



## SHINTECH

Shintech Inc., 3867 West Market Street Suite 193, Akron, Ohio 44333 330-618-8666

March 29, 2021

Standing Committee on Environment and Sustainable Development

Attention: Isabelle Duford, Clerk of the Committee

E-mail: [ENVI@parl.gc.ca](mailto:ENVI@parl.gc.ca)

**Re: Submission to the Standing Committee on Environment and Sustainable Development - Study on Ban of Single Use Plastics and Designating Plastics Under the Canadian Environmental Protection Act**

Dear Sir/Madam:

Shintech, Inc. appreciates the opportunity to provide comments for consideration by the Standing Committee on Environment and Sustainable Development as part of the above study. Shintech shares the government's goals of reducing the amount of plastic pollution in the environment and maximizing the amount of plastic waste that can be diverted from landfill into recovered, valuable feedstock. Our industry welcomes the opportunity to continue our work with the government such as our current collaboration on recovery and recycling of vinyl from medical equipment in hospitals. More information is available at this link [ECCC - Vinyl Industry Partnership - PVC 123 Recycling in Hospitals](#)). We are looking forward to our continuing collaboration on a separate proposed windows recovery and recycling project.

Shintech opposes the proposal to designate "plastic manufactured items" as toxic by adding them to Schedule 1 of CEPA and opposes the proposed integrated management approach to plastics products to prevent waste and pollution for the following reasons:

1. The use of CEPA as a regulatory instrument is inappropriate in this context as CEPA is intended to regulate "toxic" substances, not to classify and regulate plastics issues related to waste and pollution in general.
2. The usual Draft Screening Level Risk Assessment (DSLRA) process has not been employed which would have resulted in different outcomes.
3. Findings from The Science Assessment of Plastic Pollution published on October 8, 2020 are flawed and should not be used to support the proposed order – Plastic is not "Toxic". In addition, the processes for determining specific actions outlined in the proposed integrated management approach are not directly connected to or supported by the science referred to in the Science Assessment or in the discussion paper released by ECCC.
4. Designating all "plastic manufactured items" as "toxic" is factually incorrect and will result in confusion to stakeholders, the public and the supply chain as to what is safe and what is not.

5. Even if the “Assessment” could justify regulatory action, the scope of the proposed order is far too broad to be practical and the proposed integrated management approach is being applied in an arbitrary manner not supported by science.
6. The “Precautionary Principle” has not been applied correctly within the Science Assessment nor at the policy level to support the proposed order.
7. The effectiveness of this order and the proposed integrated management approach in achieving meaningful environmental and societal benefit has not been adequately demonstrated, especially since there is no express requirement for alternatives to be subjected to the same level of scrutiny as the items proposed to be banned or restricted.
8. The Regulatory Analysis of benefits and costs (direct and indirect) downplays the impact of likely decisions flowing from the proposed order.

Shintech is of the strong opinion that this initiative represents an undermining of a world recognized chemicals management plan within CEPA that could lead to comprising the entire CEPA. Further, this initiative presents itself as a diversion from other issues faced by the federal government. The proposed actions are being undertaken during a “one in hundred years” pandemic without parliamentary oversight, effective consultation or transparency which collectively is resulting in an absence of accountability on the part of the government. Shintech views this initiative as arbitrary, sudden, reactive and rushed. It will lead to divisiveness between government, potentially jeopardizing the collaborative relationship our industry has nurtured for more than 25 years. In the absence of a transparent decision logic for this action, this is not sustainable policy for the government.

1. **The use of CEPA as a regulatory instrument is inappropriate in this context as CEPA is intended to regulate “toxic” substances, not to classify and regulate plastics issues related to waste and pollution in general.**

Schedule 1 of CEPA was designed to safely manage substances that are of urgent, acute, or long-term concern to human health (e.g., lead, asbestos). Placing chemically inert plastic items that the government says are safe for food packaging, drinking water distribution, medical devices and other safety sensitive applications on a list with other substances that have undergone risk assessments and have been determined to be “toxic” will undermine the integrity of Canada’s chemicals management system.

2. **The usual Draft Screening Level Risk Assessment (DSLRA) process has not been employed which would have resulted in different outcomes.**

The process followed to support the proposed order is a significant departure from, and inconsistent with, the precedent of requiring a Draft Screening Level Risk Assessment (DSLRA) to be performed. In our view, this unusual approach creates a further risk to the integrity and credibility of a world recognized standard for managing chemical risk (Chemicals Management Plan or CMP) which has been successfully applied to categorize 23,000 substances, with 3,600 DSLRA’s conducted as a result. Shintech has been pleased to be a partner in the implementation of the CMP which has successfully influenced chemicals management policy and approaches across the world from the U.S. and Australia to Mexico and Brazil.

