



# **Safer Consumer Products Regulations**

## **National Pollution Prevention Roundtable Webinar**

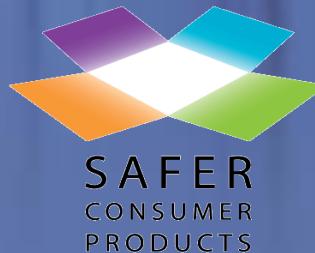
### **April 17, 2014**

### **Karl Palmer, Chief**

### **Safer Consumer Products Branch**



California  
Environmental  
Protection Agency



Department of  
Toxic Substances  
Control



# Today I will address:

- California's Safer Consumer Products Program
  - Fundamental Approach
  - Proposed Priority Products
  - Alternatives Analysis process
  - Regulatory Response options
  - What's next and time lines....



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# What We Need

- A comprehensive solution to address toxics in products.
- An ability to avoid regrettable substitutions.



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# The Goal:

- Safer consumer products.
- Greater market opportunities for innovative companies
- Healthier us!





# 2007-2013: California's Approach



Green Chemistry Report

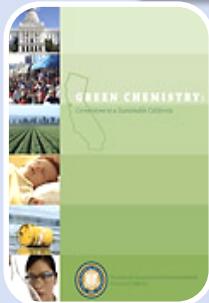
Green Chemistry Options

Policy Thinking

2010 Draft Regulations

2012 Draft Regulations

2013  
Safer Consumer Products Regulations



AB 1879/ SB 509  
Statutory Authority





# California's Safer Consumer Products Regulations:

Product Designers must answer the question:

➤ **Is it necessary ?**

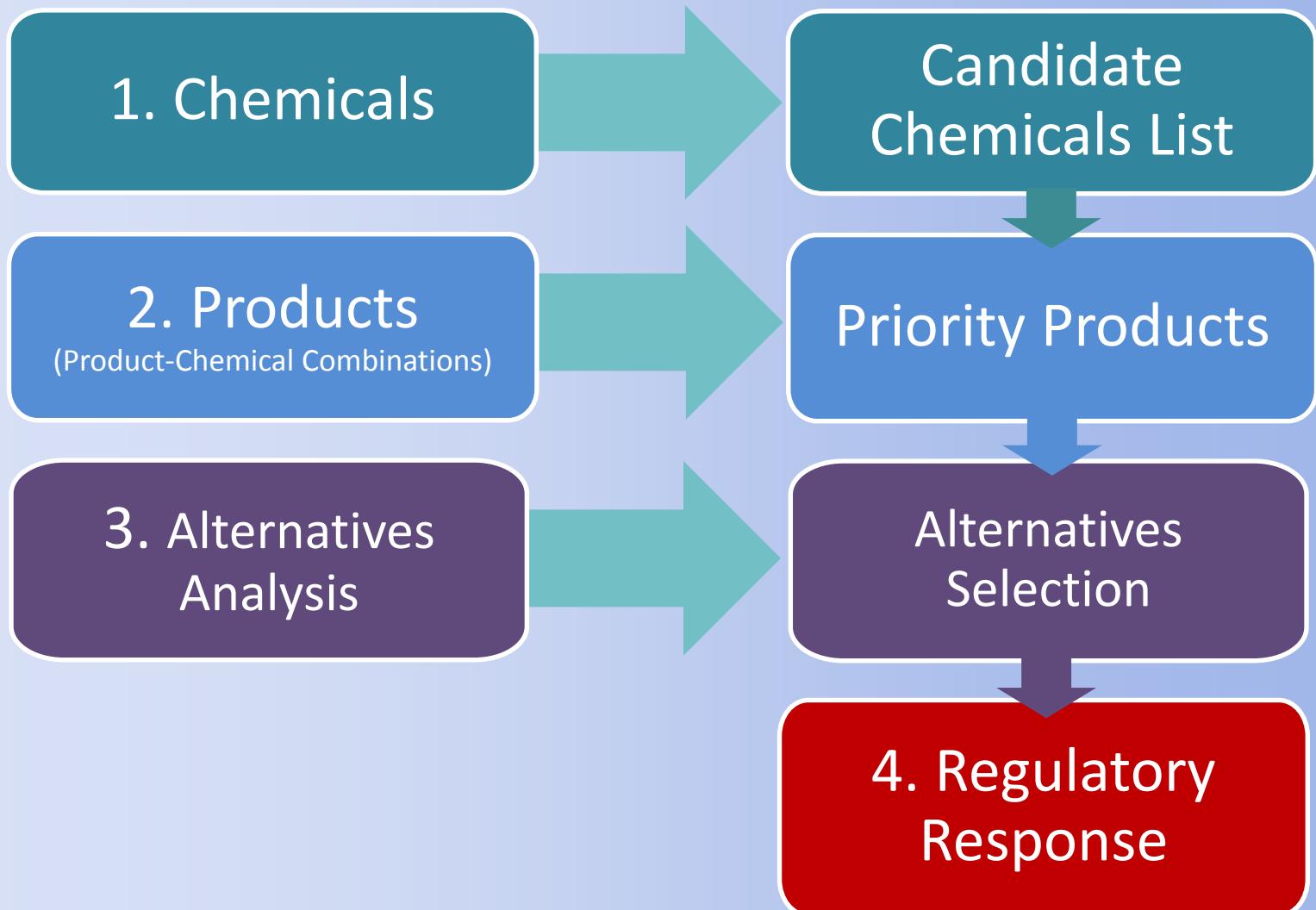
(Is there a safer alternative?)



