

Taking Action on Paint Strippers: Retailers and Suppliers Report from the Field

GC3 Innovators Roundtable
Wednesday May 8, 2019



Goal of this session

Explore the challenges faced by retailers and suppliers in identifying, marketing and adopting safer products and **identify ways to overcome these challenges**, through a focus on paint strippers.

Panelists

- Paul Ellis, Head, Sustainable Chemicals Management, Kingfisher
- Chris Cassell, Director, Corporate Sustainability, Lowe's
- Tess Fennelly, CEO, remooble
- Greg Morose, Research Manager, Massachusetts Toxics Use Reduction Institute

Setting the Context – NGO pressure



How are big retailers implementing bans on toxic paint strippers?

Posted Mar 20, 2019 by Mike Schade and Jen Dickman in [Mind the Store](#)

A new resource: safer paint strippers for consumers and workers

Posted Apr 1, 2019 by [Jen Dickman](#) in [Find Safer Products](#), [Mind the Store](#)

EPA paint stripper rule will leave workers' lives at risk

Posted Mar 15, 2019 by [Liz Hitchcock](#) in [Policy & Regulation](#)

Let's say it again: Dangerous paint strippers don't belong on store shelves

Posted Mar 27, 2018 by [Liz Hitchcock](#) in [Mind the Store](#), [Policy & Regulation](#)

Setting the Context - Regulation



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EPA Bans Consumer Sales of Methylene Chloride Paint Removers, Protecting Public

03/15/2019



Setting the Context - Regulation



The screenshot shows the website for the California Department of Toxic Substances Control (DTSC). The header includes the CA.GOV logo, the department name, and navigation links for About DTSC, Make A Payment, Calendar, E-Lists, and Contact. A search bar is present with a dropdown menu for 'This Site' and 'California'. The main navigation bar includes links for HOME, CLEANING UP CONTAMINATION, MANAGING HAZARDOUS WASTE, and PROTECTING CONSUMERS. The main content area features a banner for 'SAFER CONSUMER PRODUCTS (SCP)' with a woman holding a product. Below the banner, a sidebar on the left lists navigation options: SCP Home, News & Press Releases, SCP Program Overview, Candidate Chemicals, and Priority Products. The main content area displays a regulation announcement: 'Effective January 1, 2019: Paint or Varnish Strippers Containing Methylene Chloride'. The text of the regulation states that DTSC has adopted regulations to list paint or varnish strippers containing methylene chloride as a Priority Product, effective January 1, 2019, and that manufacturers must notify the Department by March 4, 2019.

CA.GOV California Department of Toxic Substances Control

About DTSC | Make A Payment | Calendar | E-Lists | Contact

Search

This Site California

HOME CLEANING UP CONTAMINATION MANAGING HAZARDOUS WASTE PROTECTING CONSUMERS

SAFER CONSUMER PRODUCTS (SCP)

SAFER CONSUMER PRODUCTS

- SCP Home
- News & Press Releases
- SCP Program Overview
- Candidate Chemicals
- Priority Products

➔ Effective January 1, 2019: Paint or Varnish Strippers Containing Methylene Chloride

DTSC has adopted regulations to list paint or varnish strippers containing methylene chloride as a Priority Product. Effective January 1, 2019, manufacturers of this product (see [final regulations text](#) for full description of the Priority Product) must notify the Department by March 4, 2019. To submit a Priority Product Notification, [register](#) on the Safer Consumer Products Information Management System, [CalSAFER](#), and submit a notification.

Common Challenges

- Incumbency
- Need for education
- Regulations - insufficient or lacking
- Greenwashing and casting of doubt on new solutions
- Switching risk – concern that alternatives may pose other hazards
- Insufficient time to identify and implement alternatives

Question for audience

How you have overcome some of these common challenges/barriers as you have worked to bring a safer product to the market?

ONE Kingfisher

Kingfisher plc

**Report from the Field -
learning from Europe and
beyond**

April 2019



Who are we?

