



**Rohm and Haas Canada LP,
a wholly owned subsidiary of
The Dow Chemical Company
Toxics Reduction Act
Public Annual Summary Report
Reporting Year 2017**

Issue Date: 11-June-2018

Purpose

Rohm and Haas Canada LP, a wholly owned subsidiary of The Dow Chemical Company is regulated under the Toxics Reduction Act, 2009 and Ontario Regulation 455/09. The act and regulation require that a summary of data submitted to the Ontario Ministry of the Environment under the Act is made public.

**Dow is a Responsible Care®
Company**

Dow Canada and as such Rohm and Haas Canada LP's West Hill site is a member of the Chemistry Industry Association of Canada (<http://www.canadianchemistry.ca/>) and as such follows the association's [Responsible Care®](#) initiative. Responsible Care was developed in Canada in 1988 as a program to collectively improve the environmental, health and safety performance of member companies. Responsible Care has been very successful in this regard and has expanded into a global movement, now practiced in more than 60 countries around the world, and overseen by the International Council of Chemical Associations (<https://www.icca-chem.org>).

Responsible Care® is the chemistry industry's commitment to sustainability – the betterment of society, the environment, and the economy. Through Responsible Care®, CIAC member-companies strive to “do the right thing and be seen to do the right thing.”

Responsible Care® covers all aspects of our company's business, over the entire life cycle of our products. In addition, Dow Canada and our Site Leader Janet Melnyk must annually reaffirm their commitment to the [Ethic and Principles for Sustainability](#), and the [Codes of Practice](#), and undergo a regular third-party verification process that allows independent experts and members of the public to verify that they're living up to the standards set by Responsible Care®.

Dow Canada was successfully re-verified in 2016 by outside community and industry verifiers. To view the latest report, visit http://www.canadianchemistry.ca/responsible_care/uploads/2016_Dow.pdf Dow Canada will be re-verified again in 2019.

A key component of Responsible Care is to innovate for safer products and processes that conserve resources, reduce risk and enhance value. This is accomplished through a regular review of products and processes.

At Dow's West Hill site we addressed this through the key codes of practice for Responsible Care which include: Operations, Stewardship and Accountability.

**Dow is a Responsible Care®
Company, continued**

Dow Canada has embraced the goals of the chemistry industry's Responsible Care initiative and applied them throughout our processes and facilities. We dedicate ourselves, our technology and our business practices to sustainability - the betterment of society, the environment and the economy.

The principles of Responsible Care® are key to our business success, and compel us to continually innovate for safer and greener products and processes, and work to continuously improve our environmental, health and safety performance.

NPRI Identification Number

2065

| | | |
|--|---|---|
| MOE O.Reg 127/01 Identification Number | n/a | |
| Legal Name and Facility Address of the Owner and Operator of the facility | Rohm and Haas Canada LP 2 Manse Road Toronto, ON M1E 3T9 | |
| Mailing Address | Same as Facility Address | |
| Number of Full-Time Employees | 75 | |
| North American Industry Classification System (NAICS) 2, 4 and 6 digit code | 31-33 - Manufacturing 3255 - Paint, Coating and Adhesive Manufacturing 325510 - Paint and Coating Manufacturing | |
| Public Contact | Jess MacDonald Public Affairs Specialist Phone: +1 7809988426 Email: jmacdonald1@dow.com | |
| UTM Coordinates | Easting: 647152 Northing: 4846708 Zone: 17T | |
| Legal Canadian Parent Company | 3229809 Nova Scotia Company 0.001% Ownership Calgary Corporate Head Office, Suite 2400, 215 – 2nd Street S.W., Calgary, Alberta, T2P 1M4 | |
| Name of all toxic substances for which plans are required to be prepared | Acrylic Acid (and its salts) Acrylonitrile Acrylamide Ammonia Butyl acrylate Ethyl acrylate | Methyl methacrylate Methylolacrylamide Octylphenol ethoxylates Styrene Sulphuric Acid Zinc (and its compounds) |

Acrylic Acid

| | |
|-----------------------|------------------------------|
| Substance Name | Acrylic Acid (and its salts) |
| CAS Number | 79-10-7 |

Date of Toxic Reduction Plan

18-December-2013

Reduction Objective and Target

A reduction of the use and creation of Acrylic Acid and its salts as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|-----------------|-----------------|-----------------------|
| On a facility basis: | Unit: | Unit: | Unit: |
| | [Tonnes] | [Tonnes] | [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 100 – 1000 | 100 – 1000 | -2.68 |
| Amount of the substance that was created | 1-10 | 1-10 | 1.95 |
| Amount contained in product | 0-1 | 0-1 | 6.67 |
| Total Quantity Released (All Media) | 0.0032 | 0.003 | 6.67 |
| Off-site Transfer for Disposal | 0.000 | 0.000 | 0 |
| Off-site Transfer for Treatment | 3.507 | 3.435 | 2.10 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

Not applicable.

