis, meaning one Sustainability Index survey submission represents one supplier's responses to KPIs for a particular product category. There is potential for a single supplier who sells in multiple product categories to answer a particular KPI multiple times or for a single supplier who sells multiple product types in the same department to answer a particular KPI multiple times.

Section II B: Advancing Safer Formulation of Products

B.1. Complete the [Sustainability Index](#) to report performance on chemical disclosure, risk assessment, and hazard avoidance.

Description

The **Sustainability Index** program is a powerful tool that is helping Walmart to understand, monitor, and enhance the sustainability of our products and supply chain.

Resources

- [About The Sustainability Consortium](#) (TSC)
- [About the Walmart Sustainability Index](#)
- [Register to take the Index through the Product Sustainability Network](#)

Measurement

- Completion of the Sustainability Index for relevant and available product categories
- Responses to relevant Sustainability Index key performance indicators

Walmart uses the Sustainability Index to capture key performance indicators, including one on priority chemicals. The Index does not cover all product categories for the commitment and participation is voluntary. In 2017, for the consumables business departments in-scope for our sustainable chemistry commitment, suppliers representing 90% percent of Walmart sales and 94% percent of Sam's Club sales participated in the Sustainability Index, where surveys were available.

Walmart U.S.

Supply chain disclosure: In 2017, 34% of 247 respondents [in the departments and relevant product categories covered by our sustainable chemistry commitment] reported that they require ingredient and raw material suppliers to disclose all intentionally added substances in their ingredients as well as a (self-determined) list of priority chemicals present in the ingredient at greater than 100ppm, whether intentionally added or not.

Product and ingredient safety evaluations: In 2017, 62% of 247 respondents reported that they go beyond ensuring legal and regulatory compliance in some capacity. 55% of these same respondents include aggregate exposure in their chemical risk assessments.

Management of priority chemicals: In 2017, 72% of 247 respondents reported that they have programs to reduce, restrict, and eliminate priority chemicals in their products. 36% of these same respondents publicly disclose their goals and progress.

Sam's Club U.S.

Supply chain disclosure: In 2017, 47% of 57 respondents [in the departments and relevant product categories covered by our sustainable chemistry commitment] reported that they require ingredient and raw material suppliers to disclose all intentionally added substances in their ingredients as well as a (self-determined) list of priority chemicals present in the ingredient at greater than 100ppm, whether intentionally added or not.

Product and ingredient safety evaluations: In 2017, 75% of 57 respondents reported that they go beyond ensuring legal and regulatory compliance in some capacity. 70% of these same respondents include aggregate exposure in their chemical risk assessments.

Management of priority chemicals: In 2017, 88% of 57 respondents report that they have programs to reduce, restrict, and eliminate priority chemicals in their products. 54% of these same respondents publicly disclose their goals and progress.

B.2. By 2022, Walmart aims to reduce its consumables chemical footprint for Walmart U.S. and Sam's Club U.S. stores by 10 percent. Suppliers are encouraged to reduce, restrict, and eliminate use of Walmart Priority Chemicals using informed substitution principles.

Description

10 Percent Priority Chemical Consumables Chemical Footprint Reduction Goal

By 2022, Walmart aims to reduce its consumables chemical footprint for Walmart U.S. and Sam's Club U.S. stores by 10 percent. The baseline for comparison will be 2017 results, shown below. A new baseline is needed because the 2014 baseline did not include the two regulatory and authoritative lists that were added to the Walmart Priority Chemical list in 2016. All suppliers are expected to reduce, restrict, and eliminate use of Walmart Priority Chemicals using informed substitution principles. Walmart has defined a list of authoritative and regulatory lists (made publicly available through Appendix 1) to identify Walmart Priority Chemicals within the scope of this commitment.

Informed Substitution

Informed substitution is “the considered transition from a chemical of particular concern to safer chemicals or non-chemical alternatives.”¹³ Walmart advocates use of informed substitution principles to mitigate, reduce, and eliminate potential hazards associated with product formulations. Per Walmart Compliance procedures, a new UPC/GTIN must be issued on products

¹³ U.S. EPA. 2015. U.S. [EPA's Safer Choice Standard \(formerly, the 'DfE Standard for Safer Products'\)](#).

that have changes to formulation or composition. For additional information on UPC change requirements, please go to the [Walmart Compliance Website](#).