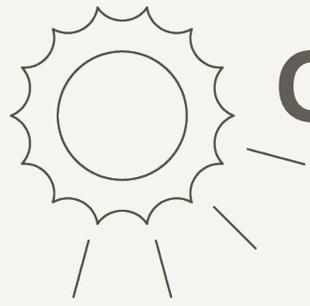
We're an international home improvement company

Offering home improvement products and services to nearly six million customers who shop in our stores and through our digital channels every week

Our main retail brands are B&Q, Castorama, Brico Dépôt and Screwfix

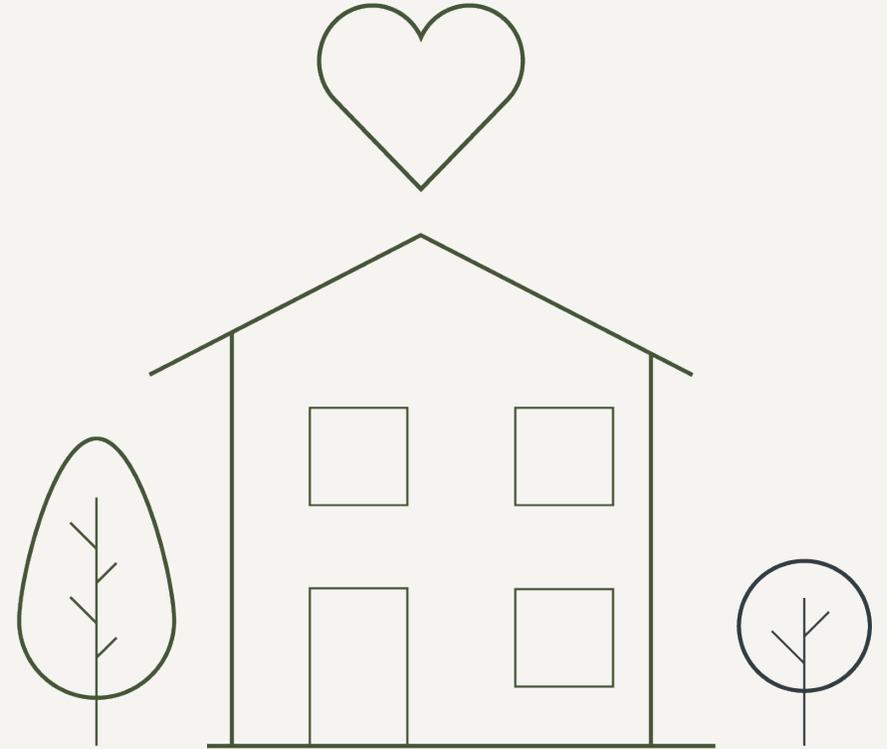
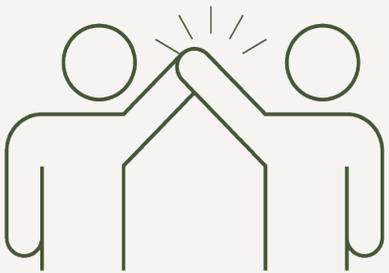
The Lowes and Home Depot of Europe....





Our purpose...

**Together we will make
home improvement
accessible for
everyone.**



About us



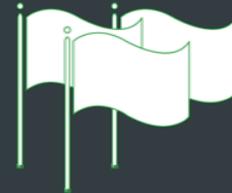
£11.7bn sales



6m customers per week



£753m retail profit



10 countries



77,300 colleagues^{†*}

as at 31 January 2019



1,300+ stores

as at 31 January 2019

† Total, not full-time equivalent.

* Turkey joint venture not consolidated.

** as at 31 January 2019, unless otherwise stated

Where we are



1. B&Q UK & Ireland 296, Screwfix 627
2. Castorama 101, Brico Dépôt 123
3. Turkey joint venture not consolidated



Our journey to safer chemicals and products...in context of MC /NMP

Drivers

Regulation

- REACH restricts (MC) or restricting (NMP)
- Learnings told us we need to do more than just “substitute”

Our customer's

- Our customers across all corners of Europe told us they want to live in a “toxin free life style”
- Asked when defining GoodHome strategy development

Policy and sustainable chemicals plan

- Combined drivers, led to Policy and a plan to phase out the most harmful

..our roadmap to enabling a GoodHome...

