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# PR&S COMMITTEE

## Environment Canada

Brunswick, GA

Oct. 22, 2015

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# Environment Canada

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- Canadian Environmental Protection Act (CEPA)
- Two current issues for us:
  - *Pine chemical polymers*
  - *UVCB identities*

# EC Polymer Approach

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- 4300 priority substances
  - 603 polymers
    - 267 will require more data from importers/producers (27 pine chemicals)
    - 336 polymers in use at <1000 kg/yr qualifying for “Rapid Screening” for human health & ecological risks
      - 48 require further assessment (3 pine chemicals)
        - 68648-57-7 Rosin, polymer with phenol and tall-oil rosin (health risk)
        - 139682-51-2 Fatty acids, C18-unsatd., dimers, polymers with bisphenol A, diethylenetriamine, epichlorohydrin, tall-oil fatty acids and triethylenetetramine (ecol. risk)
        - 11487-3 Fatty acids, tall-oil, reaction products with monomethyl maleate and a polyethylenepolyamine (ecol. Risk)

A	B
CAS#_Dash	Chemical Name
	<b>TALL OIL</b>
65071-95-6	Tall oil, ethoxylated
67785-03-9	Tall oil, polymer with formaldehyde and phenol
	<b>TOFA</b>
61791-00-2	Fatty acids, tall-oil, ethoxylated
67784-86-5	Fatty acids, tall-oil, ethoxylated propoxylated
68951-85-9	Fatty acids, tall-oil, polymers with bisphenol A, diethylenetriamine, epichlorohydrin and tetraethylenepentamine
68038-22-2	Fatty acids, tall-oil, polymers with bisphenol A, epichlorohydrin and rosin
67761-98-2	Fatty acids, tall-oil, polymers with ethylene glycol, pentaerythritol and phthalic anhydride
66070-62-0	Fatty acids, tall-oil, polymers with glycerol, pentaerythritol and phthalic anhydride
11487-3†	Fatty acids, tall-oil, reaction products with monomethyl maleate and a polyethylenepolyamine
	<b>DIMER</b>
68541-13-9	9,12-Octadecadienoic acid (Z,Z)-, dimer, polymer with 3,3'-[oxybis(2,1-ethanedioxy)]bis[1-propanamine]
105839-18-7	Fatty acids, C16 and C18-unsatd., polymers with bisphenol A, Bu glycidyl ether, epichlorohydrin and triethylenetetramine
139682-51-2	Fatty acids, C18-unsatd., dimers, polymers with bisphenol A, diethylenetriamine, epichlorohydrin, tall-oil fatty acids and triethylenetetramine
68410-23-1	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines

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	<b>TERPENE</b>
25719-60-2	Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-, homopolymer
25359-84-6	Phenol, polymer with 2,6,6-trimethylbicyclo[3.1.1]hept-2-ene
	<b>LIGNIN</b>
37203-80-8	Lignin, sodium salt
37207-89-9	Lignosulfonic acid, sodium salt, polymer with formaldehyde and phenol
8061-51-6	Lignosulfonic acid, sodium salt
8061-52-7	Lignosulfonic acid, calcium salt
8061-53-8	Lignosulfonic acid, ammonium salt
8062-15-5	Lignosulfonic acid
	<b>ROSIN</b>
68152-61-4	Rosin, maleated, polymer with bisphenol A, formaldehyde and pentaerythritol
65997-07-1	Rosin, polymer with formaldehyde
68038-41-5	Rosin, maleated, polymer with glycerol
68333-69-7	Rosin, maleated, polymer with pentaerythritol
68648-57-7	Rosin, polymer with phenol and tall-oil rosin
68910-64-5	Rosin, polymer with o-cresol, formaldehyde and tetra-Bu titanate
<b>TOTAL</b>	<b>27</b>

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# Information Requested on Polymers of Concern

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- **For each CAS RN:**
- **1) What is the approximate molecular weight range of the polymer?**
- **2) What was the approximate quantity manufactured or imported in 2014? (rounded to the nearest 1000 kg)**
- **3) Is there direct human exposure with the substance? (Y/N)**
- **i. If yes, what is the degree of exposure? (concentration/duration/frequency)**
- **4) Is the polymer designed or reasonably expected to degrade, depolymerize or decompose? (Y/N)**
- **5) Is the polymer able to absorb water of mass equal to 50% or more of its own polymer weight? (Y/N)**
- **6) Please provide a short description of the releases to the environment and any mitigating procedures in place.**
- **7) Do you have access to data related to the following?:**
- **a. Acute and/or chronic toxicity (Y/N)**
- **b. Ecotoxicity (daphnia, fish, algae, benthic organisms or avian toxicity) (Y/N)**
- **c. Carcinogenicity (Y/N)**
- **d. Genotoxicity (Y/N)**
- **e. Dermal absorption (Y/N)**

