

# Activity

**Look through the following slides and select one or two of the example resources for finding alternatives.**

**Take 3-5 minutes to explore the resource making sure to look at what types of alternatives are mentioned as well as the information available.**

**When you are ready, share this information with a partner. Is there anything you found especially useful?**

# Example Resources for Looking for Potential Alternatives

All those listed have at least a portion that is open access. Also, some of the databases mentioned in Step 5 can be used to search for alternatives.

**Note that just because an alternatives is marked as safer, doesn't mean that they meet your criteria of safer.**

# The US EPA Safer Chemical Ingredient List (SCIL)

"The Safer Chemical Ingredients List (SCIL) is a list of chemical ingredients, arranged by functional-use class, that the Safer Choice Program has evaluated and determined to be safer than traditional chemical ingredients. This list is designed to help manufacturers find safer chemical alternatives that meet the criteria of the Safer Choice Program."

- website



Environmental Topics    Laws & Regulations    About EPA    Search EPA.gov

## Safer Choice

- Safer Choice Home
- Learn About Safer Choice
- Frequently Asked Questions
- Resources for Manufacturers
- Partner of the Year Awards
- Search Safer Choice Products
- For Use in Your Community
- Safer Chemical Ingredients List**
- How to List on SCIL

Safer Choice Standard and Criteria

### Related Programs

- DfE Alternatives Assessments
- DfE Life-Cycle Assessments
- DfE Workplace Best Practices
- DfE for Pesticides
- Safer Detergents Stewardship Initiative
- Program History
- Connect with Safer Choice

## Safer Chemical Ingredients List

EN ESPAÑOL

On this page:

- [Safer Chemical Ingredients List](#)
- [Overview of the Safer Chemical Ingredients List](#)
- [Technical notes about the list](#)
- [Additional resources](#)

A downloadable spreadsheet of the [Safer Chemical Ingredients List](#) (17 pp, 442 K) is also available. See the "Updates" tab in the Excel spreadsheet for recently added and/or updated chemicals.

### Safer Chemical Ingredients List

- The listed chemicals are safer alternatives, grouped by their [functional-use class](#).<sup>†</sup>
- Chemicals are marked as a ● green circle, ◐ green half-circle, ▲ yellow triangle, or  grey square.<sup>†</sup>
- This list includes many of the chemicals evaluated through the Safer Choice Program. It does not include confidential chemicals. There may be chemicals not included in this list that are also safer.
- Some of the chemicals listed in these functional use classes may not be on the [TSCA inventory](#) and therefore may not be authorized/allowed for TSCA uses. Persons considering TSCA uses for these substances should engage in appropriate diligence to ascertain whether such use is authorized.

❖ Please Select: [All Functional Use Classes](#)

### Related Information

For chemical manufacturers and raw material suppliers looking for information on how to list a chemical on the Safer Chemical Ingredients List (SCIL), [visit our step-by-step guide](#).

❖ Please Select: [All Functional Use Classes](#)

❖ or Select a Functional Use Class:

- [Antimicrobial Actives](#)
- [Chelating Agents](#)
- [Colorants](#)
- [Defoamers](#)
- [Emollients](#)
- [Enzymes and Enzyme Stabilizers](#)
- [Fragrances](#)
- [Oxidants and Oxidant Stabilizers](#)
- [Polymers](#)
- [Preservatives and Antioxidants](#)
- [Processing Aids and Additives](#)
- [Skin Conditioning Agents](#)
- [Solvents](#)
- [Specialized Industrial Chemicals](#)
- [Surfactants](#)
- [Uncategorized](#)

Surfactants <span style="float: right;">Clear Options</span>			
<small>Note: When a functional use category is selected, the search above will only apply to the chemicals assigned to this functional use. To select a different functional use, please <a href="#">scroll up</a>.</small>			
<small>Note for Surfactants: The hazard profile of a surfactant varies with its structure. Manufacturers using CAS numbers in this functional class may need to provide additional information for Safer Choice review. See the <a href="#">Safer Choice Safer Surfactant Criteria</a> for more information.</small>			
Show 25 entries			
Code	Common Name	CAS Registry Number	Functional Use
●	(2)-7-Hexadecanoic acid	2416-19-5	<a href="#">Surfactants</a>
●	(2)-9-Hexadecanoic acid	373-49-0	<a href="#">Surfactants</a>
◐	beta-Alanine, N-(2-carboxylethyl)-N-[3-(decyloxy)propyl]-, sodium salt (1:1)	64072-10-6	<a href="#">Surfactants</a>
●	1-Dodecanesulfonic acid, hydroxy-, sodium salt	128824-30-6	<a href="#">Surfactants</a>
●	1-Hexadecanaminium, N-(carboxymethyl)-N,N-dimethyl-, inner salt	693-33-4	<a href="#">Surfactants</a>
●	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 and C18-unsatd. acyl derivs., inner salts	147170-44-3	<a href="#">Surfactants</a>
●	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., inner salts	97862-99-4	<a href="#">Surfactants</a>
●	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., chlorides, sodium salts	61789-35-7	<a href="#">Surfactants</a>
●	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., inner salts	61789-40-0	<a href="#">Surfactants</a>
●	1-Propanaminium, N-(carboxymethyl)-N,N-dimethyl-3-[[1-oxododecyl]amino]-, inner salt	73772-45-9	<a href="#">Surfactants</a>
●	1-Propanaminium, N-(carboxymethyl)-N,N-dimethyl-3-[[1-oxooctyl]amino]-, inner salt	32954-43-1	<a href="#">Surfactants</a>
●	1-Propanaminium, N-(carboxymethyl)-N,N-dimethyl-3-[[1-oxooctyl]amino]-, inner salt	73772-46-0	<a href="#">Surfactants</a>
●	1H-imidazole-1-propanoic acid, 2-heptyl-2,3-dihydro-3-(2-hydroxyethyl)-, monosodium salt	68630-95-5	<a href="#">Surfactants</a>
●	2-Ethylhexyl-alpha-D-glucoside	125590-73-0	<a href="#">Surfactants</a>
●	2-Ethylhexyl-poly-D-glucosides	161074-93-7	<a href="#">Surfactants</a>
●	2-O-Rhamnopyranosyl-rhamnopyranosyl-3-hydroxydodecanoyl-3-hydroxydodecanate	4348-76-0	<a href="#">Surfactants</a>
●	9-Eicosenoic acid	506-31-0	<a href="#">Surfactants</a>
◐	Acetic acid, 2-chloro-, reaction products with 2-heptyl-4,5-dihydro-1H-imidazole-1-ethanol and sodium hydroxide	68608-64-0	<a href="#">Surfactants</a>
●	Acetic acid, chloro-, sodium salt, reaction products with 4,5-dihydro-2-undecyl-1H-imidazole-1-ethanol and sodium hydroxide	68608-66-2	<a href="#">Surfactants</a>
●	Alcohols, C10-12, ethoxylated propoxylated	60154-97-2	<a href="#">Defoamers; Surfactants</a>
●	Alcohols, C10-14, ethoxylated	66455-15-0	<a href="#">Surfactants</a>
●	Alcohols, C10-16, ethoxylated	68002-97-1	<a href="#">Surfactants</a>
●	Alcohols, C10-16, ethoxylated propoxylated	69227-22-1	<a href="#">Surfactants</a>
●	Alcohols, C11-14 iso-, C13-rich, ethoxylated	79330-21-9	<a href="#">Surfactants</a>
●	Alcohols, C11-15 secondary, ethoxylated	68131-40-8	<a href="#">Surfactants</a>

