Prohibition of Certain Toxic Substances Regulations, 2012

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Background - the Regulations

- Are generally used to manage substances that are found to be very harmful (i.e., toxic, persistent and bioaccumulative)
- Are Environment Canada’s main tool to implement Canada’s obligations under the Stockholm Convention on POPs
- Are a multi-substance risk management instrument used to prohibit the manufacture, use, sale, offer for sale or import of toxic substances and products containing toxic substances with some exemptions
- Are amended periodically to add substances for which prohibition has been determined appropriate, or to amend existing controls when necessary
What do the Regulations do?

• The Regulations prohibit the manufacture, use, sale, offer for sale or import of substances listed in Schedules 1 and 2 of the Regulations and products containing these substances with a limited number of exemptions
  – Applies to any person or company in Canada

• The Regulations also include reporting requirements in certain cases
List of Substances Subject to the Regulations

1. Dodecachloropentacyclo [6.3.0.0^1.6.0^3.0^4.0]decanec (Mirex)
2. Polybrominated Biphenyls that have the molecular formula C_{n}H_{2n-2}Br_{n}, where “n” is greater than 2 (PBB)
3. Polychlorinated Terphenyls that have a molecular formula C_{n}H_{10n-1}Cl_{n}, where “n” is greater than 2 (PCT)
4. Bis(Chloromethyl) ether that has the molecular formula C_{6}H_{2}Cl_{2}O (BCME)
5. Chloromethyl Phosphoric ether that has the molecular formula C_{6}H_{2}Cl_{2}O (CMPO)
6. 4-Chloro-N,N-dimethyl-N-(4-nitrophenyl)phosphonamic acid (NCC ether)
7. N-Nitrosodiethylenimine, which has the molecular formula C_{6}H_{10}NClO (NDMA)
8. Hexachlorobutadiene, which has the molecular formula C_{6}H_{8}Cl_{4} (HCBD)
9. Dichlorodiphenyltrichloroethane, which has the molecular formula C_{6}H_{12}Cl_{6} (DDT)
10. Hexachlorobenzene (HCB)
11. Benzidine and benzidine dihydrochloride, which have the molecular formulae C_{6}H_{14}N_{2}Cl and C_{6}H_{14}N_{2}Cl_{2}, respectively
12. Hexane, 1,6-dicyanamido-3-homopolymer, reaction products with alpha-fluoro-omega-2-hydroxyethyl-poly(difluoromethylene), C_{16}-20-branched alcohols and 1-octadeconol
13. 2-Propanoic acid, 2-methyl-, hexadecyl ester, polymers with 2-hydroxyethyl methacrylate, gamma-omega-perfluoro-C_{10}-16-alkyl acrylate and stearyl methacrylate
14. 2-Propanoic acid, 2-methyl-2-methacryloxy propyl ester, polymer with butyl 2-propenoate and 2,5 furandione, gamma-omega-perfluoro-C_{8}-14-alkyl esters, tert-But benzene carboxylic peroxide-initiated
15. 2-Propan-1-ol, reaction products with perfluorooctane, tetrafluoroethylene, telomer, dehydroiodinated, reaction products with epichlorohydrin and triethylene tetramine
16. 2-Methoxyethanol, which has the molecular formula C_{4}H_{8}O (2-ME)
17. Pentachlorobenzene, which has the molecular formula C_{6}H_{4}Cl_{6} (PCB)
18. Tetrachlorobenzene, which has the molecular formula C_{6}H_{8}Cl_{4} (TCB)
19. Polychlorinated Naphthalenes (PCN)
20. Short-Chain Chlorinated Alkanes (SCCA) formerly Chlorinated Paraffins
21. Benzenamine, N-phenyl-, Reaction Products with Styrene and 2,4,4-Trimethylpentene (BNST)
22. Tributyltin (TBTs) for non-pesticidal uses
Non-application

These regulations do not apply to any toxic substance that:

- is contained in a hazardous waste, hazardous recyclable material or prescribed non-hazardous waste intended for final disposal;
- is contained in a pest control product as defined in subsection 2(1) of the Pest Control Products Act;
- is present as a contaminant in a chemical feedstock that is used in a process from which there are no releases of the toxic substance and on the condition that the toxic substance is destroyed or completely converted in that process to a substance that is not a toxic substance.
What are the general exemptions/non-application?