# Information Requested on Polymers of Concern

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- f. **Skin sensitization** (Y/N)
- g. Absorption, distribution, metabolism, elimination (Y/N)
- h. Aerobic biodegradation, anaerobic biodegradation (Y/N)
- i. Hydrolysis (Y/N)
- j. Water extractability or solubility (Y/N)
- k. Bioconcentration factor or biomagnification factor (Y/N)
- l. Octanol solubility (Y/N)
- m. Octanol-water partition coefficient (Y/N)
- n. Organic carbon-water partition coefficient (Y/N)
- o. Decomposition, depolymerisation or degradation (Y/N)
- p. **Environmental monitoring** (Y/N)
- q. **Emissions, releases or migration of the polymer from final mixtures, products or manufactured items.** (Y/N)
- 8) Do you possess any additional information/test data that are relevant to identifying hazards to environment or human health? (Y/N)
- a. If yes, please provide a short summary of the information available to you.

# The Bottom Line.....

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- PCA provided some guidance and correction on EC product groupings
- Fred Gouzoules and I discussed this with EC and HC March 23, 2015 to what they need and how to get the data.
  - EC has access to the publicly available REACH registration information and HPV robust summaries
  - We pointed out that products with the same CAS# from different parts of the world or different manufacturers might be quite different
  - HC/EC seems to want info specific to what is being imported/produced in Canada, how much and projected end-use and exposure
  - There is no way PCA can provide this data to EC directly
- ***Actions***
  - *EC/HC will ask the importers to provide the data and refer them to PCA for coordination and review*



# EC Actions

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- EC requested voluntary submission of the information in the possession of manufacturers & importers
- Those who did not respond are required to provide the information by Dec 3.
- PCA has heard nothing back

# UVCB Identities

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- **Here's ALL (!) that EC wants for UVCBs:**
  - Provide the chemical identity (e.g. structural formula diagram, molecular formula, and the name established in accordance with the nomenclature rules of CAS or IUPAC) of the components of the substances including any residual precursors. Each component identified represents a distinct homologous group with a unique molecular formula and weight.
  - Provide the supporting analytical data used to identify the components, which may include chromatograms, spectral analyses (e.g. C or H-nuclear magnetic resonance (NMR) spectra data, infrared or UV-VIS spectra data, mass spectra (MS) or atomic absorption spectra (AAS) data); and/or reference to articles supporting chemical identity and concentration information, or reference to industry or analytical standards such as the color index or ISO-Standards for essential oils.
  - When analytical information is submitted, ensure that sufficient detail of the methodology is provided such that concentration and/or chemical identity information may be determined from the information provided.

CAS#	Chemical Name
8002-09-3	Oils, pine
8006-64-2	Turpentine, oil
9005-90-7	Turpentine
61788-89-4	Fatty acids, C18-unsatd., dimers
61790-12-3	Fatty acids, tall-oil
61790-44-1	Fatty acids, tall-oil, potassium salts
68139-89-9	Fatty acids, tall-oil, maleated
68937-90-6	Fatty acids, C18-unsatd., trimers
71820-35-4	Fatty acids, tall-oil, low-boiling, reaction products with 1-piperazineethanamine
61789-01-3	Fatty acids, tall-oil, epoxidized, 2-ethylhexyl esters
68647-55-2	Fatty acids, tall-oil, esters with triethanolamine
70955-34-9	Fatty acids, tall-oil, reaction products with 2-[(2-aminoethyl)amino]ethanol, di-Et sulfate-quaternized
8061-51-6	Lignosulfonic acid, sodium salt
8061-52-7	Lignosulfonic acid, calcium salt
8061-53-8	Lignosulfonic acid, ammonium salt
8062-15-5	Lignosulfonic acid
37203-80-8	Lignin, sodium salt
8002-26-4	Tall oil
8016-81-7	Tall-oil pitch
8050-09-7	Rosin
8050-15-5	Resin acids and Rosin acids, hydrogenated, Me esters
8050-28-0	Rosin, maleated
8052-10-6	Tall-oil rosin
9007-13-0	Resin acids and Rosin acids, calcium salts
61790-51-0	Resin acids and Rosin acids, sodium salts
68186-14-1	Resin acids and Rosin acids, Me esters
73138-82-6	Resin acids and Rosin acids
91081-53-7	Rosin, reaction products with formaldehyde

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11053-1	Fatty acids compounded with ethylenediamine
11556-0	Fatty acids, reaction products with maleic anhydride
11557-1	Fatty acids, reaction products with maleic anhydride and oleylamine
11555-8	Fatty acids, reaction products with maleic anhydride and triethanolamine

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# UVCB Identities

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- This is on hold until the Canadian federal election is over, but will probably progress in the same manner as the polymer approach
- What do we do?
  - Meet with Env. Can. at a planned workshop
  - Provide the data based on REACH, HPV etc. Who would do this?
  - Nothing and wait? Run the risk of bad data