The Assessment does not meet the required standard of rigor to justify such a far-reaching and arbitrary regulatory initiative as deeming all “plastic manufactured items” and by extension all “plastics” as “toxic” throughout their life cycle.

To our knowledge, a DSLRA has not been completed and in our opinion the conclusion would have differed if a DSLRA had occurred and therefore would not have led to such a broad designation. It is also our opinion that a proper DSLRA would have applied a significant weight of evidence and that the risk to the environment is not from the risk related to chemical properties of the plastic manufactured items contemplated by the Proposed Order.

3. **Findings from The Science Assessment of Plastic Pollution published on October 8, 2020 are flawed and should not be used to support the proposed order – Plastic is not “Toxic”. In addition, the processes for determining specific actions outlined in the proposed integrated management approach are not directly connected to or supported by the science referred to in the Science Assessment or in the discussion paper released by ECCC.**

The Science Assessment on Plastic Pollution (Assessment) was published on October 8, 2020 and includes a recommendation that “action is needed to reduce macro plastics and microplastics that end up in the environment”. Our understanding is that such an assessment should not be making a regulatory conclusion.

In addition, the scope of the “Assessment” was limited to ‘plastic pollution’. As such is cannot be used to address waste and certainly cannot be used to address “plastic manufactured items” during use or other stages in the life cycle.

Shintech submits that the Science Assessment is incomplete and that further scientific evaluation following the DSLRA process referred to above is needed to address at least the following:

- Many of the references are based on exposure data for multiple polymers and do not specify proportions of the polymers involved (especially in some studies that refer to PVC).
- There are few studies cited based on actual pollution in the Canadian environment. There are some references that do relate to activities such as shore clean-up which provide anecdotal results but these do not have the scientific rigor required to base policy decisions on. Other studies report findings from other parts of the world, mostly the far east. It is unreasonable to simply extrapolate the findings from surface water situations in other geographic areas of the world to the Canadian environment.

More specifically related to vinyl, the position of Shintech regarding the “Assessment” is the same as our position with the Draft Science Assessment. Neither of the assessments support any regulatory action regarding vinyl or a declaration that vinyl is toxic.

The Vinyl industry retained Dr. Ron Brecher, PhD, DABT, CChem, a renowned toxicologist, to review a wide range of the studies cited in the “Assessment”. We can make a copy of this report available to the Committee if required. 16 of the studies specifically reference PVC. 3 additional papers were reviewed to gain a high-level view of the prevalence of PVC in the aquatic environment. The key conclusions of the review by Dr. Brecher are:

1. None of the references cited support a conclusion that vinyl is “toxic’ under the CEPA Section 64 definitions, at least in the chemical toxicity sense.”

2. Based on the studies reviewed, PVC represents a minor amount of the plastic in the environment based on de Haan (2019), where PVC grouped with several other unidentified components accounted for 5.5% of floating plastic pollution.

Also, there are technical inaccuracies regarding physical and chemical properties of plastics, particularly for PVC. For example, there is no science to show that PVC degrades back into its original monomer. There also incorrect assumptions that additives that have been phased out for many years are currently being used in vinyl processing.

Further, the commitment of the federal government to sound science and transparency has not been met with the “state of science” approach. While the “Summary of public comments received regarding the draft science assessment of plastic pollution” posted on the ECCC website indicates that the “Assessment” has been peer reviewed, no information has been provided on which “reviewers” were employed and what the findings from these reviews have been. It is interesting to note that during the consultations on the Discussion Paper, additional sources were frequently being inserted to support specific plans. Some of these sources are not generally available to stakeholders (e.g. Ellen MacArthur, internal ECCC studies) which creates a “moving target” for stakeholders. We also note the curious comments during these consultations that Life Cycle Assessment data will not necessarily be accepted as a response to individual product restrictions.

Importantly, the “Assessment” acknowledges gaps where additional research is required. Simply put, any regulatory action is premature as the data and analysis are just not there to make any reasonable determination of risk and therefore to propose appropriate measures to address that risk.