In the aim of advancing safer formulated products and promoting informed substitution, Walmart embraces the major tenets of Alternatives Assessment, a process for identifying, comparing and selecting safer alternatives to Walmart Priority Chemicals (including those in materials, processes or technologies) on the basis of their hazards, performance, and economic viability.¹⁴

The Commons Principles of Alternatives Assessment are reproduced here:¹⁵

1. REDUCE HAZARD
2. MINIMIZE EXPOSURE
3. USE BEST AVAILABLE INFORMATION
4. REQUIRE DISCLOSURE AND TRANSPARENCY
5. RESOLVE TRADE-OFFS
6. TAKE ACTION

Walmart encourages its suppliers to use methods, databases, and lists such as the ones listed in Appendix 3 (Guides for Alternatives Assessment) on their journey to reduce and eliminate Walmart Priority Chemicals using informed substitution.

Walmart also welcomes innovative products that have been certified or screened by programs that clearly state continuous improvement and informed substitution as program principles, such as the U.S. Environmental Protection Agency's Safer Choice Labeling Program.

Resources

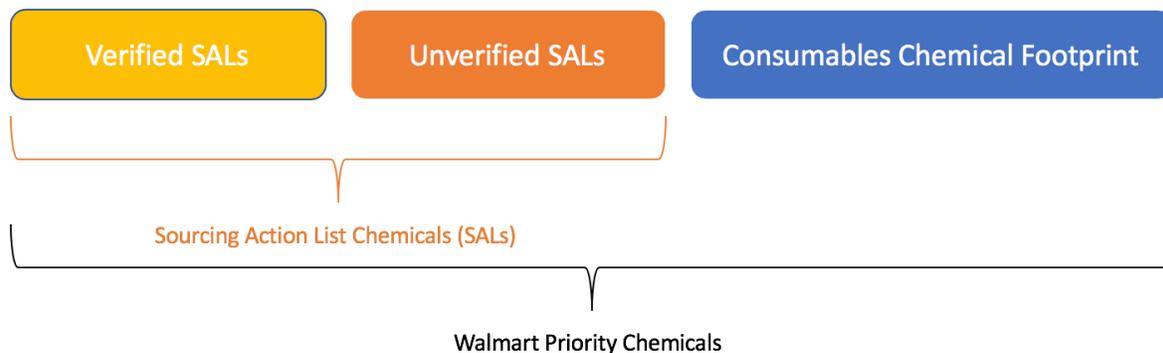
- See Appendix 1 for Walmart's Priority Chemical list, a list of authoritative and regulatory reference lists
- See Appendix 3 for a non-exhaustive list of guides for alternatives assessment aligned with The Commons Principles of Alternatives Assessment that suppliers may use in their efforts to advance safer formulation of products using informed substitution.

Measurement

- Walmart will track progress against its 10 percent Consumables Chemical Footprint reduction goal, a subset of the Walmart Priority Chemical list, excluding the Sourcing Action List chemicals (SALs) (see Appendix 8), .
- Beginning in 2019, Walmart will separately measure SALs that have been verified to meet purity standards (see B.3. for more information).

¹⁴ Chemical Commons. 2013. [The Commons Principles for Alternatives Assessment](#).

¹⁵ Ibid



Walmart will track the policy elements in section B.2. using the metrics listed in the table below and information from UL.

The metrics below capture the reduction of Walmart Priority Chemicals within our Consumable Chemical Footprint by weight volume, the restriction and elimination of Walmart Priority Chemicals within our Consumable Chemical Footprint by number of UPCs and number of suppliers. To capture this data, Walmart shares internal inventory data from Retail Link to The WERCS (see definitions above). The WERCS combines the Retail Link data with formulation data submitted by suppliers, who granted at least Tier 2.1 access to Walmart, into the WERCSmart system.

Note: There are external variables - such as increased sales of products containing Walmart Priority Chemicals, and the addition of new ingredients to regulatory and authoritative lists - that can impact the increase or decrease of the numbers shown. Additionally, as Walmart continues to encourage suppliers to grant permission to UL WERCSmart's Tiers 2.1 and 2.2, these numbers may increase and decrease as additional supplier information becomes available. While not perfect, we use these metrics to help us assess progress towards our goal of a reduction in our Consumables Chemical Footprint.