Showing 1 to 25 of 352 entries (Filtered from 965 total entries)

Previous 1 2 3 4 5 ... 15 Next

<https://www.epa.gov/saferchoice/safer-ingredients>

# CleanGredients



ACCOUNT LOGOUT

ALL INGREDIENTS ALL SUPPLIERS COMPANY DATA

## ALL INGREDIENTS





Clear Search

Viewing 1-25 of 864

Product Name	Company	Functional Class	CASRN	Safer Choice Status	Max Use (%)	Direct Release	Approval Date* ▼
Koralone B-119	LANXESS Corporation	Preservatives and Antioxidants	No CASRN Data	Approved	ⓘ	No	01/27/2025
SIMULSOL™ SL 7G	SEPPIC Inc	Surfactants	No CASRN Data	Approved		Yes	01/23/2025
SIMULSOL™ SL 4	SEPPIC Inc	Surfactants	No CASRN Data	Approved		Yes	01/23/2025
Liquitint Cyan 15	Milliken & Company	Colorants	No CASRN Data	Approved		No	01/21/2025
Span™ 20-LQ-(AP)	Croda Home Care	Surfactants	1338-39-2	Approved		Yes	01/16/2025
Span™ 80-LQ-(AP)	Croda Home Care	Surfactants	1338-43-8	Approved		Yes	01/16/2025
Span™ 80-NV-LQ-(AP)	Croda Home Care	Surfactants	1338-43-8	Approved		Yes	01/16/2025

- Ingredients listed are evaluated by the EPA Safer Choice Criteria.
- Low cost subscription for formulators.
- Reduces the cost for the formulated product assessment.

# Example Resource-TCO Certified Accepted Substance List



Industry home / Guidance / Accepted Substance List

## TCO Certified Accepted Substance List

Substances listed by CAS number or Trade name have been assessed by independent toxicologists and are approved for use in certified products and their manufacture. Filter the list by clicking on the purple header bar or by using the search field to the right.

GreenScreen benchmarks and ChemForward hazard band assessments are valid for up to five years from the date shown under 'Assessed'. TCO Certified Accepted Substance List is dynamic and substances may be reassessed in light of new scientific findings. A substance must be reassessed before the expiry date (shown under 'Approaching expiration date'), otherwise the substance will be moved to the potential candidate list and can no longer be used for certified products.

### How our accepted list works

Reduce risk and identify a pathway to safer options with TCO Certified.

→ HOW IT WORKS

### Potential candidates list

Find substances previously approved as safer by independent toxicologists.

→ POTENTIAL CANDIDATES

The TCO Certified Accepted Substance List is a dynamic list of chemicals that are assessed and approved for use in TCO Certified products, a certification for **IT products**.

The chemicals listed have a GreenScreen Benchmark score of 2,3 or 4. The functions currently covered are flame retardant, plasticizer, stabilizer and cleaning ingredient. A few cleaning products are also listed.

<https://tcocertified.com/industry/guidance/accepted-substance-list/>

If one was specifying a resin, one could ask for a grade that only uses flame retardants listed on the TCO Certified Accepted Substance list.

# Cradle to Cradle Certified® Products

The screenshot displays the 'Certified products' page on the Cradle to Cradle Certified website. The header includes the logo, navigation links for 'Certified Products' and 'Resources', and a 'Topics & Sectors' dropdown menu. The main content area features a search bar and a list of products. The products are filtered by 'CHEMICALS AND BASIC MATERIALS' and include details such as product name, manufacturer, category, and certification level.

Product Image	Product Name	Manufacturer	Product Category	Certification Level
	Dyeing dispersing agent	GIOVANNI BOZZETTO SPA	Chemicals and Basic Materials	Gold Version 4.1
	Natural Vita Talalay®	RADIUM FOAM BV	Chemicals and Basic Materials	Gold Version 3.1
	BURNBLOCK® Fire Retardant Pow...	BURNBLOCK APS	Chemicals and Basic Materials	Gold Version 4.0

While this certification contains mostly products, there are some “chemicals and basic materials” that have been assessed.

# GreenScreen Certified®

The screenshot shows the GreenScreen Certified website. The header features the GreenScreen logo and navigation links for 'Assess Chemicals' and 'Certified'. The main heading is 'GreenScreen Certified® Products' with a breadcrumb trail 'Home / GreenScreen Certified® / ...'. Below this, there are several product standard categories, each with an icon, title, and description. A sidebar on the right lists navigation options under the heading 'GreenScreen Certified®'.

**Cleaners & Degreasers in Manufacturing**  
Applies to all industrial applications, especially the electronics sector.

**Firefighting Foam**  
We worked with a technical review team of scientists, firefighting foam researchers, and governments to ensure the Standard is protective, and achievable.

**Furniture & Fabrics**  
Products are PFAS-free, use safer chemistry, and meet the specifications of Kaiser Permanente - a leader in setting standards for environmentally preferable purchasing.

**Medical Supplies & Devices**  
Easily identify environmentally preferable medical equipment and supplies used in health care including IV bags and tubing, bandages, home health care supplies, catheters, blood pressure cuffs, surgical gloves, bedpans, and wheelchairs.

**Reusable Food Packaging, Food Service Ware & Cookware**  
A new safety standard for everyday items like pots, pans, food containers and other reusable food packaging.