By 2020, achieve transparency of harmful chemicals in key supply chains.

By 2025, improve our products by phasing out a selection of hazardous and high risk chemicals of concern and introducing five green substances/materials across our ranges.

Learnings...

Negative Customer reactions

- Honesty is, we left the substitution to our suppliers
- Resulted in customer dissatisfaction and loss of business

Why?

- The product simply worked differently, took longer and not as effective
- Some customers returned the product, because they believed it was “faulty”
- We didn't see the need (at that time) to consider the efficacy of new ingredients

This and others contributed to the term “***unfortunate substitution***”

Have we introduced safer alternatives and products?

Yes - we have taken action on

- **Neonic's** , banning their use on live plants in the growing phase
- Plus introducing a safer organic range of garden chemicals

**Plus..
A Progressive
5yr plan to
phase out**

SUBSTANCES	Uses
Per & Poly fluorinated chemical (PFCs)	Textiles, waterproofing spray, paints, biocides and coatings.
Ortho - Phthalates	PVC, textiles , sealants
Alkylphenol (AP) and Alklyphenol Ethoxylates (APEOs)	Textile supply chain; detergents and cleaning products
Solvents – developing a scaleing of Good & Bad solvents move towards safer and new innovation	Forumulated Product
Halogenated and organophosphate flame retardants	Polymers
TDI (Toluene-diisocyanate)	Chemicals formulations
MDI (methylene diisocyanate)	Composite woods, chemicals formulations

Our 5 biggest challenges

- 1** Reluctance from incumbent suppliers to change formulations
- 2** Lack of transparency from suppliers, refusal to provide 100% ingredient disclosure.
- 3** Lack of “innovation seeking “ from 1st tier finished goods suppliers
- 4** Perceived cost increases
many cases no cost impact and in some, action taken already
- 5** Legal constraints in some European countries, meaning we are locked into suppliers for a period of time.
Limiting movement to more responsive suppliers with new innovations to offer

Our advice to others...

- 1** Internally, sell in the reasons for change in the context of the consumer and the potential risks
- 2** Create a process that avoids unfortunate substitutions. Manage expectations on the extra time needed and the additional process steps
- 3** Ensure the Efficacy is managed, and risks and hazards are measured
- 4** Ensure consumer expectations are met, by understanding the performance expectations
- 5** Explore new innovative chemicals to enhance and grow brand

- Founded in 1946 in North Carolina
- One of the world's largest home improvement retailers – over \$71B in sales
- Approximately 300,000 employees



- More than 2,200 home improvement & hardware stores in US and Canada
- A typical store stocks ~39,000 items and we carry hundreds of thousands of items via special order and online

Together, deliver the right home improvement products, with the best service and value, across every channel and community we serve.

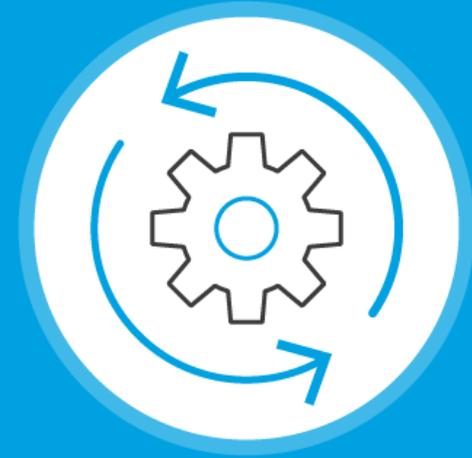




**Product
Sustainability**



**Our People &
Our Communities**



**Operational
Excellence**



**Product
Sustainability**

**Promote sustainable practices
throughout our value chain**

**Provide customers with the highest
quality, safest products**

**Help customers reduce their impact on the
environment**



- 2018**
 -  Eliminate neonicotinoids from all on-shelf products and live goods
 -  **Eliminate methylene chloride and NMP from all paint remover products**
 -  **Eliminate corded blinds from in-stock selection**
- 2020**
 -  100% FSC Certification for all wood products sourced from identified regions at risk
- 2025**
 -  100% of our wood products will be responsibly sourced
 -  100% of strategic suppliers will have sustainability goals
 -  Save customers more than \$40B in energy costs through the sale of ENERGY STAR products
 -  **Increase the number of eco-products available to customers**



Green Chemistry and Regrettable Substitutions

May 8, 2019

Greg Morose, Sc.D.