4. **Designating all “plastic manufactured items” as “toxic” is factually incorrect and will result in confusion to stakeholders, the public and the supply chain as to what is safe and what is not.**

Shintech finds classifying substances as “toxic” based on a physical hazard to be very problematic and counter intuitive. This classification will lead to unnecessary concern about exposure on the part of the public who are using these products every day, rather than keeping the focus on the societal benefits of these products. It will have a subliminal, if not direct, impact on decisions made by consumers, public agencies and specifiers resulting in “deselection of excellent product choices” by default due to the connotation of this nomenclature. There have already been challenges over the past 25 years with misunderstanding by the public with what materials are accepted into the blue box program and what the eventual disposition of those materials are. Use of this terminology will only make this situation worse. We note that these concerns have been acknowledged publicly by the Minister of Environment but no alterations in approach have been proposed to our knowledge.

5. **Even if the “Assessment” could justify regulatory action, the scope of the proposed order is far too broad and the proposed integrated management approach is being applied in an arbitrary manner not supported by science.**

If the “Assessment” could support any regulatory action, the proposed order applies far too broadly and generally to plastics to provide clear direction on effective and reasonable risk-mitigation measures related to toxicity. Indeed, the Discussion Paper titled “A proposed integrated management approach to plastic products to prevent waste and pollution” (Discussion Paper) released on October 8, 2020, makes clear that the proposed order, if implemented, would apply bans and restrictions to “manage plastic manufactured items along their entire lifecycle.”

With the limitations noted above, the “Assessment” does not meet the required standard of rigor to justify such a far-reaching and arbitrary regulatory initiative as deeming all “plastic manufactured items”, and by extension all “plastics”, as “toxic” throughout their life cycle.

Our concerns are borne out from the Discussion Paper and related consultations. The planned decisions that will be taken following the implementation of the order present a risk of being arbitrary and not connected to specific scientific findings. One example of concern with the potential for arbitrary action is the specific reference to PVC in the proposed initial ban of food service ware without data to support which particular applications would be affected and how the definition of PVC as a so-called “problematic plastic” were determined.

The Vinyl industry met with relevant ECCC staff to understand this process and has been placed in a position of ‘reverse onus”, having been advised that we could provide additional information to challenge this conclusion, rather than ECCC providing the rationale for their decision to the industry. Not only is this unfair, but it is not consistent with the Cabinet Directive on Development of Regulations. Invariably, this same unfair and non-transparent approach will be extended in future, leading to further arbitrary actions such as additional bans and onerous restrictions on additional plastic products composed of PVC and other polymers.

There is nothing in the science assessment of plastic pollution justifying such a broad categorization.

As noted in submissions to previous public comment opportunities (which we have not received responses to), the proposed order groups all plastics together failing to effectively recognize 3 critical variables that need to be considered concurrently from a risk and mitigation perspective:

- Differences between a wide range of polymers as well as differences in their physical configuration (Plastics in microbead, fragment, fibre and pellet form)
- Differences in an even broader range of applications among these polymers and
- Differences in the impacts among various media (air, soil, surface water, groundwater)

Understandably, addressing these variables within a regulatory framework presents an extremely complex challenge for government. While it is expedient to classify the entire group of plastics in this manner, Shintech considers this to be a flawed approach to public policy, impractical, unfair and cannot be justified.

Accordingly, Shintech position is that such an “omnibus” approach should be replaced by initiatives related to very specific polymers and applications after a full risk assessment has been completed on each initiative to determine substance/hazard specific risks.

6. **Reliance on the “Precautionary Principle” is not an appropriate mechanism to support the proposed order**

The reference to the use of the precautionary principle (PR2) in the “Assessment” is misplaced in our view. Our understanding is that PR2 is intended to be used as a public policy tool and should not be applied in scientific assessments due to the potential of “double counting” in the “Assessment” (with respect to estimates of concentrations in the environment as well as with respect to doses in toxicity studies) and then again at the policy level.

Under section 76.1 of CEPA, the Environment and Health Ministers are required to apply both a weight of evidence approach and the precautionary principle when conducting or interpreting the results of assessments and decisions of other jurisdictions. A clear link between the “Assessment” and the decision to list all “plastic manufactured items” on Schedule 1 has not been established, nor has the weight of evidence shown why such a broad listing is required. It is important to note that that no other jurisdiction has seen fit to designate plastics as an entire group as toxic.

Regarding PVC as an example, in the “Assessment” there are 16 studies cited that specifically reference PVC, none of which support the criteria of “serious or irreversible damage”. Our comments in Point 3 above, identify the limitations of the “Assessment” and are precisely why a DSLRA should have been used in this instance. In the absence of such a risk assessment, we believe the precautionary principle has been applied inappropriately.