**Single-Use Food Service Ware & Thermal Paper**  
A new safety standard for everyday items like disposable plates and bowls.


**Textile Chemicals**  
Created to promote safer chemicals use in the global supply chain of the apparel and footwear sector.

**GreenScreen Certified®**

- What is GreenScreen Certified®?
- View the Standards
- Find Certified Products
- Get Certified
- FAQ
- Reviewers

While this certification contains many products, there are some chemical ingredients and process chemicals that have been assessed.

# ChemFORWARD SAFER™ Program






About Us Our Approach Safer Chemistry Industry Collaborations SAFER™

## SAFER TRADE NAME LISTINGS

ChemFORWARD's SAFER™ program assesses a suppliers trade name ingredient against rigorous human and environmental impacts using toxicology experts. To be designated as SAFER, all chemicals present at or above 100 ppm have been disclosed and assessed by a qualified toxicology firm against ChemFORWARD's comprehensive hazard methodology and all chemicals subject to disclosure are well characterized and do not present high hazards. Products are reviewed annually.

**Confidently START SAFER when you choose ingredients that have been evaluated through ChemFORWARD's third-party program.**

Filter 11 Sort

 <p><b>ANGUS Chemical</b></p> <p>Sector: Beauty &amp; Personal Care Other</p> <p>Product Trade Name: TRIS AMINO™ ULTRA PC - Tris(hydroxy...</p> <p>Function(s) (tag): Pharmaceutical intermediate Biologica</p> <p>Company Webpage: <a href="https://www.angus.com/">https://www.angus.com/</a></p>	 <p><b>Chinova Bioworks</b></p> <p>Sector: Beauty &amp; Personal Care</p> <p>Product Trade Name: BioFiber+™</p> <p>Function(s) (tag): Natural preservative Antimicrobial</p> <p>Company Webpage: <a href="https://www.chinovabioworks.com/">https://www.chinovabioworks.com/</a></p>	 <p><b>INOLEX</b></p> <p>Sector: Beauty &amp; Personal Care</p> <p>Product Trade Name: LexFeel™ Natural</p> <p>Function(s) (tag): Emollient</p> <p>Company Webpage: <a href="https://inolex.com/">https://inolex.com/</a></p>	 <p><b>Dow Personal Care</b></p> <p>Sector: Beauty &amp; Personal Care</p> <p>Product Trade Name: CELLOSIZ™ Texture K100M Hydroxypro...</p> <p>Function(s) (tag): Rheology modifier Binder Water ret</p> <p>Company Webpage: <a href="https://www.dow.com/en-us/pdp.cellosi...">https://www.dow.com/en-us/pdp.cellosi...</a></p>	 <p><b>Dow Personal Care</b></p> <p>Sector: Beauty &amp; Personal Care</p> <p>Product Trade Name: CELLOSIZ™ Texture E4M Hydroxypropyl...</p> <p>Function(s) (tag): Rheology modifier Binder Water ret</p> <p>Company Webpage: <a href="https://www.dow.com/en-us/pdp.cellosi...">https://www.dow.com/en-us/pdp.cellosi...</a></p>
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# Example Association Resources

NAME/CAS/EC LIST SEARCH

FUNCTION

PRODUCT CATEGORY

CHEMICAL CLASS

VOC STATUS

REFERENCES

INGREDIENT TYPE

SOURCE

EPA SAFER CHOICE

FIFRA 25(b)

REACH LIST

Search Ingredients

## Ingredients Directory

(Chloropropyl)Trimethoxysilane  
(E)-beta-Damascone  
(Z)-beta-Damascone  
1,2-Benzisothiazol-3(2H)-one, Sodium Salt  
1,2-Ethanediamine, N1-[3-(Trimethoxysilyl)Propyl]-  
1,3-Butadiene-Itaconic Acid-Methacrylic Acid-Styrene Copolymer  
1,4-Butane Sulfone  
1,8-Diazabicyclo[5.4.0]Undec-7-ene  
1-Hexadecene  
1-Octen-3-ol  
2,4,7,9-Tetramethyl-5-Decyne-4,7-diol  
2,4-Di-t-Butylphenyl 3,5-Di-t-Butyl-4-Hydroxybenzoate  
2,6-Dimethyl-2-Heptanol  
2,6-Dimethyl-7-Octen-2-ol  
2,8-Epithio-p-Menthane  
2-Acetonaphthone  
2-Ethoxynaphthalene  
2-Ethylhexylamine, Methacrylate Alkylate, Sodium Salt  
2-Isobutylthiazole  
2-Methoxynaphthalene  
2-Methoxypropyl Acetate  
2-Methyl-2-Pentenoic Acid  
2-Methylbutyl Acetate  
2-Methylhexane  
2-Naphthalenesulfonic Acid, Polymer with Formaldehyde, Sodium Salt  
2-Propoxy-1-Propanol  
2-t-Butylcyclohexyl Acetate  
2-Tridecenitrile  
3,3-Dimethylpentane  
3-(p-Cumenyl)-2-Methylpropanol  
3-(Trimethoxysilyl)Propylamine  
3-Hexen-1-ol  
3-Isodecyloxypropanamine Chloride Ethoxylated  
3H-Pyrazol-3-one, 2,4-Dihydro-5-Methyl-2-Phenyl-, 4-[(4-C7-17-Branched Alkylphenyl)Azo] Derivs.  
4,4'-Isopropylidenediphenol  
4,4'-Sulfonyldiphenol  
4-Chloro-2-Methylphenoxyacetic Acid  
4-Methylanisole  
4-Terpineol  
4-Vinylcyclohexene  
8-Mercaptomenthone  
Acetato Pentammine Cobalt Dinitrate  
Acetoin  
Acetophenone  
Acetyl Hexamethyl Tetralin  
Acid Blue 1  
Acid Blue 145

