**Joint statement** **26 April 2024**

**Consultation input on Exterior panels and cladding 114**

The Nordic PVC Network strongly question the categoric rejection and ban of PVC materials as a part of exterior panels and cladding, found in criteria 012 and 027. The background on this blanket ban on PVC materials given in criteria 027 is based on obsolete knowledge and an outdated view of the European PVC industry.

Instead of a blanket ban on PVC, a more nuanced approach should be taken. Such an approach could involve dialogue with companies that manufacture PVC and products containing PVC, involving a transparent life cycle scrutiny. That would also work as an incentive for PVC products that are safe, fully traceable, and compatible with a circular economy.

The main concerns given in the background are on "waste management, the use of additives and dioxin emissions, for example in the manufacture and incineration of PVC". These concerns could easily be met by a nuanced approach.

Concerning waste management in general: There are several initiatives for end-of-life retake and recycling of PVC (and other plastic) products. For instance, the WUPPI system in Denmark has worked successfully since 1997 for rigid PVC. Instead of categorically banning PVC products from the Nordic Swan, criteria could be set up that require traceability and circular models.

When it comes to waste incineration, the EU Industrial Emission Directive imposes strict limits on the emission of all harmful pollutants, including PCDD/Fs (dioxins), from waste incineration plants.

The claim that PVC waste generates dioxins – which are anyway managed by flue gas cleaning systems – is not substantiated by facts. According to the European Chemicals Agency, the formation of dioxins "does not seem proportional to the amount of chlorine present but rather the production of PCDD/Fs in incinerations processes is strongly linked to furnace types, their operating conditions and the type and efficiency of air pollution control systems."[1] Even if PVC is not incinerated, other sources of chlorine, e.g. salty foods, are always present in the waste and can generate dioxins in poorly run incineration plants.

Further, ECHA acknowledges that waste incineration plants can safely accept waste with PVC content up to 2%. It is also worth mentioning that the HaloSep technology developed in the Nordics since the 1990s can now utilise residual waste from waste incineration. The technology is ready to be implemented across the Nordics and beyond.[2]

Additives are added to most plastics. According to a new report by the Swiss-Norwegian project PlastChem, PVC ranks 5th after rubber, polyurethane (PUR), acrylonitrile butadiene styrene (ABS), and polycarbonate (PC) in the use of additives. When looking at the full

[1] European Chemicals Agency. (2023). Investigation report on PVC and PVC additives. https://echa.europa.eu/documents/10162/17233/rest_pvc_investigation_report_en.pdf. p. 7

[2] https://www.halosep.com/

lifecycle, PVC require far fewer substances than PET, PE, and PP which are commonly used for wood-plastic composites (WPC.[3] Thanks to REACH and proactive work from the PVC industry, problematic additives are continuously phased out and substituted by new, non-toxic substances that are increasingly non-fossil based. The Nordic Swan Eco-label should promote this substitution to safer chemicals.

The mercury method for producing chlorine for PVC resin has been legally phased out in Europe since 2017. Since there are no obstacles to trace back where PVC resin is produced, such a requisite would be easily implemented by the Nordic Swan.

The membrane method certainly utilizes PFAS material, but that should be considered an invalid point. PFAS is not one material, but more than 10 000 different materials, with different properties. The industry at large (not limited to chloro-vinyl) uses PFAS materials in diversified applications, such as membranes for electrolysers, gaskets, and lined piping or vessels because of their unique properties. Some applications are recognized as Best Available Techniques, while others provide significant benefit for safe and continued reliable operations of industrial assets, with no equivalent alternatives currently available.

As an industry committed to human health and environmental safety the chloro-vinyl industry continue to review all PFAS-containing material and equipment as well as available alternatives.

It is also in place to point out that virtually all products somehow depend on PFAS at some stage in their value chain. An important aspect is industrial processes, which rely heavily on materials containing PFAS for gaskets, refrigerants, conveyor belts and much more. But PFAS such as fluoropolymers are also essential for renewable energy, automotive, electronics, food, pharmaceuticals, water, oil and gas, aviation, architecture, water, and protective equipment.[4] Thus, if 'PFAS-free' would be a prerequisite for obtaining the Nordic Swan Eco-label, no product would be able to meet these criteria.

It is important to note that PVC is an integral part of the chlor-alkali industry. Chlor-alkali is vital to society, e.g. medicines, water purification and batteries for electric vehicles. Only 30% of the chlorine produced in Europe is used for PVC.

Moreover, by excluding PVC from exterior panels Nordic end-users are missing the advantages of a fire-safe, highly durable, resource-efficient, and recyclable material.

First, PVC has inherent fire-retarding properties due to its high chlorine content. According to ECHA, "the use of flame retardants in PVC is quite limited, especially in the case of rigid PVC, compared to other commodity plastics like e.g. polyolefins, styrenics and acrylics."[5]

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[3] Wagner, M., Monclús, L., Arp, H. P. H., Groh, K. J., Løseth, M. E., Muncke, J., Wang, Z., Wolf, R., & Zimmermann, L. (2024). State of the science on plastic chemicals - Identifying and addressing chemicals and polymers of concern. Zenodo. https://doi.org/10.5281/zenodo.10701706. p. 34

[4] https://fluoropolymers.eu/irreplaceable-uses-of-fps/

[5] European Chemicals Agency. (2023). Investigation report on PVC and PVC additives. https://echa.europa.eu/documents/10162/17233/rest_pvc_investigation_report_en.pdf. p. 21

Time and again, the tragic necessity for fire-safe materials in our buildings has been demonstrated, and PVC fulfills these requirements.

Second, PVC is known for its very long service life and has unique properties for exterior use. PVC does not corrode and can withstand the harsh Nordic climate with freezing winters, hot summers and increasing rainfall. PVC is therefore a chosen material for windows, doors, rain gutters, downpipes, roofing membranes, decking, siding, and other outdoor applications.

Third, PVC is inherently a low carbon material made from 57% chlorine from common salt and consumes less primary energy than other plastics such as PET, PE, PS, and PP, which are often used for WPC. Bio-attributed and bio-circular (mass balance) PVC are already available from resin manufacturers situated in Norway and Sweden.

Fourth, PVC can, depending on application, be recycled 8 to 10 times without loss of functional properties or needing new raw material or additives. PVC also has the longest history of plastic recycling. At European level, PVC's recycling rate is above the average for plastics.

We sincerely hope that the Nordic Swan Eco-label will carefully consider our detailed arguments and the data presented in support of a more nuanced approach to the use of PVC in exterior panels. The undersigned parties are fully committed to engaging in productive dialogues and developing criteria that allow consumers to confidently select PVC-based products that are safe, durable, and environmentally responsible. By working together, we can establish standards that not only reflect current scientific and industry practices but also promote advancements in sustainability and circular solutions.

The Nordic PVC Network

Signatories:

PVC Information Council Denmark
PVC Forum Norway
PVC Forum Sweden
Finnish Plastics Industries Federation