Research Manager, Toxics Use Reduction Institute (TURI)

Research Professor, University of Massachusetts Lowell

Chemical Substitution Approaches

1) Green Chemistry (Principle #4)

Design chemical products that are fully effective while reducing toxicity.

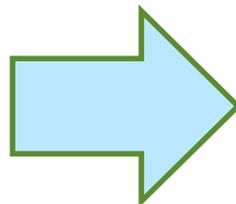
2) Regrettable Substitution

Replacing a highly toxic chemical with another highly toxic chemical.

NMP Substitution

NMP

State	Cal Prop 65 (Developmental) MA TURA
Fed.	EPA Hazardous Air Pollutant EPA TRI
Global	EU Annex VI CMR



Toluene

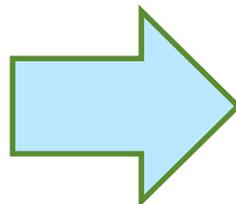
State	Cal Prop 65 (Developmental) MA TURA
Fed.	EPA Hazardous Air Pollutant EPA TRI
Global	EU Annex VI CMR

Green Chemistry or Regrettable Substitution?

Methylene Chloride Substitution

Methylene Chloride

State	Cal Prop 65 (Carcinogen) MA TURA
Fed.	EPA Hazardous Air Pollutant EPA TRI
Global	EU Annex VI CMR IARC Carcinogen



Naphthalene

State	Cal Prop 65 (Carcinogen) MA TURA
Fed.	EPA Hazardous Air Pollutant EPA TRI
Global	EU Annex VI CMR IARC Carcinogen

Green Chemistry or Regrettable Substitution?

Media Coverage



November 2018

“Consumers should read the warnings on products carefully, and avoid exposing themselves to methylene chloride as well as NMP and a handful of other toxic chemicals, including toluene, xylene and naphthalene”



December 2018

“There’s a long history of regrettable substitution in the United States — one dangerous chemical swapped for another. Some products, meanwhile, took out methylene chloride ... only to put in toluene and methanol, both linked to birth defects.”

“California will require that firms selling paint strippers with methylene chloride in the state to investigate alternatives. If the new options are problematic, California’s Department of Toxic Substances Control can require the companies to keep looking.”

Media Coverage

The Bloomberg logo is displayed in white, bold, sans-serif font against a solid black rectangular background.

March 12, 2019

“consumers and retailers face a conundrum. Some of the chemicals manufacturers have substituted for methylene chloride are safer while others are highly toxic.”

“California’s Department of Toxic Substances Control (DTSC) is working to understand which of many potential methylene chloride substitutes may be safer and also effective”