General exemptions that apply to all 22 substances include:

- The prohibition on manufacture, use, sale, offer for sale or import of products does not apply where toxic substances are incidentally present
  - This exemption does not apply in case of products listed on Part 3 of Schedule 2 as concentration limits are imposed for these products:
    - Diethylene glycol methyl ether, containing 2-ME ≤ 0.5% (w/w)
    - Tetrabutyltin, containing TBTs ≤ 30% (w/w)

- The prohibition on manufacture, use, sale, offer for sale or import of any toxic substances or products containing them does not apply if they are to be used in laboratory for analysis, in scientific research or as a laboratory analytical standard
What are the specific exemptions?

• Substances listed in Schedule 1 Part 1:
  – A person may use, sell, or offer for sale a product containing polychlorinated naphthalenes (PCNs) or short chain chlorinated alkanes (SCCAs) if the product was manufactured or imported before the day on which these Regulations come into force (March 14, 2013)
What are the specific exemptions? cont.

Substances listed in Schedule 1 Part 2:
Prohibited substances unless present in manufactured items

The prohibition on manufacture, sale, offer for sale and import of the “four new fluorotelomer-based substances” does not apply if these toxic substances are present in manufactured items

• a manufactured item is that formed into a specific physical shape or design during its manufacture and that has, for its final use, a function or functions dependent in whole or in part on its shape or design
### What are the specific exemptions?

**Substances listed in Schedule 2 Part 1: Permitted uses**

<table>
<thead>
<tr>
<th>Toxic Substances</th>
<th>Permitted Uses</th>
<th>Permitted Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzidine and benzidine dihydrochloride</td>
<td>Staining for microscopic examination; Reagent for detecting blood in biological fluids Niacin test to detect some micro-organisms Reagent for detecting chloralhydrate</td>
<td>Manufacture, sale, offer for sale and import</td>
</tr>
<tr>
<td>2-Methoxyethanol (2 ME)</td>
<td>Adhesives and coatings for aircraft refinishing Semiconductor manufacturing process</td>
<td></td>
</tr>
<tr>
<td>Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentane (BNST)</td>
<td>Additive in rubber, except in tires</td>
<td></td>
</tr>
<tr>
<td>Pentachlorobenzene (exemption applies to the use only)</td>
<td>Use with chlorobiphenyls contained in equipment or liquids in the service of such equipment in which their use is permitted under the PCB Regulations</td>
<td>Use</td>
</tr>
<tr>
<td>Tetrachlorobenzenes (exemption applies to the use only)</td>
<td>Use with chlorobiphenyls contained in equipment or liquids in the service of such equipment in which their use is permitted under the PCB Regulations</td>
<td></td>
</tr>
</tbody>
</table>
**What are the specific exemptions?**

Substances listed in Schedule 2 Part 2: Temporary Permitted uses - expired

The prohibition on manufacture, use, sale, offer for sale and import did not apply to BNST used as an additive in lubricants up to March 14, 2015.

<table>
<thead>
<tr>
<th>Toxic Substance</th>
<th>Permitted uses</th>
<th>Expiration date</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNST</td>
<td>Additive in lubricants</td>
<td>March 14, 2015 (2 years after the day on which these Regulations come into force)</td>
</tr>
</tbody>
</table>
What are the specific exemptions?

Substances listed in Schedule 2 Part 3: Permitted concentration Limits

The prohibition on manufacture, sale, offer for sale and import of 2-ME and Tributyltins (TBTs) does not apply if these toxic substances are present (incidentally or not) below specific concentrations in listed products.

<table>
<thead>
<tr>
<th>Toxic substance</th>
<th>Product containing the toxic substance</th>
<th>Permitted concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-ME</td>
<td>Diethylene glycol methyl ether</td>
<td>0.5 % (w/w)</td>
</tr>
<tr>
<td>TBTs</td>
<td>Tetrabutyltin</td>
<td>30 % (w/w)</td>
</tr>
</tbody>
</table>
What are the specific exemptions?

cont.

- A person may use, sell, or offer for sale a product containing a toxic substance (BNST, TBTs) if the product was manufactured or imported before the day on which these Regulations come into force (March 14, 2013)

- In case of BNST used in lubricants this exemption applies to products manufactured or imported before March 14, 2015

- A person may use or import a product containing BNST, if the product is used or intended to be used for a personal use
BNST permitting provisions

Who can apply for a permit?