Acrylonitrile

| | |
|-----------------------|---------------|
| Substance Name | Acrylonitrile |
| CAS Number | 107-13-1 |

Date of Toxic Reduction Plan

18-December-2013

Reduction Objective and Target

A reduction of the use of Acrylonitrile, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|-----------------------|-----------------------|------------------------------|
| On a facility basis: | Unit: [Tonnes] | Unit: [Tonnes] | Unit: [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 1,000 – 10,000 | 1,000 – 10,000 | 2.96 |
| Amount of the substance that was created | 0 – 1 | 0 – 1 | 0 |
| Amount contained in product | 0 – 1 | 0 – 1 | 9.52 |
| Total Quantity Released (All Media) | 0.201 | 0.253 | -20.37 |
| Off-site Transfer for Disposal | 0.000 | 0.000 | 0 |
| Off-site Transfer for Treatment | 0.202 | 0.207 | -2.42 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

Not applicable.

Acrylamide

| | |
|-----------------------|------------|
| Substance Name | Acrylamide |
| CAS Number | 79-06-1 |

Date of Toxic Reduction Plan

17-December-2012

Reduction Objective and Target

A further reduction of Acrylamide emissions and disposals at this point is not technically feasible but we remain committed to evaluate new technologies as they become available.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|-----------------------|-----------------------|-----------------------|
| On a facility basis: | Unit: [Tonnes] | Unit: [Tonnes] | Unit: [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 10 – 100 | 10 – 100 | 15.56 |
| Amount of the substance that was created | 0 – 1 | 0 – 1 | 0 |
| Amount contained in product | 0 – 1 | 0 – 1 | -55.56 |
| Total Quantity Released (All Media) | 0.0002 | 0.0002 | 0 |
| Off-site Transfer for Disposal | 0.000 | 0.000 | 0 |
| Off-site Transfer for Treatment | 0.053 | 0.041 | 29.3 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

Not applicable.

Ammonia

| | |
|-----------------------|--|
| Substance Name | Ammonia (total) |
| CAS Number | no single CAS RN applies to this substance |

Date of Toxic Reduction Plan

18-December-2013

Reduction Objective and Target

A further reduction of Ammonia usage as well as a reduction of emissions and transfers at this point is not technically or economically feasible but we remain committed to evaluate new technologies as they become available.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|-----------------|-----------------|-----------------------|
| On a facility basis: | Unit: | Unit: | Unit: |
| | [Tonnes] | [Tonnes] | [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 100 – 1000 | 100 – 1000 | 5.16 |
| Amount of the substance that was created | 0 – 1 | 0 – 1 | 0 |
| Amount contained in product | 100 – 1000 | 100 – 1000 | 7.47 |
| Total Quantity Released (All Media) | 2.398 | 2.0144 | 19.03 |
| Off-site Transfer for Disposal | 0.000 | 0.000 | 0 |
| Off-site Transfer for Treatment | 1.365 | 1.442 | -5.34 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

Not applicable.

Butyl acrylate

| | |
|-----------------------|----------------|
| Substance Name | Butyl acrylate |
| CAS Number | 141-32-2 |

Date of Toxic Reduction Plan

18-December-2013

Reduction Objective and Target

A reduction of the use of Butyl acrylate, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|------------------|------------------|-----------------------|
| On a facility basis: | Unit: | Unit: | Unit: |
| | [Tonnes] | [Tonnes] | [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 10,000 – 100,000 | 10,000 – 100,000 | -1.35 |
| Amount of the substance that was created | 0 – 1 | 0 – 1 | 0 |
| Amount contained in product | 1 – 10 | 1 – 10 | 12.72 |
| Total Quantity Released (All Media) | 0.156 | 0.192 | -18.71 |
| Off-site Transfer for Disposal | 0.000 | 0.000 | 0 |
| Off-site Transfer for Treatment | 0.0142 | 0.0285 | -50.18 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

Not applicable.