(E)-3-Methyl-5-Phenylpent-2-enenitrile  
(Z)-3-Methyl-5-Phenylpent-2-enenitrile  
1,1-Dichloroethane  
1,2-Butylene Oxide  
1,2-Trans-Dichloroethylene  
1,3-Dichloropropene  
1,4-Dioxane  
1-Formyl-3-Isohexenyl-3-Cyclohexene  
1-Octadecanethiol  
2,3-Dimethylpentane  
2,4-Bis((Dimethylphenyl)Azo)-1,3-Benzenediol  
2,4-Dimethyl-3-Cyclohexene Carboxaldehyde  
2,6-Dimethyl-7-Octen-2-ol  
2,6-Xylenol  
2-(2H-Benzotriazol-2-yl)-4,6-di-tert-Pentylphenol  
2-Bromobutane  
2-Ethylhexanol  
2-Heptanone  
2-Mercaptoacetamide  
2-Methoxypropanol  
2-Methyl Butyl Salicylate  
2-Methylamino-2-Methyl-1-Propanol  
2-Methyldecanal  
2-Methylundecanal  
2-Octanone  
2-Phenylpropionaldehyde  
2-Propylheptanol  
2-tert-Butyl-1,4-Benzoquinone  
2-[[Methyl(Nonafluorobutylsulfonyl)Amino]Ethanol  
3,7-Dimethyloctanenitrile  
3-(Trihydroxysilyl)Propyl Methylphosphonate, Monosodium Salt  
3-Ethylpentane  
3-Hexenol  
3-Methylhexane  
3MEA-Citrate  
3TEA-Citrate  
4,4'-Isopropylidenediphenol/Epiclorohydrin Copolymer  
4-C10-13-sec-Alkyl Benzenesulfonic Acid Derivatives  
4-Ethyl-4-Oxazolidinemethanol  
4-Methylbenzaldehyde  
4-tert-Butylcyclohexyl Acetate  
7-Octen-2-ol, 2-Methyl-6-Methylene-, Dihydro Deriv.  
Acetaldehyde  
Acetic Acid  
Acetone  
Acetyl Hexamethyl Tetralin  
Acetyl Propionyl  
Acid Blue 104  
Acid Blue 182

pinfa Innovative and Sustainable Flame Retardants in Building and Construction

Non-halogenated phosphorus, inorganic and nitrogen flame retardants

# Example Resources

## American Chemical Society Green Chemistry Institute Pharmaceutical Roundtable

ACS Green Chemistry Institute  
Pharmaceutical Roundtable

ABOUT FOCUS AREAS **TOOLS** FUNDING & AWARDS LEARNING

# SOLVENT TOOL

Home / Tools / Solvent Tool

This tool allows you interactively select solvents based upon the Principal Component Analysis (PCA) of the solvent's physical properties. Solvents which are close to each other have similar physical and chemical properties, whereas distance solvents are significantly different. In addition to the PCA scores other data including the physical properties, functional groups and environmental data has been included to aid in the rational selection of solvents.

Functional Groups Physical Properties PCA Engineering ICH SHE Solvent List Filter Summary

Solvents Selected: 272

Functional Groups Hints and Tips

ACS Green Chemistry Institute  
Pharmaceutical Roundtable

Reagent Guides Interpret Venn Diagrams Ethos of Guides About

Home - Reagent Guides

## Reagent Guides

All Carbon-Ni/O/S/B bond formation Carbon-carbon bond formation Carbon-halogen bond formation Oxidation/Reductions Protection/Deprotection

Specific synthesis Technologies

Amide Reduction R-C(=O)-N(R')R'' >> R-CH2-N(R')R'' [View](#)

Achiral Hydrogenation R-C#C-R' >> R-CH2-CH2-R' [View](#)

Biocatalysis R-C(=O)-R' + H2 >> R-CH(OH)-R' [View](#)

BOC Deprotection R-NH-Boc >> R-NH2 [View](#)

Borylation R-OH + B2H6 >> R-BH2 [View](#)

Bromination R-H + Br2 >> R-Br + HBr [View](#)

Buchwald-Hartwig Amination R-NH2 + R'-CHO >> R-NH-CH2-R' [View](#)

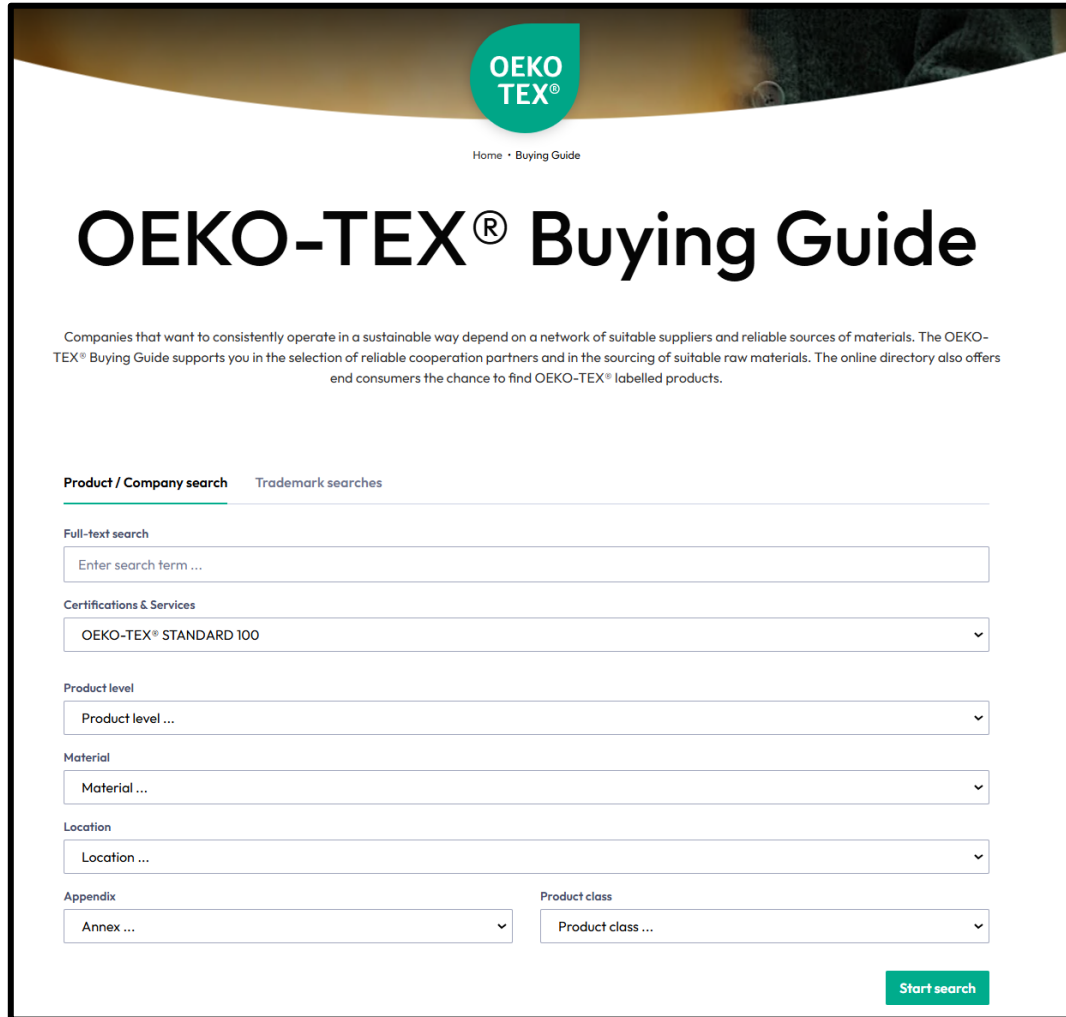
Chiral Hydrogenation R-C(=O)-R' + H2 >> R-CH(OH)-R' [View](#)