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# How It Works: The SCP Regulations





# 1

# **Candidate Chemicals Identification**

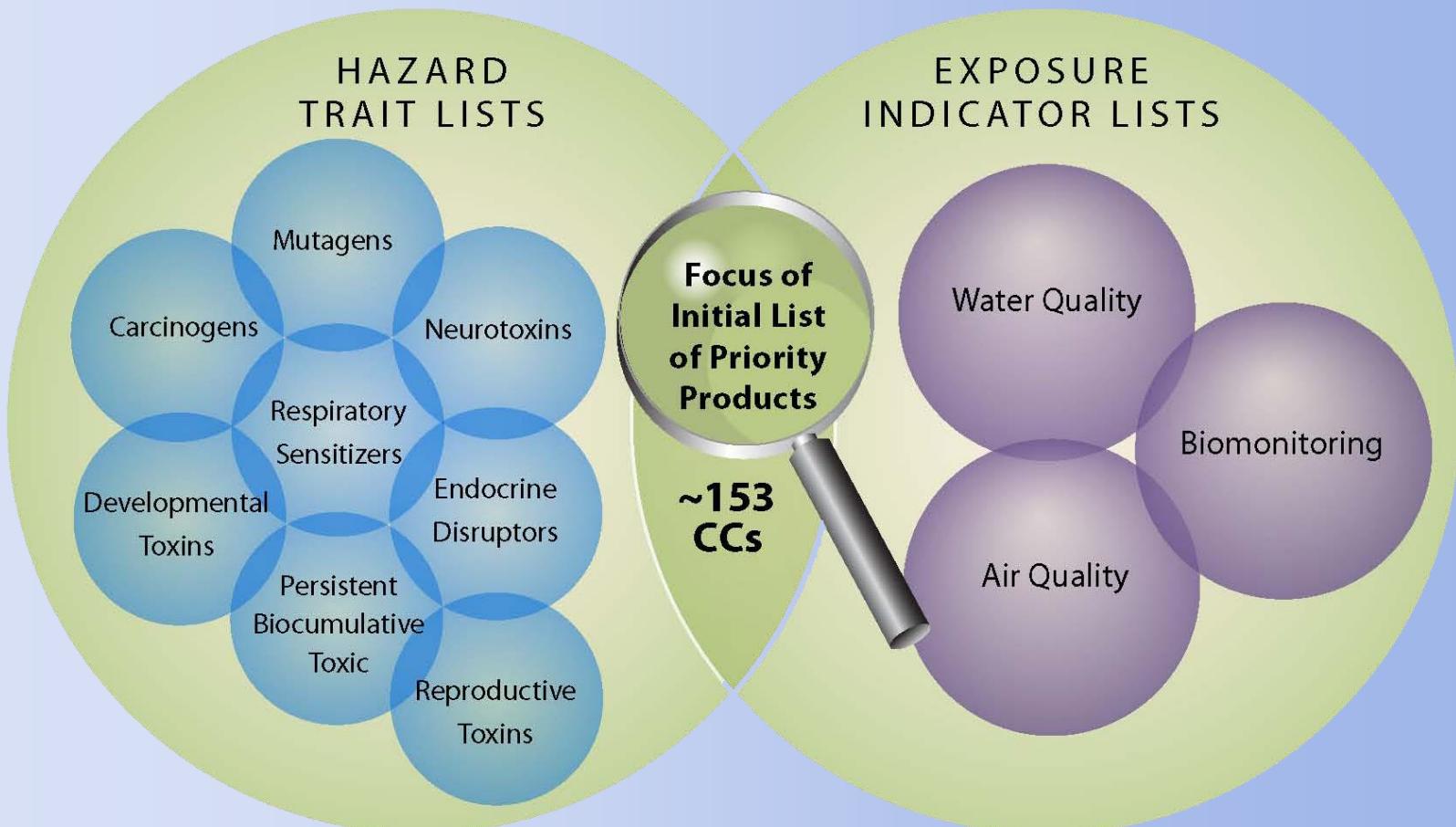
2. Identify Priority Products with Chemicals of Concern
3. Alternatives Analysis
4. Regulatory Response