- A person can apply for a permit if they were a manufacturer or importer of BNST or a product containing BNST for use as an additive in lubricants on March 14, 2015

- A permit is valid for one year and can potentially be renewed twice, ending March 2018

- Information to be provided in permit application is listed in Schedule 4
Permitting provisions (continued)

- The following conditions must be met to issue a permit (refer to paragraph 10 and Schedule 4 of the Regulations):
  - Demonstrate that there is no technically or economically feasible alternative or substitute available at the time of the permit application.
  - Explain what necessary measures have been taken to minimize or eliminate any harmful effect of the substance on the environment and human health.
  - Describe the plan that will be taken to comply with these Regulations and the implementation period of the plan (must not exceed three years)
  - Provided the other information requested in Schedule 4 (such as applicant information, quantity, concentration, customer list, etc.)
Reporting provisions

Who must report?

- Every person who manufactures or imports SCCAs and benzidine and benzidine dihydrochloride (listed in Schedule 2 Part 4) above the reporting thresholds must submit an annual report by March 31st of the following year. Schedule 5 outlines the information that needs to be submitted.

- Every person who uses more than 10 grams in a calendar year of any listed toxic substance pure or in a product containing them, in a laboratory for analysis, in scientific research or as a laboratory analytical standard must submit the information set out in Schedule 3 of the Regulations.
### Reporting provisions (continued)

#### Reporting thresholds

<table>
<thead>
<tr>
<th>Substance or product containing it</th>
<th>Reporting thresholds - Annual quantity</th>
<th>Reporting thresholds - Annual weighted average concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCCAs</td>
<td>1000 g</td>
<td>0.5% (w/w)</td>
</tr>
<tr>
<td>Benzidine and benzidine dihydrochloride</td>
<td>1000 g</td>
<td>-</td>
</tr>
<tr>
<td>Any toxic substances used in laboratory analysis, scientific research or as a laboratory analytical standard</td>
<td>10 g</td>
<td>-</td>
</tr>
</tbody>
</table>
Record-keeping

- Every person that submits information to the Minister under these Regulations must keep a record containing that information and any supporting document for a **period of 5 years** beginning on the date of the submission of the information.

- The records must be kept at the **person’s principal place of business in Canada** or, on notification to the Minister, at **any other place in Canada** where the records can be inspected.
REGULATIONS AMENDING THE PROHIBITION OF CERTAIN TOXIC SUBSTANCES REGULATIONS, 2012
Overview of the Proposed Amendments

The Proposed Amendments, published April 4, 2015, include the addition of five substances to the Regulations:

1. Hexabromocyclododecane (HBCD) - mainly used as a flame retardant in construction and building insulation
2. Polybrominated Diphenyl Ethers (PBDEs) - mainly used as a flame retardant in electrical and electronic goods, textiles and construction materials
3. Perfluorooctanoic acid (PFOA) - mainly used as surfactants and as water, oil and grease repellants in a variety of applications, such as in treatments for sportswear (i.e., swimsuits)
4. Long-chain perfluorocarboxylic acids (LC-PFCAs) - mainly used as surfactants and as water, oil and grease repellants, such as waterproofing treatments for tents
5. Perfluorooctane Sulfonate (PFOS) - mainly used as a surfactant in fume suppressants and in aqueous foams, such as fire fighting foam
Proposed Amendments

- Two regulations will be repealed and replaced upon the coming-into-force of the final amendments:
  1. *Polybrominated Diphenyl Ether Regulations*
  2. *Perfluorooctane Sulfonate and its Salts and Certain Other Compounds Regulations*
- A 75-day public comment period on the proposed amendments took place from April 4 to June 18, 2015
- The publication of final amendments is expected in 2016
Thank you!
Annex I – Links


- Forward Regulatory Plan: http://www.ec.gc.ca/default.asp?lang=En&n=DF9C1A4C
Annex II – Contact Information

- For further information:
  - Please send inquiries to ec.interdiction-prohibition.ec@ec.gc.ca
  - or contact Christopher Marshall at ChristopherS.Marshall@ec.gc.ca or 819-938-4303