<https://acsgcipr.org/tools/solvent-tool/>

<https://reagents.acsgcipr.org/reagent-guides/>

# Example Resource

## for Apparel, Footwear, Textiles

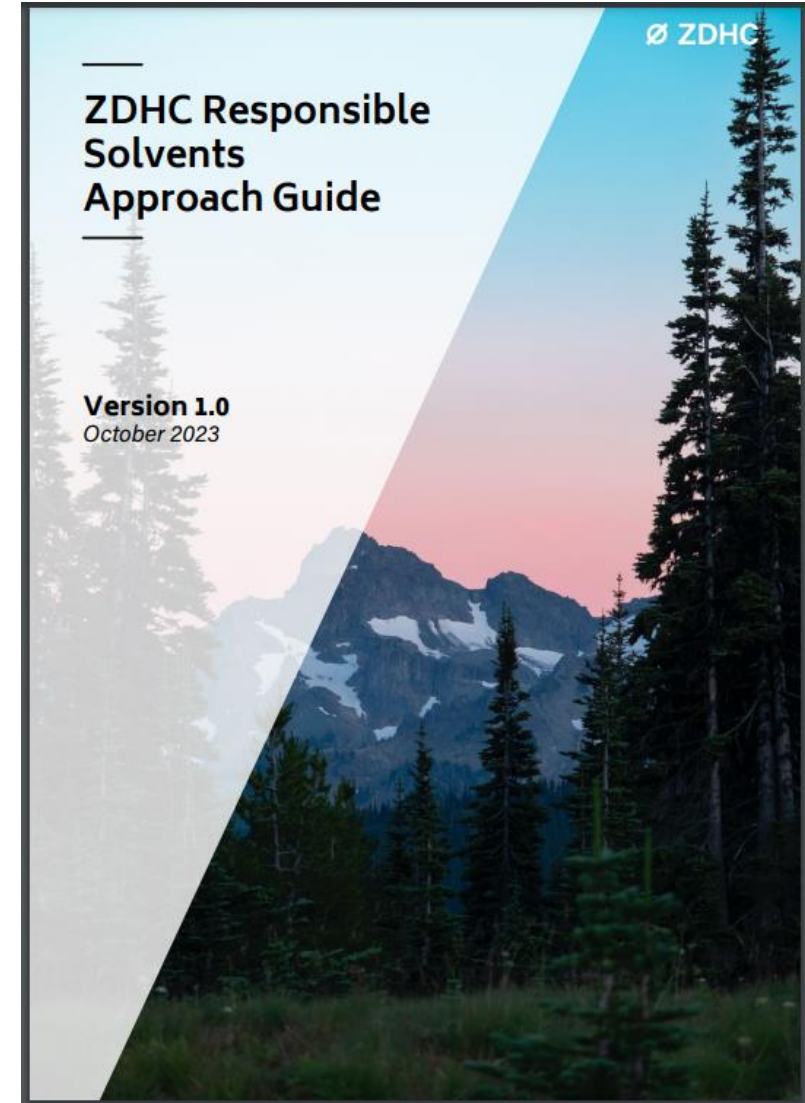


The screenshot shows the OEKO-TEX Buying Guide website. At the top, there is the OEKO-TEX logo and a navigation bar with "Home" and "Buying Guide". The main heading is "OEKO-TEX® Buying Guide". Below this, a paragraph explains the guide's purpose: "Companies that want to consistently operate in a sustainable way depend on a network of suitable suppliers and reliable sources of materials. The OEKO-TEX® Buying Guide supports you in the selection of reliable cooperation partners and in the sourcing of suitable raw materials. The online directory also offers end consumers the chance to find OEKO-TEX® labelled products."

Below the text, there are search filters:

- Product / Company search** (active) and **Trademark searches**
- Full-text search**: A text input field with the placeholder "Enter search term ..."
- Certifications & Services**: A dropdown menu currently showing "OEKO-TEX® STANDARD 100"
- Product level**: A dropdown menu currently showing "Product level ..."
- Material**: A dropdown menu currently showing "Material ..."
- Location**: A dropdown menu currently showing "Location ..."
- Appendix**: A dropdown menu currently showing "Annex ..."
- Product class**: A dropdown menu currently showing "Product class ..."

A green "Start search" button is located at the bottom right of the filter section.



<https://www.oeko-tex.com/en/buying-guide>

<https://www.roadmaptozero.com/process#Guide>

# Other Resources

The screenshot shows the SpecialChem website homepage. At the top left is the SpecialChem logo with the tagline "The material selection platform". To the right of the logo is a navigation menu with "All categories" and a search bar containing the text "Search for a product, supplier, or resource". Further right are links for "Why SpecialChem?" and "For suppliers". The main heading is "The Material Selection Platform" in a large, bold font, with "Platform" in green. Below the heading is a sub-heading: "Access all the product data, knowledge and assistance to select the material you search for." At the bottom, there are five white boxes with icons and text representing different material categories: "Cosmetics Ingredients", "Coatings Ingredients", "Adhesives Ingredients", "Polymer Additives", and "Plastics & Elastomers".