March 26, 2019

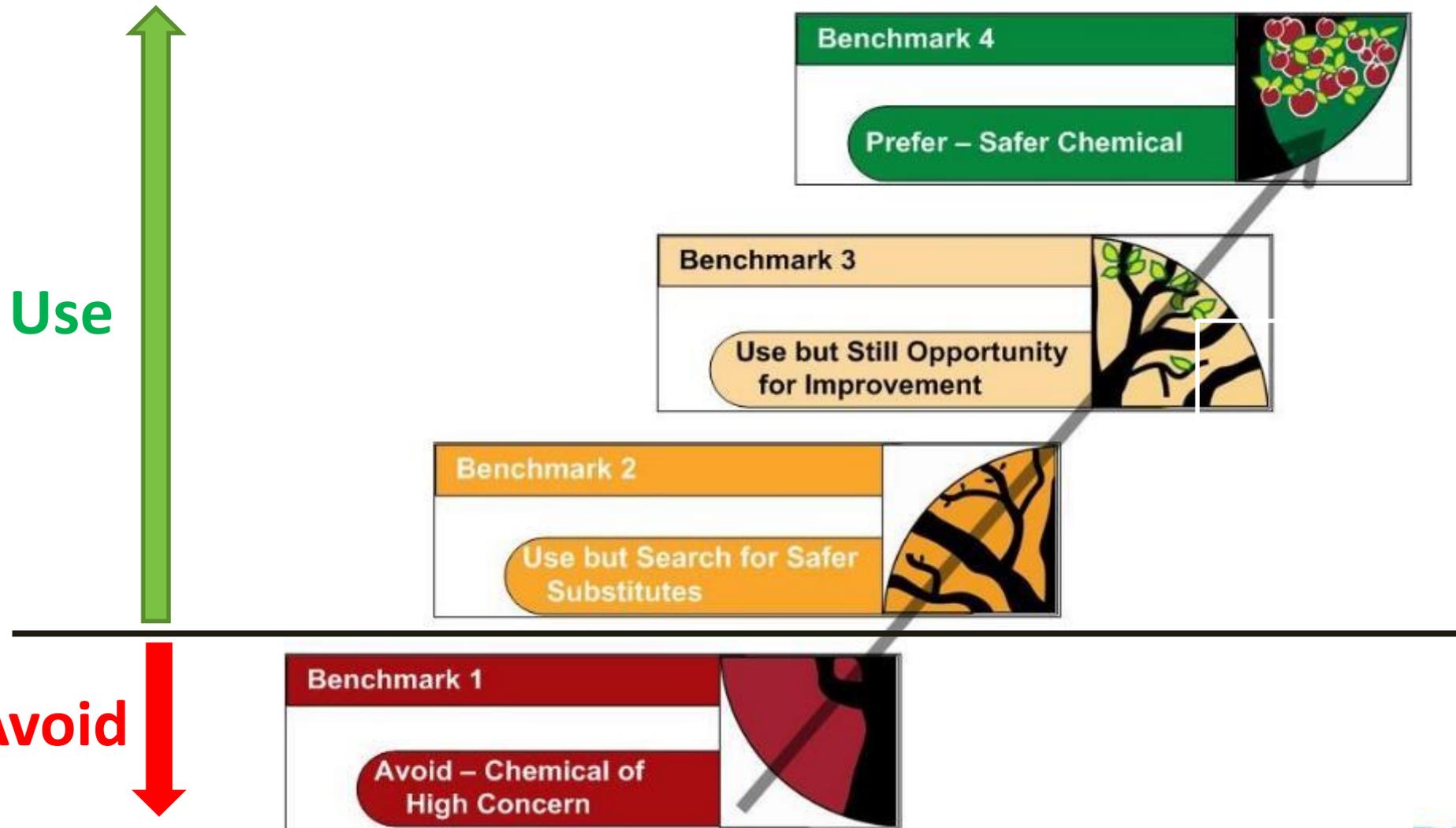
“We have seen a number of paint removers on the market with other chemicals of concern, such as toluene”

Green Screen Chemical Hazard Assessment

Ecotoxicity and fate in the environment	Toxicity to humans (Group I)	Toxicity to humans (Group II)	Physical hazards
<ul style="list-style-type: none"> • Acute aquatic ecotoxicity • Chronic aquatic ecotoxicity • Other ecotoxicity studies (if available) • Persistence • Bioaccumulation 	<ul style="list-style-type: none"> • Carcinogenicity • Mutagenicity and genotoxicity • Toxicity for reproduction • Toxicity for development • Endocrine activity 	<ul style="list-style-type: none"> • Acute toxicity • Systemic toxicity and effects on organs • Neurotoxicity • Skin sensitisation • Respiratory sensitisation • Dermal irritation • Eye irritation 	<ul style="list-style-type: none"> • Reactivity • Flammability