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# List of Candidate Chemicals: ~1,100





# Searchable Candidate Chemical Database

[Download Candidate Chemical List](#)

## Search by Chemical Name and CAS RN

for



Search

Search Group Names

Show Only Initial List

- Formaldehyde
- Formaldehyde, reaction products with branched nonylphenol and xylene, ethoxylated
- Formaldehyde, reaction products with sulfonated 1,1'-biphenyl and sulfonated terphenyl, sodium salts
- Formamide
- Formic acid, copper nickel salt
- Formic acid, nickel salt

### Select Hazard Traits

Select All

Clear All

- Ambient Ozone Formation
- Bioaccumulation
- Carcinogenicity
- Cardiovascular Tox
- Combustion Facilitation
- Dermatotoxicity
- Developmental Tox
- Digestive System Toxicity
- Domesticated Animal Tox
- Endocrine Tox

### Select Authoritative List(s)

#### Hazard Trait Lists

Select All

Clear All

- ATSDR Neurotoxicants
- Canada PBiTs
- EC Annex VI CMRs - Cat. 1A
- EC Annex VI CMRs - Cat. 1B
- EC Annex VI Resp. Sens. - Cat. 1
- EC EDs - Cat. 1
- EC PBTs
- IARC Carcinogens - 1
- IARC Carcinogens - 2A

# Details Page

## Candidate Chemical Details

[New Search](#) | [Chemical Lists Homepage](#) | [SCP Website](#) | [FAQ](#)

[\*\*<< Back\*\*](#)

**Candidate Chemical Name:** Bis(2-chloro-1-methylethyl)ether,technical grade

**CAS RN:** 108-60-1

**On Initial List:** Yes

**Chemical Group Name:** NONE

**Other Group Members:** NONE

**Basis For Listing:**

**Hazard Traits**

**Authoritative Lists**

Carcinogenicity

[Prop 65 \(4/19/13\)](#)