The change in UL WERCSmart's terms of use and licensing, and Walmart's request to suppliers to grant permission to data Tiers 2.1 and 2.2 will allow Walmart to more accurately report progress on the stated goal. Walmart will be able to track publicly available chemical ID information from suppliers who granted Walmart Tier 2.1 and 2.2 permission. Walmart will track supplier information in aggregate if suppliers only granted Walmart Tier 2.1 permission. All suppliers' proprietary formulations will remain strictly confidential and will not be shared with Walmart.

Walmart:**Reduce volume of In- scope Walmart Priority Chemicals in our Consumable Chemical Footprint**

Weight (Volume) of in-scope PCs in Products Sold in 2017	Percent change vs. previous year	Percent change vs. baseline
189,448,032 lbs	N/A	N/A

Walmart:**Restrict and Eliminate In-scope Walmart Priority Chemicals in our Consumable Chemical Footprint**

Metric	2017	Percent change vs. previous year	Percent change vs. baseline
# of UPCs containing in-scope PCs	65% of UPCs	N/A	N/A
# of Suppliers using in-scope PCs	45% of Suppliers	N/A	N/A

Sam's Club:**Reduce volume of In- scope Walmart Priority Chemicals in our Consumable Chemical Footprint**

Weight (Volume) of in-scope PCs in Products Sold - 2017	Percent change vs. previous year	Percent change vs. baseline
31,365,260 lbs	N/A	N/A

Sam's Club:**Restrict and Eliminate In- scope Walmart Priority Chemicals in our Consumable Chemical Footprint**

Metric	2017	Percent change vs. previous year	Percent change vs. baseline
# of UPCs containing in-scope PCs	57% of UPCs	N/A	N/A
# of Suppliers using in-scope PCs	48% of Suppliers	N/A	N/A

B.3. Walmart suppliers are encouraged to verify purity of ingredients where contaminants of concern may exist, starting in 2019. From among Walmart Priority Chemicals, Walmart U.S. and Sam's Club U.S. stores have identified a subset of Sourcing Action List chemicals (SALs). These chemicals will be measured separately from Walmart's 10% Walmart Priority Chemical Reduction Goal in our Consumables Chemical Footprint.

Description

From among Walmart Priority Chemicals, Walmart has identified a subset of Sourcing Action List chemicals (SALs), which are petroleum-based chemicals that have been identified because of the potential presence of contaminants of concerns. Suppliers can verify their SALs do not contain any Priority Chemicals when WERC Smart measurement enhancements are available.

Measurement

In the future, suppliers will be able to provide verification information when entering formulation data into the WERCSmart system. Walmart will track both verified and unverified SALs by weight volume, number of UPCs, and number of suppliers starting in 2019. Note, WERCSmart measurement enhancements are not yet available to suppliers.

B.4. From among "Walmart Priority Chemicals," Walmart has identified a subset of eight "Walmart High Priority Chemicals" (HPCs) as a starting point for suppliers in Walmart's initial Commitment on Sustainable Chemistry in 2014.

Description

This list of Walmart HPCs is based on (a) authoritative lists, (b) current and pending regulatory lists, (c) high prevalence in Walmart products, and (d) concerns of direct exposure to consumers.

Note: Given the new UL data transparency tiers, it is not possible for Walmart to do a year over year comparison to previous year of the reduction of HPCs in consumables in a manner that would fairly and accurately reflect the changes that have been made. Walmart will continue to communicate to suppliers that all priority chemicals, including the HPCs, should be reduced, removed, and restricted as Walmart moves towards the goal of 10% Walmart Priority Chemical reduction in our consumables chemical footprint. Going forward, Walmart will only report on the priority chemical reduction, which includes the HPCs, to spur suppliers to focus their actions on the broad list of priority chemicals and not just the HPCs.

Measurement

Walmart will continue to actively encourage suppliers to advance safer formulations through reformulation and removal of HPCs and PCs. The metrics below capture the reduction of HPCs by weight volume, the restriction and elimination of HPCs by number of UPCs, and number of suppliers. HPCs are a subset of the goal of 10% Walmart Priority Chemical reduction in our Consumables Chemical Footprint.