Ratings: very low, low, medium, high, very high, data gap

Green Screen Benchmark Levels



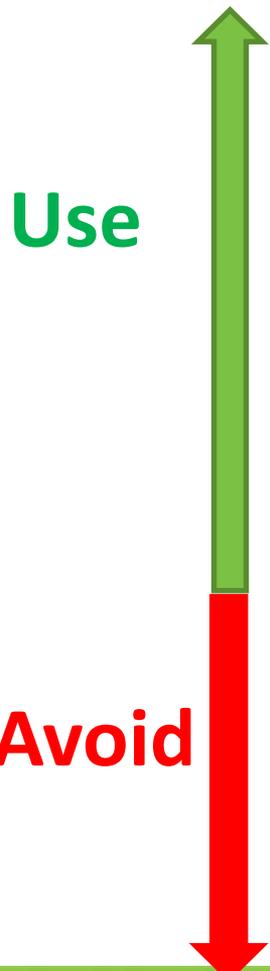
Chemicals Used in Paint Strippers	Green Screen Benchmark	EPA HAP, EPA TRI & MA TURA	California Prop 65 Listed	California Chemical Candid. List
Water	4			
DMSO	3			
Acetone	2			
Benzyl alcohol	2			
DEGME	2			
Dibasic esters (DMA, DMG, and DMS)	2			
D-Limonene	2			
1,3 Dioxolane	2			
Formic acid	2			
Methyl acetate	2			
Ethyl benzene	LT-1	✓	✓	✓
Methanol	1	✓	✓	✓
Methylene chloride	1	✓	✓	✓
Naphthalene	1	✓	✓	✓
NMP	LT-1	✓	✓	✓
Toluene	1	✓	✓	✓
Xylene	1	✓		✓

Use

Avoid



Paint Stripping Performance Test Results



Primary Chemical Ingredient	Green Screen Benchmark	Performance (Paint, Epoxy, & Varnish)
Acetone, DEGME	2	5 – 7 hours
Benzyl alcohol, water	2	2 – 6 hours
Benzyl alcohol, DEGME	2	3 – 5 hours
Dibasic esters, water	2	4 – 8 hours
Dibasic esters, triethyl phosphate	2	5 – 8 hours
Dibasic esters, benzyl alcohol	2	2 – 5 hours
Methyl acetate, DMSO, 1,3 dioxol.	2	< 40 minutes
Methylene chloride	1	< 40 minutes
NMP	LT-1	2 – 7 hours
Ethylbenzene, methanol, naphthalene, toluene, or xylene	1	< 40 minutes - 5 hours

Retailer Progress

It is a challenge for retailers to review their entire paint stripper product portfolio and ensure that their products do not contain methylene chloride, NMP, or any other Benchmark 1 chemicals.

Retailers that are currently selling only safer paint stripping products with **NO** Benchmark 1 chemicals include:

- AutoZone (U.S.)
- Canadian Tire (Canada)
- Home Hardware (Canada)
- Kelly-Moore (U.S.)
- Sherwin-Williams (U.S.)

Safer Chemicals Healthy Families: 12 paint stripping products with **NO** Benchmark 1 chemicals:
<https://saferchemicals.org/get-the-facts/chemicals-of-concern/methylene-chloride/>

remooble™



Safe Products that Work

GCB INNOVATORS
ROUNDTABLE

Panel Presentation: Taking Action on
Paint Strippers: Retailers and
Suppliers Report from the Field
May 8, 2019