7. **The effectiveness of this order and the proposed integrated management approach in achieving meaningful environmental and societal benefit has not been adequately demonstrated, especially since there is no express requirement for alternatives to be subjected to the same level of scrutiny as the items proposed to be banned or restricted.**

The proposed order and integrated management approach do nothing to address the “root causes” of plastic pollution, which are inappropriate human behaviour and improper disposal. The outcome from the Proposed Order may simply mean that this poor behaviour is only transferred to other alternative materials unless there is a better understanding of how waste, when not properly recovered and re-used or recycled, can damage the environment.

Importantly, in this case, where a proper risk assessment has not been undertaken, specific mitigation measures cannot be proposed nor can a determination be made of whether there are any measures that are “cost-effective”. This consideration has so far not been addressed in consultations held by ECCC on the Discussion Paper despite numerous questions on how alternatives would be evaluated. This is a critical absence. Any proposal should expressly state that proposed alternatives must be evaluated for the same toxicological, environmental, performance, and cost considerations across the full life cycle of the proposed alternatives to maintain an even playing field. Regrettable substitution needs to be avoided at all costs.

8. **The Regulatory Analysis of benefits and costs downplays the impact of likely decisions flowing from the proposed order.**

The notice of Proposed Order makes the technically true statement that “The addition of “plastic manufactured items” to Schedule 1 to CEPA would not on its own impose any regulatory requirements on businesses or other entities and would therefore not result in any incremental compliance costs for stakeholders or enforcement costs for the Government of Canada”. Yet, the order also acknowledges that risk management measures could result in costs and impacts but these would be evaluated during consultation processes. This downplays the costs and business disruption arising from the ensuing regulatory action of bans and restrictions, which is expected to be extremely high. The (YOUR COMPANY NAME HERE) believes that this step will

send a strong signal to investors in the sector that Canada is not the right place to conduct business at a time when multiple crises are impacting on businesses and employment. Regulatory action of almost any kind will result in increased operational costs for industry (which will be passed on to the consumer and taxpayer) and reduce access to secure raw material supply. It will also stifle the innovations in product development underway in the Canadian plastics industry with a subsequent impact on availability of products to Canadian consumers from both domestic and international sources.

Some specific considerations related to this initiative include:

1. Increased scrutiny on reclaimed plastics which will hinder the recycling of these materials since “toxic” materials would experience increased restrictions with transport and importation. Many major carriers simply will not ship “toxic” materials at all and others will charge a premium rate compared to safe materials, creating a major challenge with transport options, and again increasing cost to consumers and taxpayers. The proposed bans will result in reduction of sales and consequentially job losses with a reluctance to make investments as demand for products is reduced.

Shintech applauds the “arrangement” the Canadian government has recently executed with the US under Article 11 of the Basel Convention to deem plastic wastes as “non-hazardous” in order to maintain free flowing trans-border shipments. This important trade step is clearly in conflict with the Proposed Order deeming “plastics manufactured products” as “toxic” and could compromise or nullify the benefits of such an “arrangement”.

Currently Canadian recyclers cannot get enough product to satisfy demand and must import reclaimed materials from other countries to satisfy domestic demand for reprocessed plastic and this initiative will put Canadian recyclers at a major disadvantage.

2. Plastics recycling operations can be expected to leave Canada. Manufacturers and recyclers of plastic products locate their operations where tax and regulatory environments are most beneficial. As Canada will be the only country in the world declaring inert plastics ‘toxic’, product manufacturers will leave Canada or shift production to operations (likely to China or the US) where these rules do not apply. This would waste the impressive amount of innovation and investment pursued by the plastics industry related to recycling which will also work against the government’s own stated goals related to recycling and GHG’s.

It is important to recognize that these implications will be much greater as additional restrictions and bans are implemented under the proposed integrated management approach.

### **Recommendations for Alternative Approaches**

As part of the previous public comment processes, (YOUR COMPANY NAME HERE has presented the following suggestions for alternate approaches that the government could consider:

- Redirect resources from government programs such as Canadian Plastics Innovation Challenge to focus on solutions for difficult materials to recycle such as packaging films.
- Provide financial support for developing advanced recycling technologies and building new recycling infrastructure to supply manufacturers with recycled content.

- Improve coordination efforts with Canadian provinces, municipalities, and regions to reduce all types of waste and to support recycling efforts with better solutions to recover and re-use valuable plastics.
- Expand education and awareness to address the behavioural “root cause” of plastics pollution to help companies and, most importantly, households understand the need for, and their role in, reducing waste and the importance of recovering plastic products and materials.
- Provide incentives to expand acceptability of products with recycled content in consumer and municipal markets.