The screenshot shows the ULTRUS Prospector website homepage. At the top left is the ULTRUS logo and "Prospector®". To the right are links for "Sign In" and "Register". The main heading is "Source your materials" in a bold font. Below it is a paragraph: "Find the materials you need to bring your product to market faster. Search thousands of materials from global suppliers by keyword, property, certification and more. Analyze technical data, request samples and contact suppliers with your free account." Below this paragraph is a red button that says "Start searching now". To the right of the text is a circular image of a woman in a lab coat and safety glasses holding a test tube. Below the "Start searching now" button is another heading: "Market your materials". Below this is a paragraph: "Promote your products to industry professionals engaged in material research. Learn more about UL's plastics and chemical marketing solutions to reach product developers, engineers, and chemical buyers." Below this paragraph is a red button that says "Go to marketing solutions". At the bottom, there is a heading "Browse Prospector® Industries" followed by a grid of ten icons representing different industries: "Adhesives & Sealants", "Food, Beverage & Nutrition", "Graphic Arts & Inks", "Household, Industrial & Institutional Cleaners", "Lubricant & Metalworking Fluids", "Paint & Coatings", "Personal Care & Cosmetics", "Plastics", "Plastics Additives", and "Metals".

One can go to the relevant sector and search ingredients by function. Many of these ingredients are linked to technical sheets. There are also some selection guides that could be helpful.

<https://coatings.specialchem.com/selectors/a-coatings-markets-transportation-road-marking/c-additives-plasticizers>

<https://www.ulprospector.com/en/eu>

# Example Resource- ChemSec Marketplace



## Search results

Search for alternatives and requests



### Filter

#### I am looking for

Evaluated Alternatives

Alternatives

Requests

#### Show results from

All items

#### Technical Function <sup>i</sup>

None selected

#### Sector of Use <sup>i</sup>

None selected

#### Material Article Category <sup>i</sup>

None selected

#### Legal requirements, standards and third party labels <sup>i</sup>

None selected

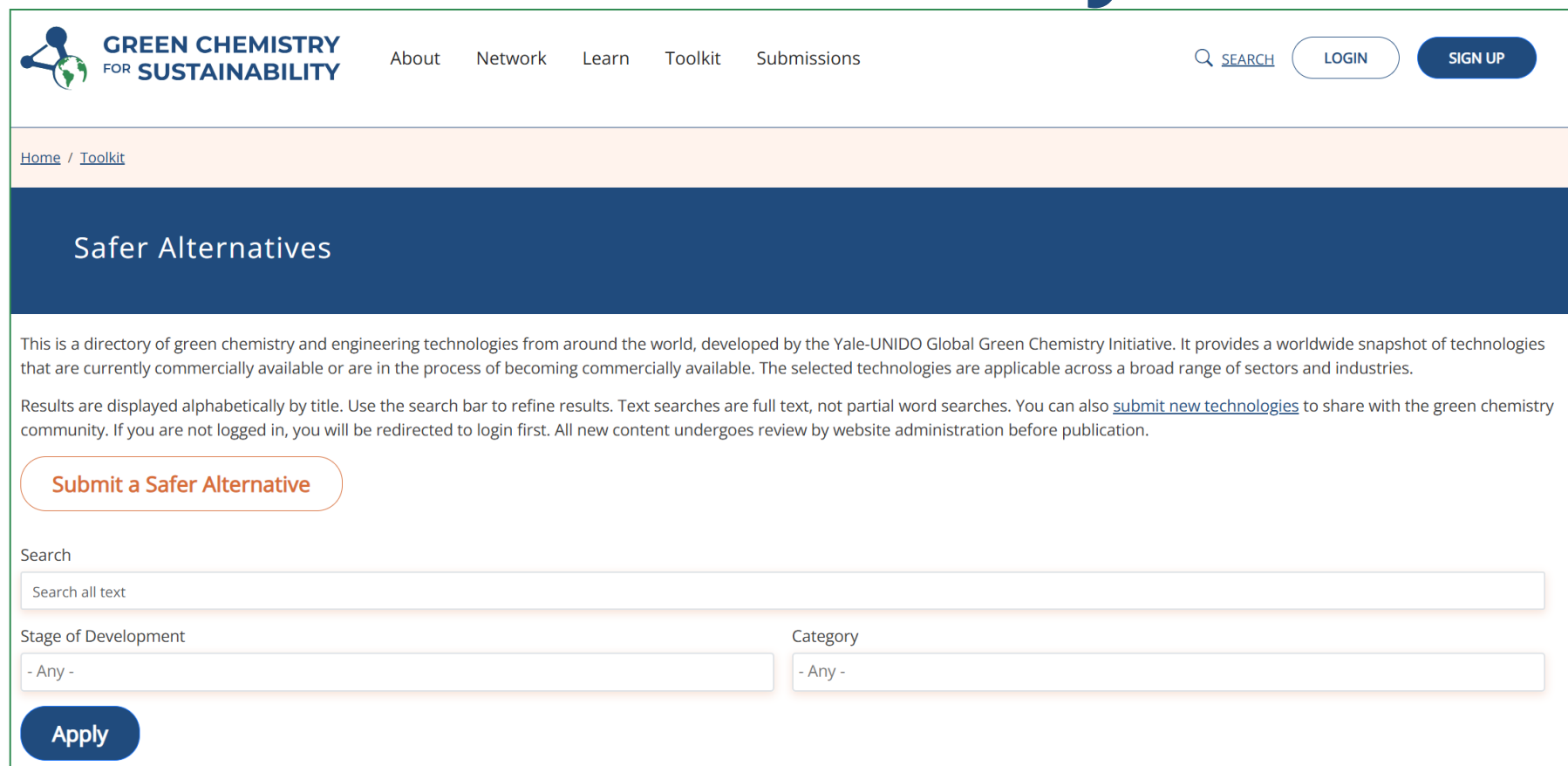
RESET

Apply

A platform where one can search for alternatives. Some of these innovations might be from startups.



# Example Resource- Green Chemistry for Sustainability



**GREEN CHEMISTRY FOR SUSTAINABILITY** About Network Learn Toolkit Submissions

[Home](#) / [Toolkit](#)

## Safer Alternatives

This is a directory of green chemistry and engineering technologies from around the world, developed by the Yale-UNIDO Global Green Chemistry Initiative. It provides a worldwide snapshot of technologies that are currently commercially available or are in the process of becoming commercially available. The selected technologies are applicable across a broad range of sectors and industries.

Results are displayed alphabetically by title. Use the search bar to refine results. Text searches are full text, not partial word searches. You can also [submit new technologies](#) to share with the green chemistry community. If you are not logged in, you will be redirected to login first. All new content undergoes review by website administration before publication.

Search

Stage of Development  Category

A platform where one can search for innovative technologies. These alternatives might be in an early stage of development.