Note: Only suppliers who granted Tier 2.1 access are captured in the numbers below (95% sales volume granted for Walmart, 97% sales volume granted for Sam's Club). Additionally, there are other external variables – such as increased sales of products containing HPCs – that can impact the increase or decrease of the numbers shown. While not perfect, we use these metrics to help us drive the removal of HPCs and PCs.

Walmart: Reduce volume of, Restrict, and Eliminate HPCs

Weight (lbs) of HPCs in Products Sold in 2017	# of UPCs Containing HPCs	# of Suppliers Using HPCs
475,242 lbs	11% of UPCs	19% of suppliers

Sam's Club: Reduce volume of, Restrict, and Eliminate HPCs

Weight (lbs) of HPCs in Products Sold in 2017	# of UPCs Containing HPCs	# of Suppliers Using HPCs
19,184 lbs	4.3% of UPCs	16% of suppliers

Section II C: Advancing our Assortment

C.1. Walmart encourages all national and private brand suppliers of formulated consumables to credibly certify products. Walmart believes the following align with its Commitment to Sustainable Chemistry: US EPA's Safer Choice, EWG Verified, and Cradle to Cradle at the Silver or above level.

Description and Resources

Third party certifications can help lend credibility and verification for how products are made, and can provide a signal of leadership to customers. Walmart is encouraging the use of the following certifications that Walmart believes align with its Commitment to Sustainable Chemistry:

- [U.S. EPA's Safer Choice Product Labeling Program](#)
- [Cradle to Cradle Certification](#) (Silver level of above)
- [EWG Verified](#)

Measurement

Starting in 2019, Walmart U.S. and Sam's Club will annually measure:

- Number of UPCs bearing:
 - Credible certifications
- Number of Suppliers using:
 - Credible certifications

Appendix 1: Walmart Reference Lists of Priority Chemicals (as of September 27, 2017)

The following authoritative and regulatory lists may be used as resources to identify Walmart Priority Chemicals for reduction, restriction, or elimination in accordance with Walmart's Commitment to Sustainable Chemistry in Consumables.

Note: The policy excludes active ingredients that provide therapeutic benefit when present in a product approved by the FDA New Drug Application process.

Walmart tracks policy elements related to the list of Walmart Priority Chemicals through information provided by UL. UL utilizes [LOLI Chemical Registry Database](#) to track the Reference Lists of Priority Chemicals. The LOLI Database does not maintain a record of inactive authoritative or regulatory lists. The Walmart Reference Lists of Priority Chemicals originally included two additional lists from the U.S. EPA (Priority PBT List and National Waste Minimization Program – Priority Chemicals). Though these two lists remain useful references of authoritative determinations of certain chemicals of concern, these lists are no longer included in the Reference list below because they are no longer maintained by the source regulatory organizations.

European Union	<ul style="list-style-type: none">· Endocrine Disruptors – Ranked Priority List - Human Health Categorizations 1 and 2.· Interim Strategy for Management of Persistent Bioaccumulative Toxic (PBT) and very persistent bioaccumulative (vPvB) substances.· SCCS Fragrance Allergens
European Union - REACH (1907/2006)	<ul style="list-style-type: none">· Annex II – Cosmetics Regulation· Annex XIV – Substances Subject to Authorisation· Annex XV – Candidate List of Substances of Very High Concern for Authorisation· Annex XVII Appendices 1 and 2 – Carcinogens Categories 1A and 1B.· Annex XVII Appendix 4 – Mutagens Category 1B· Annex XVII Appendices 5 and 6 – Reproductive Toxicants Categories 1A and 1B
International Agency for Research on Cancer	<ul style="list-style-type: none">· Groups 1 (Carcinogenic to Humans) and 2A (Probably Carcinogenic to Humans) and 2B (Possibly Carcinogenic to Humans)
U.N. Environment Programme	<ul style="list-style-type: none">· Stockholm Convention Secretariat Stockholm Convention on Persistent Organic Pollutants (POPs)

U.S. EPA	<ul style="list-style-type: none"> · Toxic Release Inventory (TRI) PBT Chemicals
U.S. National Toxicology Programme	<ul style="list-style-type: none"> · Report on Carcinogens – Known to be Human Carcinogens and Reasonably Anticipated to be Human Carcinogens
U.S. State of California	<ul style="list-style-type: none"> · Proposition 65 – Developmental/Reproductive Toxicants
U.S. State of Maine	<ul style="list-style-type: none"> · Chemicals of High Concern · Priority Chemicals
U.S. State of Minnesota	<ul style="list-style-type: none"> · Chemicals of High Concern · Priority Chemicals
U.S. State of Washington	<ul style="list-style-type: none"> · Chemicals of High Concern to Children (CHCC) · Persistent Bioaccumulative Toxins