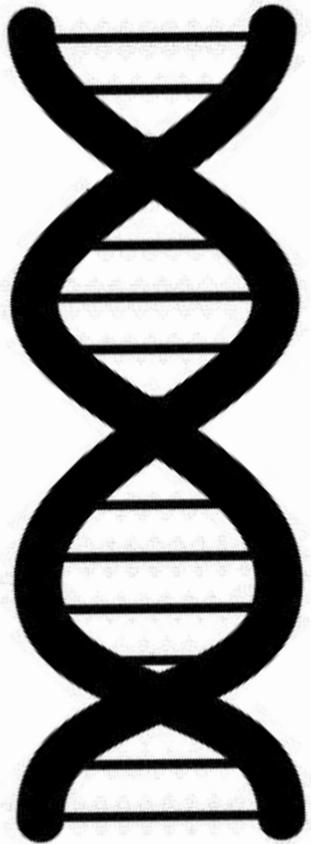
Presented by Tess Fennelly
CEO remooble
tess@remooble.com
www.remooble.com
612-201-7980



 remooble has chosen to unfollow
the notion that
only harsh chemicals perform.



remooble DNA



- WHO Trusted partners in environmental stewardship
- WHAT Products that remove inks, adhesives, paint and are safe for human health & the environment
- HOW Following the principles of green chemistry

Remooble offers more than just new **performance** products.

Remooble offers peace of mind to consumers that the products they bring into their homes and workplace are not harmful.





OTHERS

Health Hazard <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	Flame <ul style="list-style-type: none"> • Flammable • Pyrophoric • Self-Heating • Emits Flammable Gas • Self-Reacting • Organic Peroxides 	Exclamation Mark <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Harmful Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
Gas Cylinder <ul style="list-style-type: none"> • Gases under Pressure 	Corrosion <ul style="list-style-type: none"> • Skin Corrosion/ burns • Eye Damage • Corrosive to Metals 	Expanding Bomb <ul style="list-style-type: none"> • Explosives • Self-Reacting • Organic Peroxides
Flame over Circle <ul style="list-style-type: none"> • Oxidizers 	Environment (Non-Mandatory) <ul style="list-style-type: none"> • Aquatic Toxicity 	Skull and Crossbones <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic)

remooble™
 Contains no hazardous ingredients at levels requiring disclosure by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

We did the impossible, because we wouldn't take impossible as an answer

Exhale the past, inhale the future

Completely clean SDS for every remooble contractor and DIY product



- Contains no hazardous ingredients at levels requiring disclosure by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Exhale the past, inhale the future

Completely clean SDS for every remooble office, school and artist product



- Contains no hazardous ingredients at levels requiring disclosure by the OSHA Hazard Communication Standard (29 CFR 1910.1200)



remooble paint stripper performance

REMOVING 3 LAYERS OIL PAINT

AFTER 15-20 MINUTES



AFTER 30 MINUTES



AFTER 45 MINUTES



REMOVING 3 LAYERS LATEX

AFTER 1 MINUTE



AFTER 5 MINUTES

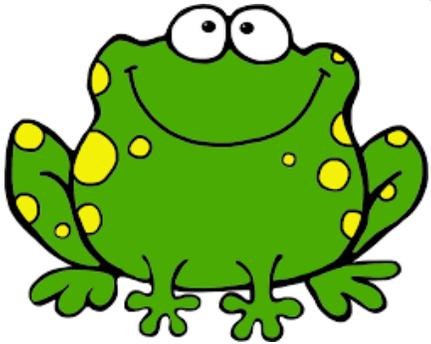


Also removes varnish, epoxy, polyurethane, stain, acrylic and other coatings.

It's not easy being green, but it is the only choice for us.

Commercialization Hurdles...

- Incumbents/Legacy Suppliers own the supply chain and provide a breadth of other products in the category
- Confusion: “green washing” confusing the buyers and customers on
 - What is truly sustainable and green
 - Hidden hazards
- Switching risks - worries of failures due to poor performance, brand tarnishing, other hidden costs
- Supply & Demand worries will new suppliers be able to meet Big Box Big Demands.
- Skepticism: Safe or green products don't perform.



Use renewable
materials



**GREEN
CHEMISTRY**
A U.S. EPA Program

Follow green
chemistry practices



Fully recyclable
packaging

At remooble,
we are proud
to be building a
company that
truly reflects
our vision and
core values.



Vision: To be a global leader
delivering product formulations
that work without harming the
environment or human health.



We live by our core
values:

Integrity
Passion
Environmental
Stewardship