# Example Resource

## Building Sector Product Type and Material


[PRODUCT GUIDANCE](#)
[ASSESSMENT TOOLS](#)
[RESOURCES](#)
[GET INVOLVED](#)
[ABOUT](#)


### Informed™ Product Guidance

Build your knowledge of healthier products by digging into our research, translated into easy to understand guidance.

The intuitive red-to-green color ranking compiles decades of comprehensive research about the health impacts of chemicals on building occupants, fenceline communities, and workers throughout the product life cycle.

Step up from red — a critical first move. Next, prefer product types ranked yellow and green.

- Best in Class
- Better
- Good
- Reduce
- Eliminate
- Worst in Class



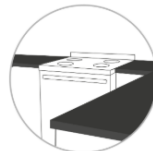
Flooring



Paint



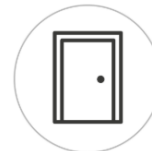
Drywall



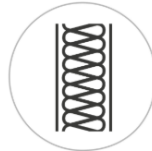
Countertops



Cabinetry & Millwork



Doors



Insulation



Flooring Installation



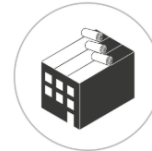
Sealants



Turf



Water Pipes



Roofing



Waterproofing & Dampproofing



Fire Protection



Firestopping & Fireblocking



Acoustical Ceilings & Treatments



Window Frames



Exterior Cladding & Siding

### Example Product Guidance (Insulation)


[PRODUCT GUIDANCE](#)
[ASSESSMENT TOOLS](#)
[RESOURCES](#)
[GET INVOLVED](#)
[ABOUT](#)


#### Insulation Product Guidance

[LEGEND](#)

Use the red-to-green product guidance below to select safer product types by avoiding those in red and preferring yellow and green, which are safer for occupants, fenceline communities, and workers.

When choosing insulation:

- Prefer products that are based on natural materials, recycled cellulose, or minerals. Good options include cork, wood fiber, sheep's wool, hemp, and certain fiberglass and mineral wool.
- Avoid plastic foam insulation, whether board or spray-applied.
- For board insulation, prefer expanded cork, wood fiber, and unfaced formaldehyde-free fiberglass or mineral wool.
- Blown and batt insulations are generally good options from a material health perspective, but pay attention to binders and facers. See below for the best blown and batt options.
- Avoid products with formaldehyde-based binders and those with flame retardant facing materials.
- Use mechanical installation methods, such as fasteners, to avoid unnecessary use of adhesives.

Read more...

Expanded Cork Boards	▼
Blown-In Wood Fiber (Loose Fill and Dense Pack)	▼
Blown and Batt Sheep's Wool	▼
Hemp Fiber Batts	▼
Wood Fiber Batts and Boards	▼
Blown-In Fiberglass or Mineral Wool (Loose Fill, Dense Pack, and Spray-Applied)	▼
Unfaced Fiberglass Batts	▼
Formaldehyde-Free Mineral Wool Batts and Boards	▼
Blown-In Cellulose (Loose Fill)	▼
Unfaced Formaldehyde-Free Fiberglass Boards	▼
Kraft-Faced Fiberglass Batts	▼
Cellulose/Cotton Batts	▼
Blown-In Cellulose (Dense Pack and Wet-Blown)	▼
PSK or FSK-Faced Fiberglass Batts	▼
Standard Mineral Wool Batts and Boards	▼
Standard Fiberglass Boards	▼
Halogen-Free Polyisocyanurate Boards	▼
ASJ- or FSK-Faced Fiberglass Boards	▼
Expanded Polystyrene (EPS) Boards	▼
Standard Polyisocyanurate (Polyiso) Boards	▼
Extruded Polystyrene (XPS) Boards	▼
Spray Polyurethane Foam (SPF)	▼

# Example Organization Working on Researching Alternatives

## Toxic Use Reduction Institute



**TURI**  
TOXICS USE REDUCTION INSTITUTE  
UMASS LOWELL  
Cleaning Laboratory

CLEANERSOLUTIONS ▾ VENDORS ▾ FORMS ▾ ABOUT ▾ CONTACT

### Replace a Solvent

Based on testing conducted by lab to replace listed solvent.  
Displayed results are for alternative chemistries evaluated for solvent selected.

#### Required Field

You must select one or more solvents.

**SOLVENT**

- 320 Cleaner
- A.) Pathosans Cleaner B.) Zep High
- A.) Pinosol B.) Pathosans
- ADF Powdered Concentrate
- AGAE Technologies Body Wash
- Abrasive Disc
- Abrasive Slurry
- Acetates
- Acetic Acid
- Acetone
- Acids

#### Optional Fields

Filter your search by substrate or equipment type, or leave these fields set to Any to include all results for a given contaminant.

**CONTAMINANT**

- Abrasive
- Adhesive
- Alcohol
- Algae
- Asphalt
- Bacteria
- Bacteria - Gram Negati
- Bacteria - Gram Positive
- Blood
- Bovine Serum Albumin Fi
- Buffing/Polishing Comp

**SUBSTRATE**

- Alloys
- Alumina
- Aluminum
- Brass
- Cadmium plated steel
- Carbon Fiber
- Carbon Steel
- Carpet
- Cat Litter
- Ceramics
- Chrome

**EQUIPMENT**

- Briilo pad
- Cold Solvent
- Electrolytic bath
- High Pressure Spray
- Immersion/Soak
- Low Pressure Spray
- Manual Paint Stripping
- Manual Wipe
- Manual spreading
- Mechanical Agitation
- Media Blasting

<https://www.turi.org/publications/alternatives-to-halogenated-solvents-used-in-surface-cleaning/>  
<https://www.cleansolutions.org/Replace-a-Solvent>



# Example Sites that Compile Case Studies

## Subsport plus and IC2 Alternatives Assessment Library

The screenshot shows the Subsportplus website interface. At the top, there is a navigation bar with links for "About the portal", "News", and "Deutsch". The main header includes the "subsportplus" logo and a search bar. Below the header, there are navigation tabs for "REGULATIONS", "SUBSTANCES", "CASES", "PROCESS", and "GOOD PRACTICE". The "CASES" tab is selected. The breadcrumb trail reads "Home > Cases > Case story database".

### Case story database

Search for Successfully Implemented Alternatives

You can use the free text search function to find information in the case story database. Most suitable are: substance name and other substance identifier (EC- and CAS-number). You can refine your search after first entry for sector-, function- and process-categories. The case studies are meant to serve as source of inspiration and ideas for substitution. The alternatives are constantly being developed further. We therefore recommend that you to check in each individual case whether an alternative is suitable for your applications and purposes. If you are aware of any other relevant information that is not mentioned in the current case story, please → CONTACT SUBSPORTPLUS.