Appendix 2: US EPA Recognized Elements of Public Online Disclosure

	U.S. EPA's Design for the Environment (DfE) Standard for Safer Products	CSPA's Consumer Product Ingredient Communication Initiative
Disclosure Sequence	Ingredients listed in descending order of concentration down to 1%; remaining ingredients listed in any particular order.	Ingredients listed in descending order of concentration down to 1%; remaining ingredients listed in any particular order.
Acceptable Nomenclature	Chemical Abstract Service (CAS) number, if available, and one or more of the following: <ul style="list-style-type: none"> • CAS name • Consumer Specialty Products Association (CSPA) Dictionary name • International Nomenclature Cosmetic Ingredient (INCI) name • International Union of Pure and Applied Chemistry (IUPAC) name 	Any of the below: <ul style="list-style-type: none"> • INCI name • IUPAC name • CAS name • CSPA Dictionary name • Common chemical name
Nomenclature for Ingredients protected as Trade Secrets [1]	May use a chemical-descriptive name.	May use trade name and common chemical names.

[1] Generally, for ingredients protected as trade secrets, a manufacturer may use chemical-descriptive name, for example, the EPA Premanufacture Notice generic name or the CSPA Dictionary name, in lieu of the specific chemical name; however, the name must be as specific as possible without revealing trade secret information.

Appendix 3: Guides for Alternatives Assessment

The following is a non-exhaustive list of publicly known methods, tools, and databases aligned with The Commons Principles of Alternatives Assessment that suppliers may use to advance the safer formulation of products using informed substitution.

- [CleanGredients](#)
- [GreenScreen List Translator](#)
- [Pharos Chemicals and Material Library](#)
- [U.S. EPA Safer Choice Chemicals List](#)
- [ChemSec Marketplace](#)
- [Scivera](#)
- [Alternative Assessment Paradigms](#)
- [BizNGO's Chemical Alternatives Assessment Protocol](#)
- [GreenScreen™ Methodology](#)
- [University of Lowell's Alternatives Assessment Protocol](#)
- [U.S. EPA's DfE Alternatives Assessment Methodology](#)

Appendix 4: Key Stakeholders

Walmart U.S. and Sam's Club have worked with Environmental Defense Fund and a range of other NGOs, suppliers, academics, government and industry stakeholders to develop a company commitment on sustainable chemistry for the formulated consumable products that we sell. Through close collaboration with Environmental Defense Fund, we have applied an initial framework for evaluating our consumables chemical footprint using UL's WERCSmart™ platform for in-scope formulated consumable products.

Appendix 5: Guidance for On-pack Ingredient Disclosure

Walmart expects suppliers of formulated consumables to Walmart U.S. and Sam's Club U.S to disclose ingredient information on-pack beginning January 2018.

- Guidance on how suppliers can comply with Walmart's On-pack Disclosure

Appendix 6: WERCSmart Data Tier Implementation

In October 2017, UL's WERCSmart platform changed their terms of use and licensing and introduced four Data Use Tiers to give retailers an opportunity to request additional information from their suppliers.¹¹ All Walmart suppliers for in-scope formulated, consumable products were encouraged to grant Walmart permission to access Tier 2.1 and 2.2 data. Additionally, Walmart encouraged in-scope Private Brand suppliers to grant permission to Tier 4.2. Below is the formal communication from Walmart to suppliers requesting Tier access.

¹¹ UL's WERCSmart® Terms of Use, including the Data Use Tier Disclosure, are available here: <https://secure.supplierWERCS.com/Help/TermsService#dutd>.

Subject: Worldwide Environmental Regulatory Compliance Solution (WERCSmart) Terms of Use Revision/Data Tier Implementation

Attention: Formulated Product Suppliers

On Oct. 16, UL's WERCSmart platform will include an additional question that requires suppliers of formulated products to grant tier 2.1 and tier 2.2 permissions for national brand suppliers, and tier 2.1, 2.2 and 4.2 permissions for private brand suppliers.

