

Toxics Reduction Plan Summary

(Formaldehyde)



North Bay Facility

281 Wallace Road
North Bay, Ontario
P1A 2W8

Prepared by:

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November 12, 2012



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1. Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for formaldehyde prepared by Arclin Canada Inc. - North Bay, dated November 12, 2012

2. Statement of Intent

Formaldehyde is currently used by the Arclin, North Bay resin facility (hereafter referred to as Arclin) as a finished product sold directly to customers, as well as a feedstock material for the manufacture of resin. Since formaldehyde is a key final and intermediate product for Arclin, the plan will not address the elimination of the use of formaldehyde. Instead, the intent is to reduce the use of formaldehyde through process efficiency improvements as well as the reduction of waste in its various forms.

3. Objective

Arclin has a long history of producing various formaldehyde containing resins in a safe, efficient and environmentally responsible fashion. Arclin will strive to further improve its environmental performance by reducing the use of formaldehyde in its processes. This plan will determine the technical and economic feasibility of each identified reduction option to determine which are viable for implementation at this time.

Arclin has long been focused on reducing its environmental footprint. Arclin has joined seven other private companies in a National Science Foundation-funded research consortium that will focus on environmentally friendly wood-based composite materials.

Today, our environmental sustainability efforts are multidimensional:

Our green manufacturing processes incorporate many of the principles of Six Sigma® quality assurance methodology to ensure we meet, if not exceed, environmental standards and guidelines.

Our R&D and product development teams have been heavily focused on green innovation — developing products that maintain or increase performance attributes while preserving resources and lessening negative environmental impact.

Arclin's growing portfolio of E-Gen®-designated green products is a testament to our commitment to market-forward innovation.

Consider our ultra low to zero-emitting resins or FSC-certified decorative surfaces overlays, our slow release fertilizers that increase yields and conserve water and railcar toppings that protect air and valuable natural resources, Arclin is leveraging its technological expertise in bonding and surfacing science to finding new and innovative ways to address market and environmental needs.



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We're also working aggressively with a number of university R&D programs at the forefront of scientific discovery to uncover novel chemistries and new applications that net new opportunities for our customers. Smarter, greener, market-ready.

From internal processes to product development and performance, Arclin's sustainability efforts benefit our customers, downstream markets, employees and communities.

4. Basic Facility Information

Substance of topic for plan:	Formaldehyde (CH ₂ O, CAS # 50-00-0)
Facility NPRI Identification Number:	0000001687
Facility Address:	Arclin Canada Ltd.- North Bay 281 Wallace Road North Bay, Ontario P1A 2W8
Owner Address:	Arclin Canada Ltd. 5865 McLaughlin Road, Unit 3 Mississauga, Ontario L5R 1B8
Public Contact:	Jason Farrow, Plant Manager 281 Wallace Road, North Bay, ON (705) 474-7460 Ext. 238
Full Time Equivalent Employees:	48
Two Digit NAICS Code:	32
Four Digit NAICS Code:	3252
Six Digit NAICS Code:	325210
Ontario Regulation 127/01 ID Number:	6777
Spacial Coordinates (UTM w/ NAD83 Datum):	UTM Zone 17 UTM Easting 621199.4 UTM Northing 5131040.5



5. Other Substances Under Toxics Reduction Act

In addition to submitting a plan for the use of formaldehyde under the Toxics Reduction Act, separate plans have been prepared for the use and creation of methanol as well as the use of phenol within the Arclin facility in North Bay.

6. Description of Formaldehyde Use

The Arclin facility in North Bay produces and imports formaldehyde as a raw material for the production of resins on site, as well as a final product to be shipped to various customers. Formaldehyde is largely produced on-site using a modified Formox process and serves as a key building block for much of the resin produced on the Arclin site. Arclin also exports some of the formaldehyde which was produced on site to off-site customers.

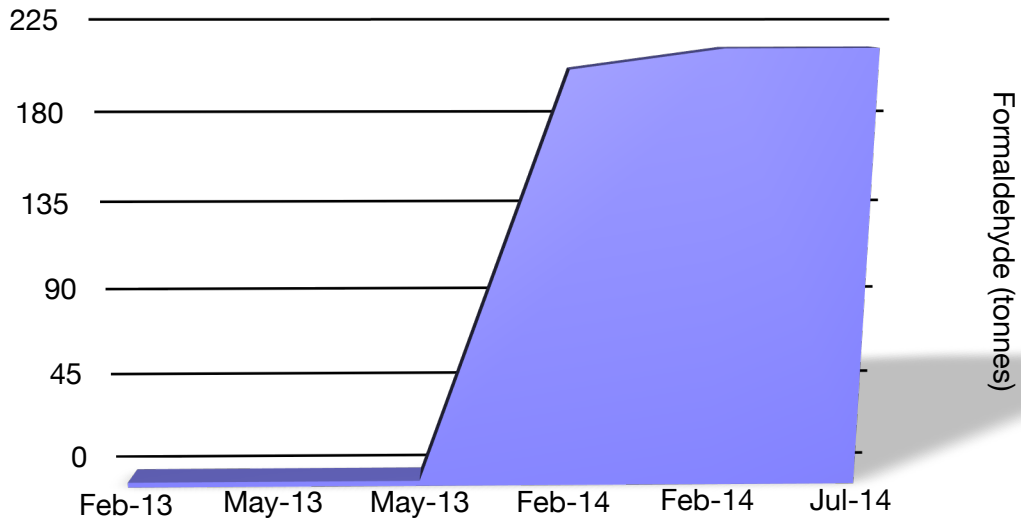
7. Description of Options

Through a thorough investigative process which focused on the more efficient use of formaldehyde, the options which were identified for implementation are as outlined in the table below:

Project Name	Estimated Benefit (tonnes)	Estimated Timing
Absorber Optimization	200	Feb-14
Absorber Design	9.6	Feb-14
Para-Formaldehyde Re-use	2.5	Feb-13
Mechanical Integrity	0.2	Jul-14
pH Control of Ceilcote Scrubber	0.07	May-13
Aftercooler Flange Repair	0.05	May-13
Total (tonnes of formaldehyde reduced)	212.4	

The graph shows the benefits gained over time:

Estimated Formaldehyde Use Reduction



8. Additional Actions Taken

Since the volume of formaldehyde produced is directly linked to the volume of methanol needed to produce the formaldehyde, it stands to reason that a reduction in the required formaldehyde production yields a direct reduction in the methanol used. Thus, it should be noted that a separate toxics reduction plan, with several additional projects to reduce the use of methanol, has been prepared.



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9. Certification

9.1. Certification by Highest Ranking Employee

As of November 15, 2012, I, Jason Farrow, certify that I have read the toxic substance reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

Formaldehyde

Jason Farrow
Plant Manager
Arclin, North Bay

9.2. Certification by Licensed Planner

As of November 15, 2012, I, Thorsten Brost, certify that I am familiar with the processes at Arclin, North Bay that use or create the toxic substance referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated November 12, 2012 and that the plan complies with the Act and Ontario Regulation 455/09 (General) made under that Act.

Formaldehyde

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