In order to utilize information in the best way, please take note of the SUBSPORTplus methodology on case stories!

*\*For a more precise search, use quotation marks ("example").*

**Filter**  
You can select one or more filters.

**Sector**

- Agriculture, forestry, fishery (10)
- Manufacture of rubber products (50)
- Manufacture of plastics products, including compounding and conversion (54)

**Search for**

Search in Case Story database

Suchbegriff

**SEARCH**

Results 1 to 10 of a total of 451 for search term

The screenshot shows the IC2 Alternatives Assessment Library website. At the top, there is a navigation bar with the IC2 logo and links for "ABOUT", "FOCUS AREAS", "HPCDS", "KNOWLEDGEBASE", and "EVENTS". The breadcrumb trail reads "Home > Knowledgebase > Alternatives Assessment Library".

[BACK TO KNOWLEDGEBASE](#)

## Alternatives Assessment Library

This is a listing of publicly available alternatives assessments (AA), AA-related guidance documents (generally organized by date, from most recent to oldest), and other resources that list multiple case studies.

If you are aware of other AAs or resources that you would like to suggest should be included, please [contact us](#).

Report on PFAS in AFFF and compendium of fluorine-free foams, prepared for the IC2 by the New York State Pollution Prevention Institute at the Rochester Institute of Technology:

- Per- and Polyfluorinated Substances in Firefighting Foam, Updated, April 2019*
- Compendium of fluorine-free foams as of April 2019* (Excel file)

## Available Alternatives Assessments

- Waterborne vs. Solventborne Automotive Basecoats: An Alternatives Assessment.** Hazardous Waste Management Program in King County. 2019.
- Assessment of Safer and Effective Alternatives for Coating Removal Products.** Massachusetts Toxics Use Reduction Institute (TURI). 2020.
- Assessment of Alternatives to Cleaners and Sanitizers for the Brewing Industry.** Massachusetts Toxics Use Reduction Institute (TURI). 2020.
- Alkylphenol Ethoxylates in Products Lay of the Land Alternatives Assessment.** Prepared for


<https://www.subsportplus.eu/subsportplus/EN/Cases/Case-story-database>

<https://www.theic2.org/alternatives-assessment-library/>

# Example- Stockholm Convention Alternative Guidance

BRS CONVENTIONS    BASEL CONVENTION    ROTTERDAM CONVENTION    **STOCKHOLM CONVENTION**

Home   The Convention   Procedures   Implementation   Countries   Partners    Search



## Stockholm Convention on Persistent Organic Pollutants (POPs)

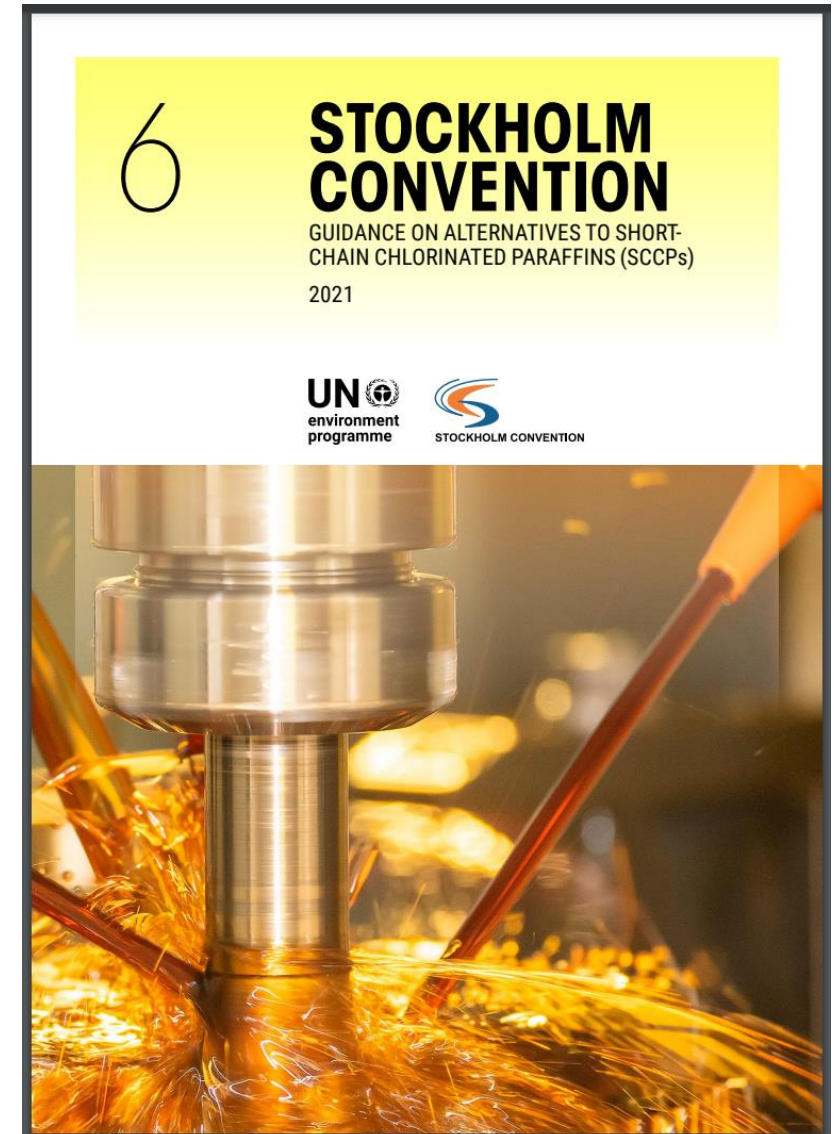
You are here: Stockholm Convention > The Convention > POPs Review Committee > Guidance

### POPRC Publications

Arabic   Chinese   **English**   French   Russian   Spanish

Document	Download
Confidentiality procedures and arrangements under selected international agreements and forums	
Approach to considering isomers or groups of isomers of chemicals proposed for listing in	
A A lis A C C D E m download)	
C C C D E m download)	

Guidance



<https://chm.pops.int/TheConvention/POPsReviewCommittee/Guidance/tabid/345/Default.aspx>

<https://www.pops.int/TheConvention/POPsReviewCommittee/Guidance/tabid/345/ctl/Download/mid/2526/Default.aspx?id=3>