Tier 2.1 and tier 2.2 permissions:

- *Tier 2.1 authorizes UL to use confidential supplier data to provide WMT with reports on chemical usage and prevalence in formulated products.*
- *Tier 2.2 authorizes UL to provide WMT with the chemical identities of publicly disclosed ingredients in a product and a product's transparency ratios.*

Tier 4.2 permissions:

- *Only apply to private brands, and authorizes Walmart/Sam's Club to publish a product's publicly disclosed ingredient list online.*

Suppliers are encouraged to grant permissions at no additional cost.

This represents a change in the process but does not represent a change in policy and is business as usual per the existing Walmart programs.

Contacts:

For supplier questions, contact Frank Schroeder at UL/WERCS

Thank you,

Walmart Sustainability

Walmart Environmental Health & Safety

- **Walmart Chemicals Best Practices Webinar**
Webinar Recording
Chemistry Information Session
Tuesday, October 31, 2017
This meeting does not require a password
Play recording

Appendix 7: Sourcing Action List Chemicals

Unique CAS Number	Sourcing Action List Chemical Name
8009-03-8	Petrolatum
75-28-5	Isobutane
106-97-8	N-Butane
68476-85-7	L.P.G. (liquified petroleum gas)
8012-95-1	Paraffin oils
64742-54-7	Petroleum distillates, hydrotreated heavy paraffinic
64742-55-8	Petroleum distillates, hydrotreated light paraffinic
64742-46-7	Petroleum distillates, hydrotreated middle
68476-86-8	Petroleum gases, liquified, sweetened
64742-48-9	Naphtha (petroleum), hydrotreated heavy
64741-88-4	Petroleum distillates, solvent-refined heavy paraffinic
64742-56-9	Petroleum distillates, solvent dewaxed light paraffinic
64742-52-5	Petroleum distillates, hydrotreated heavy naphthenic
64741-66-8	Naphtha (petroleum), light alkylate
64741-65-7	Naphtha (petroleum), heavy alkylate
64742-17-2	Mineral oil, petroleum residual oils, acid-treated
64742-95-6	Aromatic solvent
8052-41-3	Stoddard solvent
64742-89-8	Solvent naphtha (petroleum), light aliphatic
8002-05-9	Petroleum distillates (naphtha)
RR-03885-7	Mineral Oils
100684-33-1	Petrolatum (petroleum), clay-treatedA complex combination of hydrocarbons obtained by treatment of petrolatum with bleaching earth for the removal of traces of polar constituents and impurities. It
8007-45-2	Coal tar
65996-92-1	Coal tar distillate
64742-80-9	Petroleum distillates, hydrodesulfurized middle
64741-89-5	Petroleum distillates, solvent-refined light paraffinic
64743-01-7	Petrolatum, petroleum, oxidized

90640-99-6	Extract oils (coal), light oil The aqueous extract produced by an acidic wash of alkali-washed carbolic oil. Composed primarily of acid salts of various aromatic nitrogen bases including pyridine,
64742-82-1	petroleum distillate
64741-76-0	Distillates, petroleum, heavy hydrocracked
64741-59-9	Petroleum distillates, light catalytic cracked
64742-61-6	Slack wax, petroleum
64742-73-0	Naphtha, petroleum, hydrodesulfurized light

Frequently Asked Questions

Does online public disclosure include fragrances?

With regard to online ingredient disclosure, Walmart recommends at a minimum that suppliers follow ingredient disclosure guidelines provided by the U.S. EPA Safer Choice program.¹ These guidelines do not explicitly mandate disclosure of specific ingredients in fragrances that are trade secret. However, the Safer Choice standard states that,

Scent ingredients may be listed as "fragrance," on the label, but the formulator must indicate where detailed information can be found; for example, the Web site list, or subset of the list, of fragrance materials authored by the International Fragrance Association (IFRA) and available on IFRA's Web site (<http://www.ifraorg.org/>). Alternatively, if not a matter of trade secrets, the product formulator may state on its Web site the ingredients in the fragrance or the palette of fragrance materials used in its products, and may include, at the formulator's discretion, ingredients not used in the fragrance.

[1] <https://www.epa.gov/sites/production/files/2013-12/documents/standard-for-safer-products.pdf>