Ethyl acrylate

| | |
|-----------------------|----------------|
| Substance Name | Ethyl acrylate |
| CAS Number | 140-88-5 |

Date of Toxic Reduction Plan

18-December-2013

Reduction Objective and Target

A reduction of the use of Ethyl acrylate, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|-----------------|-----------------|------------------------------|
| On a facility basis: | Unit: | Unit: | Unit: |
| | [Tonnes] | [Tonnes] | [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 1,000 – 10,000 | 1,000 – 10,000 | -1.31 |
| Amount of the substance that was created | 0 – 1 | 0 – 1 | 0 |
| Amount contained in product | 0 – 1 | 0 – 1 | 16.45 |
| Total Quantity Released (All Media) | 0.042 | 0.0283 | 48.41 |
| Off-site Transfer for Disposal | 0.000 | 0.000 | 0 |
| Off-site Transfer for Treatment | 0.0063 | 0.0024 | 162.5 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

Not applicable.

Methyl methacrylate

| | |
|-----------------------|---------------------|
| Substance Name | Methyl methacrylate |
| CAS Number | 80-62-6 |

Date of Toxic Reduction Plan

18-December-2013

Reduction Objective and Target

A reduction of the use of Methyl methacrylate, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|-----------------------|-----------------------|-----------------------|
| On a facility basis: | Unit: [Tonnes] | Unit: [Tonnes] | Unit: [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 10,000 – 100,000 | 10,000 – 100,000 | 0.57 |
| Amount of the substance that was created | 0 – 1 | 0 – 1 | 0 |
| Amount contained in product | 0 – 1 | 0 – 1 | -10.51 |
| Total Quantity Released (All Media) | 0.0775 | 0.0643 | 20.53 |
| Off-site Transfer for Disposal | 0.000 | 0.000 | 0 |
| Off-site Transfer for Treatment | 0.006 | 0.478 | -98.74 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

Not applicable.

Methylol acrylamide

| | |
|-----------------------|----------------------|
| Substance Name | N-Methylolacrylamide |
| CAS Number | 924-42-5 |

Date of Toxic Reduction Plan

18-December-2013

Reduction Objective and Target

A reduction of the use of n-Methylolacrylamide, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|-----------------|-----------------|------------------------------|
| On a facility basis: | Unit: | Unit: | Unit: |
| | [Tonnes] | [Tonnes] | [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 10 – 100 | 10 – 100 | 37.45 |
| Amount of the substance that was created | 0 – 1 | 0 – 1 | 0 |
| Amount contained in product | 0 – 1 | 0 – 1 | 57.14 |
| Total Quantity Released (All Media) | 0.000 | 0.000 | 0 |
| Off-site Transfer for Disposal | 0.000 | 0.000 | 0 |
| Off-site Transfer for Treatment | 0.000 | 0.000 | 0 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

Not applicable.

Octylphenol and its ethoxylates

| | |
|-----------------------|--|
| Substance Name | Octylphenol and its ethoxylates |
| CAS Number | no single CAS RN applies to this substance |

Date of Toxic Reduction Plan

18-December-2013

Reduction Objective and Target

A reduction of the use of Octylphenol and its ethoxylates, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|-----------------------|-----------------------|-----------------------|
| On a facility basis: | Unit: [Tonnes] | Unit: [Tonnes] | Unit: [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 100 – 1,000 | 100 – 1,000 | -3.74 |
| Amount of the substance that was created | 0 – 1 | 0 – 1 | 0 |
| Amount contained in product | 100 – 1,000 | 100 – 1,000 | 1.89 |
| Total Quantity Released (All Media) | 0.000 | 0.000 | 0 |
| Off-site Transfer for Disposal | 0.000 | 0.000 | 0 |
| Off-site Transfer for Treatment | 0.021 | 0.003 | 613 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

Not applicable.