Chemicals known to cause cancer and/or reproductive toxicity that are listed under Health and Safety Code section 25249.8 of the California Safe Drinking Water and Toxic Enforcement Act of 1986

Hematotox

[CWA 303\(c\) \(7/1/2011\)](#)

Chemicals that are identified as priority pollutants in California Water Quality Control Plans under section 303(c) of the federal Clean Water Act and in section 131.38 of title 40 of the Code of Federal Regulations, or identified as pollutants by California or the United States Environmental Protection Agency for one or more water bodies in California under section 303(d) of the federal Clean Water Act and section 130.7 of title 40 of the Code of Federal Regulations



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## I. Candidate Chemical Selection

# 2 Identify Priority Products with Chemicals of Concern

## 3. Alternatives Analysis

## 4. Regulatory Response



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# Key Prioritization Principles

For each listed Priority Product there must be:

- Potential exposure(s) to the Candidate Chemicals in the product

**AND**

- Potential for exposures to contribute to or cause **significant or widespread adverse impacts**



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# Initial Priority Products

- **What did DTSC pick for the first round of products?**
- **Why did DTSC pick them?**

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# Initial Priority Products Id'ed

## March 13, 2014

The products:

- Children's Foam Padded Sleep Products with TDCPP (Chlorinated Tris)
- Paint Strippers and Surface Cleaners with Methylene Chloride
- Spray Polyurethane Foam Systems with Unreacted Diisocyanates.



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# Children's Foam Padded Sleeping products containing TDCPP



## The products

- Nap mats & cots
- Sleep positioners
- Travel Beds
- Car bed pads
- Portable crib pads
- Bassinet foam
- Play pens or play yards

## The chemical

- Chlorinated Tris or TDCPP
- A flame retardant



# Why Did We Pick Children's Foam-Padded Sleep Mats with TDCPP?

## Hazard

- Known carcinogen
- Endocrine disruptor



## Exposure

### Who

- Children and infants

### How

- Dust inhalation while sleeping
- Skin absorption



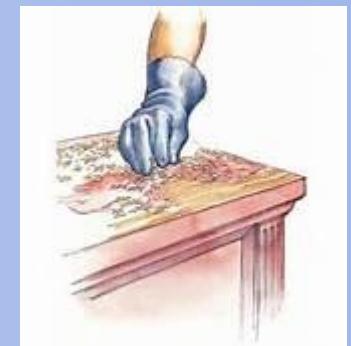
## Alternatives

- Flame Retardant not required by law



# Why Did We Pick Them?

## Paint & Varnish Strippers with Methylene Chloride



# Paint and Varnish Strippers containing Methylene Chloride



## The products

- Paint strippers
- Varnish removers

## The chemical

- Methylene chloride solvent



# Paint and Varnish Strippers containing Methylene Chloride

- Hazard
  - Toxic to the nervous system
  - Metabolized to carbon monoxide
  - Carcinogen
- Exposure
  - Who: Workers, DIYers
  - How: Inhalation especially with inadequate ventilation
- Alternatives
  - Benzyl alcohol
  - Dimethyl glutarate
  - Several others



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# Spray Polyurethane Foam (SPF) Systems with unreacted diisocyanates

## The product

- Systems with unreacted materials
- System components react and cure
- Used for
  - Home and building insulation
  - Weatherizing & sealing
  - Roofing



## The chemical

- Diisocyanates including
  - MDI
  - HDI
  - TDI



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# Spray Polyurethane Foam (SPF) Systems with unreacted diisocyanates

## Hazard

- A leading cause of occupational asthma
- Respiratory sensitizer – often reaction becomes worse with repeated use

## Exposure

- Who: Workers & DIYers
- How: Inhalation of uncured/wet diisocyanates

## Alternatives

- Cellulose, fiberglass
- Spray alternatives unknown to DTSC



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# Next Steps

Regulatory reporting requirements begin





# Next Round of Products?

- Publish Draft Priority Product 3 Year Workplan,
  - Hold Workshop late summer
  - Finalize by October 1, 2014
- Identify Product Categories (menu of subsequent Priority Products)