### **Contribution of Vinyl Products to Health and the Environment**

The current COVID-19 crisis, and the future pandemics predicted by the Bill and Melinda Gates Foundation, underscore the critical contribution vinyl products make to society. Some obvious products are related to provision of blood and other treatment fluids during day-to-day health care activities and more importantly during disasters. Vinyl is also a key ingredient in surgical masks, gloves, protective gowns, and other personal hygiene products. Protective suits for hazardous exposure are also often made with a high vinyl content due to its excellent chemical resistance.

Vinyl products are not only safe and inert, but they also uniquely positioned to provide numerous positive contributions and benefits to our environment, including:

- Reduced weight in automobiles, planes and trucks
- Safe and reliable distribution of clean drinking water
- Secure transport of storm and sanitary waste sewage from buildings and underground for ultimate treatment
- Improved energy efficiency from vinyl building materials, and
- Lower carbon footprints and recyclability

One extremely relevant example is the use of vinyl for long-lasting pond and landfill liners that prevent contents from leaching into groundwater supplies and the associated vinyl grid system for leach collection from landfills.

Another example, to support the benefits of vinyl is the Environmental Product Declaration (EPD) obtained for vinyl pipe by the PVC Pipe Association. This EPD complies with ISO 14025 standards and was independently certified by global health organization, NSF International and can be provided on request. The EPD and supporting LCA data confirm that “vinyl pipe has the lowest environmental impacts of all pipe materials and is safe to use: ‘No known chemicals are released internally into the water system. No known toxicity affects occur in the use of the product’”.

Along with the government, Shintech recognizes that “Protecting the environment and growing the economy need to go together”. In addition to the environmental and functional benefits of vinyl products, the vinyl industry is a major economic contributor here in Canada with over \$4 billion in products shipped annually and over 12,000 workers employed.

Shintech agrees that action is required on plastic litter. Our position is that the focus needs to be on disposal of litter and the downstream handling of waste, not on the substance itself. Shintech urges ECCC to collaborate with other levels of government and stakeholders to find solutions to foster the recovery/recycling of all plastic wastes (including vinyl) and to return them as a valuable material into the market. Notably, the vinyl industry is doing our part with recycling in



Canada. For many years, two vinyl processing companies in Ontario and Quebec alone have combined to consume almost 23,000 tonnes (50.6 million pounds) of external recycled vinyl per year to produce long-life, quality construction products. Additionally, a study of PVC recyclers in the U.S. and Canada conducted by Tarnell Company for the U.S. Vinyl Institute (VI) included 14 recyclers in 3 Canadian Provinces. That study completed in July 2020 found that some 29,480 metric tons (65 million pounds) of vinyl materials were recycled in 2019 by the 14 Canadian PVC recyclers. Of this amount, the VI survey confirmed 9.2% of the recycled PVC volume was post-consumer, which amounts to some 2,720 metric tons (6 million pounds) in calendar 2019.

### **Conclusion**

Shintech re-iterates our position that there is no need for any regulatory action relating to plastics generally and specifically vinyl, especially given the numerous positive benefits of these products that are so critical, and which are even more apparent during these times of crisis.

### **Who is Shintech ?**

We are the world's largest PVC producer. Our products go into meat wrap, pipe, siding, windows, wall coverings, flooring, automobiles, blood bag, medical tubing, fence, deck and rail just to name a few of the thousands of the products. Vinyl is the material for life – Windows lower energy costs. PVC pipes have the longest service life of any product on the market.

Shintech continues our commitment to working with regulators to promote sustainable PVC products in a wide range of applications that protect human health and the environment. The Vinyl Institute of Canada represents raw material suppliers, manufacturers and distributors of numerous vinyl products used in some 5000 different applications. This includes important products such as piping for water supply and sewage in both domestic and municipal applications, as well as life sustaining health care products including bags/tubing for blood and other treatment fluids. Feel free to visit our parent company Shin-Etsu and look at our CSR (Corporate Social Responsibility) reports.

It is important to note that more than 90% of these products are durable, long term applications with life spans sometimes exceeding 100 years. It is an impressive array of products, without which our lives would be difficult to imagine.

Shintech remains committed to collaborating with government and stakeholders to find solutions and to grow a sustainable vinyl industry that serves the interests of all Canadians. Please contact me directly with any questions at 330-618-8666 or by email at [smoore@shin-tech.com](mailto:smoore@shin-tech.com).

Best Regards,

*Sylvia S. Moore*

Director of Technical Development  
330-618-8666  
[smoore@shin-tech.com](mailto:smoore@shin-tech.com)  
Shintech  
3867 West Market Street Suite 193  
Akron, Ohio 44333

[www.Shintech.com](http://www.Shintech.com)



YOUR COMPANY LETTERHEAD/LOGO HERE