Styrene

| | |
|-----------------------|----------|
| Substance Name | Styrene |
| CAS Number | 100-42-5 |

Date of Toxic Reduction Plan

18-December-2013

Reduction Objective and Target

A reduction of the use of Styrene, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|-----------------------|-----------------------|------------------------------|
| On a facility basis: | Unit: [Tonnes] | Unit: [Tonnes] | Unit: [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 1,000 – 10,000 | 1,000 – 10,000 | 6.63 |
| Amount of the substance that was created | 0 – 1 | 0 – 1 | 0 |
| Amount contained in product | 0 – 1 | 0 – 1 | 1.21 |
| Total Quantity Released (All Media) | 1.831 | 1.886 | -2.92 |
| Off-site Transfer for Disposal | 0.000 | 0.000 | 0 |
| Off-site Transfer for Treatment | 0.053 | 0.070 | -24.29 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

Not applicable.

Sulphuric acid

| | |
|-----------------------|----------------|
| Substance Name | Sulphuric acid |
| CAS Number | 7664-93-9 |

Date of Toxic Reduction Plan

18-December-2012

Reduction Objective and Target

Through our commitment to Responsible Care®, Rohm and Haas Canada LP is committed to continuously improve our operations. We intent to reduce Sulfuric Acid usage by improving utility usage of our process.

We are targeting a reduction of 1,800 kg of Sulfuric Acid by reducing the amount of deionized water used in the manufacturing process

Description of Steps and Effectiveness

Activity: Reduce deionized water usage.

New backflow prevention requirements, mandating additional protection layers to maximize drinking water protection forced the proposed modification to be re-evaluated.

Amendments

The project was re-evaluated considering the increased protection layers required to meet the company back-flow prevention standard to maximize drinking water protection. The project is no longer economically feasible.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|-----------------|-----------------|-----------------------|
| On a facility basis: | Unit: | Unit: | Unit: |
| | [Tonnes] | [Tonnes] | [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 10 – 100 | 10 – 100 | 0.63 |
| Amount of the substance that was created | 0 – 1 | 0 – 1 | 0 |
| Amount contained in product | 0 – 1 | 0 – 1 | 0 |
| Total Quantity Released (All Media) | 0.0004 | 0.0004 | 0 |
| Off-site Transfer for Disposal | 0.000 | 0.000 | 0 |
| Off-site Transfer for Treatment | 0.000 | 0.000 | 0 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

The plan targeted the engineering changes to be implemented in 2014. A re-evaluation in 2017, after new backflow prevention requirements to maximize drinking water protection were mandated in 2016, determined that this project is no longer economically feasible. This has no impact on the quantity of emissions of Sulfuric acid from the site. This has no impact on the quantity of emissions of Sulfuric acid from the site.

Zinc (and its compounds)

| | |
|-----------------------|--|
| Substance Name | Zinc (and its compounds) |
| CAS Number | no single CAS RN applies to this substance |

Date of Toxic Reduction Plan

17-December-2012

Reduction Objective and Target

A further reduction of Zinc emissions and disposals at this point is not feasible but we remain committed to evaluate new technologies as they become available.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

| | 2017 | 2016 | Year over Year change |
|---|-----------------|-----------------|-----------------------|
| On a facility basis: | Unit: | Unit: | Unit: |
| | [Tonnes] | [Tonnes] | [%] |
| Amount that entered the facility as the substance itself or as a constituent of another substance | 100 – 1000 | 100 – 1000 | -4.57 |
| Amount of the substance that was created | 0 – 1 | 0 – 1 | 0 |
| Amount contained in product | 100 – 1000 | 100 – 1000 | -5.32 |
| Total Quantity Released (All Media) | 0.000 | 0.000 | 0 |
| Off-site Transfer for Disposal | 0.013 | 0.013 | 0 |
| Off-site Transfer for Treatment | 0.124 | 0.117 | 6.35 |
| Off-site Transfer for Recycling | 0.000 | 0.000 | 0 |

Progress Review

Not applicable.

Annual Report Certification Statement

As of May 16, 2018, I certify that I have read the report on the toxic substance reduction plan for Acrylic Acid (and its salts); Acrylonitrile; Acrylamide; Ammonia (total); Butyl acrylate; Ethyl acrylate; Methyl methacrylate; Methylol acrylamide; Octylphenol ethoxylates; Styrene; Sulphuric Acid and Zinc (and its compounds) and am familiar with their contents and to my knowledge the information contained in the report is factually accurate and the report complies with the Toxic Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under the Act.

Janet K Melnyk (original signature on file)
 Melnyk, Janet Site Leader, Rohm and Haas Canada LP

11th-June-2018
 Date