1. Candidate Chemical Selection
2. Identify Priority Products with Chemicals of Concern

# 3 Alternatives Analysis

4. Regulatory Response



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# Example Frameworks

- CA Safer Consumer Products Regulations
- REACH Authorization - Analysis of Alternatives
- Lowell Center AA Framework
- U.S. EPA Design for the Environment Chemical AA Steps
- German Federal Environment Agency: Guide on Sustainable Chemicals
- Interstate Chemicals Clearinghouse AA Guide
- BizNGO: Chemical Alternatives Assessment Protocol



# “A-M” Criteria (from the statute)

- A. Product function/ performance
- B. Useful life
- C. Materials/resource consumption
- D. Water conservation
- E. Water quality impacts
- F. Air emissions
- G. Product use, transportation, energy inputs
- H. Energy efficiency
- I. Greenhouse gas emissions
- J. Waste and end-of-life disposal
- K. Public health impacts: sensitive sub-populations
- L. Environmental impacts
- M. Economic impacts

# Comparison with California Requirements

Framework	Does it include Guidance?	Is it Publicly Available?	A	B	C	D	E	F	G	H	I	J	K	L	M	(G)overnment/(A)cademic Industry/NGO(X)
California Safer Consumer Products Regulation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	G
Interstate Chemicals Clearinghouse (IC2) Alternatives Assessment Guidance (draft)	Y	Y	Y	Y	Y	N	P	Y	Y	N	Y	Y	P	P	P	G
DfE Chemical Alternatives Assessment Steps	Y	Y	Y	N	N	N	Y	Y	N	N	N	Y	P	P	P	G
German Guide on Sustainable Chemicals	Y	Y	N	N	Y	Y	N	P	P	Y	Y	Y	P	P	P	G
UNEP Persistent Organic Pollutants Review Committee General Guidance on Alternatives	Y	Y	Y	Y	?	N	P	P	N	N	N	P	P	P	Y	G
REACH Authorization Analysis of Alternatives	Y	Y	Y	Y	?	N	P	P	N	N	?	Y	Y	P	Y	G
Lowell Center Alternatives Assessment Framework	Y	Y	Y	Y	N	N	N	N	N	N	N	N	P	P	P	A
TURI Alternatives Assessment Process Guidance	Y	Y	Five case studies – see Lowell Center above.													
UCLA Multi-Criteria Decision Analysis	N	Y	Framework only – Does not specify A-M tools.													
BizNGO Alternatives Assessment Protocol	N	Y	Framework only – Does not specify A-M tools.													
Cradle to Cradle	Y	Y	N	P	P	P	P	P	P	P	N	P	P	N	N	X

Y = Yes/ May Meet California SCP Requirements

N = No/Not Included ? = Not Clear

P = May Partially Meet California SCP Requirements





## ADVERSE ENVIRONMENTAL IMPACTS §69505.5(c)(1)(A)

### Adverse air quality impacts §69505.1(a)(3)

CA Toxic Air Contaminants  
Emissions of Greenhouse Gases  
Emissions of nitrogen oxides  
Emissions of particulate matter §69405.7  
Emissions of stratospheric ozone depletion §69405.8  
Emissions of sulfur oxides  
Emissions of Tropospheric ozone-forming §69405.1

### Adverse ecological impacts §69505.1(a)(7)

- Acute or chronic toxicity;
- Changes in population size, reductions in biodiversity, or changes in ecological communities; and
- The ability of an endangered or threatened species to survive or reproduce;
- Deterioration or loss of environmentally sensitive habitats;
- Impacts that contribute to or cause vegetation contamination or damage; and
- Biological or chemical contamination of soils; or
- Any other adverse effect in:#
- Domesticated Animal Toxicity
- **NOT COMPLETE LIST**

### Adverse soil quality impacts §69505.1(a)(7)

Compaction or other structural changes;  
Erosion;  
Loss of organic matter;  
Soil sealing

### Adverse water quality impacts §69505.1(a)(9)

Increase in biological oxygen demand;  
Increase in chemical oxygen demand;  
Increase in temperature;  
Increase in total dissolved solids;  
CWA 303(c) & (d);  
Safe Drinking Water Act Pollutants;  
CA HSC 116455 with Notification Levels;  
CA safe Drinking Water Act with Public Health Goals

Exceedance of enforceable California or federal regulatory standard relating to the protection of the environment.

**Must See other Regulation s for complete for list**



# Guidance- Key considerations

AA's will inform:

- Regulated entity's decisions
- DTSC's regulatory response



# What do the regulations require?

## 1<sup>st</sup> stage → Screening and options identification

- Identify information that is available
- Determine what is needed
- Identify Relevant factors
- *Optional* - consider Economic impacts
- Identify alternative(s) for further consideration

## 2<sup>nd</sup> Stage → Decisions

- Deeper dive
- Economic impact required
- Select the preferred/recommended alternative
- Narrative explains basis for conclusions and decisions



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# Next Steps for AA

- New Green Ribbon Science Panel (GRSP) providing input
- Complete Draft Guidance for Preliminary AAs and hold stakeholder workshops (Summer 2014)



- 1. Candidate Chemical Selection**
- 2. Identify Priority Products with Chemicals of Concern**
- 3. Alternatives Analysis**

**4**

**Regulatory Response**



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# List of Regulatory Responses

- No response
- Additional information to DTSC
- Additional information to consumer
- Additional safety measures
- Restrictions/Prohibitions on Sales
- End-of-life product stewardship
- Research funding



# The road ahead...

- 3 Year Product Workplan
- Priority Product Rulemaking
- Alternative Analysis Guidance
- Petitions to add/delete chemicals and products?
- Development of Data System



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# What does success look like?



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**Signal to the Marketplace...**



# The Market is Responding...



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## Regulations demand safer adhesives

**Issue:** October 28, 2013, **Posted Date:** 10/25/2013

Home > Articles > Regulations demand safer adhesives

The potential impact of the California Department of Toxic Substances Control (DTSC) Safer Consumer Products regulations, taking effect Oct. 1, 2013, could be of grave concern to the flooring adhesive industry. Adhesive manufacturers must take action to eliminate higher risk toxic substances in their products.

The regulations are designed to encourage manufacturers to use safer chemical alternatives in their products by identifying chemicals of concern, and restricting their subsequent use. Secondary goals of the program are to create new business opportunities in the safer consumer products category, and to reduce the burden on consumers and businesses attempting to identify any potentially toxic makeup of the products they purchase.

The process starts with creating and publishing an initial list of candidate chemicals, expected to number 230 substances, but would grow to more than 1,200 chemical compounds, defined



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Final Draft Technical Dossiers Regulations demand safer...

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Internet 100% 100%



capabilities might  
open technology usually provide research company  
support product development  
product regarding needs current networking relations  
collaboration resources Company respondent competent  
customer information suppliers technological understanding  
SMEs firm industry ability  
process lack cost high idea critical  
external business  
innovation also get important innovative  
companies capability different large  
firms practices data customers role  
study According example  
However larger need Respondent  
model case  
ICT absorptive  
new relationships interviews  
products projects supplier  
firms

value mainly particularly internal  
respondents universities ICED'09  
University  
due main integration involved  
several  
Accordig example  
Luleå ideas developing  
However larger need Respondent  
model case  
ICT absorptive  
new relationships interviews  
products projects supplier  
firms



## Opportunity for innovation



# Protecting People and the Environment





# Questions and Information??

**SaferConsumerProducts@dtsc.ca.gov**

**<http://www.dtsc.ca.gov/SCP>**



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# Thank you!

Contact:

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