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18 August 2020

Inquiry into Product Stewardship Amendment (Packaging and Plastics) Bill 2019

Answers to questions taken on notice by S. MacMillan

1. The original benchmarks of the PVC Product Stewardship Commitment launched in 2002, and progress in achieving them.

Refer to the attached document A outlining the original commitments under the program and the status of progress made in achieving them.

Current PVC Stewardship Commitments and Targets (Extract from 2019 report):

	COMMITMENT	TARGET
PROGRAM MILESTONES	All Signatories are to be above 50% compliance 80% of Signatories achieve above 80% compliance	100% of Signatories engaged in the program for >1 year 80% of Signatories
PVC STEWARDSHIP best practice manufacturing 1	Embed PVC Stewardship commitments in the Signatory company's business management system.	Businesses acknowledges commitment internally and externally.
	Meet or exceed PVC industry's *Minimum Acceptable Standard for Environmental Management* of manufacturing plants, including measures to minimise the loss of plastic pellets or powder to waterways and the marine environment.	Minimum standard met for plant environmental management system.
	Mercury avoidance.	PVC product sold in Australia is sourced from mercury-free feedstock manufacturing processes.
	Minimise Vinyl Chloride Monomer (VCM) emissions from manufacturing.	S-PVC resin: ≤ 43g/tonne S-PVC produced p.a. E-PVC resin: ≤ 500g/tonne E-PVC produced p.a.
	Minimise Residual Vinyl Chloride Monomer.	Maximum of 1ppm in finished resins.
	Life Cycle Thinking (LCT) considered and addressed in the development or introduction of new PVC products for the Australian market.	Life Cycle Thinking applied.
	Modern slavery.	Investigate whether modern slavery practices exist in organisation and in tier 1 upstream supply chain.
PVC STEWARDSHIP safe and sustainable use of additives 2	Avoid use of lead, cadmium and hexavalent chromium additives.	Zero use. Any use of these additives shall be reported annually and a commitment made to phase out by set date.
	Recycle responsibly end-of-life PVC products that contain legacy additives.	
	Voluntarily phase out use of low molecular weight (LMW) ortho-phthalates in all PVC applications in Australia by the end of 2022 within the constraints of technical and commercial feasibility.	Zero use by end 2022. Report annually any use and type of LMW ortho-phthalates.
	Avoid the use of any ortho-phthalate plasticisers in PVC food contact packaging film supplied to the Australian market.	Zero use in food contact packaging materials.
	Support regulatory authorities in measures that encourage the market to cease the use of LMW phthalate plasticisers in applications where credible scientific authorities show evidence of unacceptable health or environmental impacts.	
	Recommend inclusion of approaches for safe plasticiser use in relevant Australian Standards or revisions as appropriate.	
	Open Disclosure: Disclose information on additives used in PVC products	Include in product technical data sheets
PVC STEWARDSHIP energy and greenhouse gas management 3	Comply with the PVC industry's Charter on Energy Efficiency and Greenhouse Gas Emissions.	Improved energy and greenhouse gas emission profile of PVC products.
PVC STEWARDSHIP resource efficiency 4	Minimise post-industrial PVC waste sent to landfill.	< 2 percent of the total production of saleable PVC product.
	Use recycled PVC in the PVC products supplied to the Australian market.	> 0 kg recoPVC used by each converter/supplier.
	Consumer Responsible Care: Publicly inform consumers on how to and where to reuse, recycle or dispose of the product safely at end-of-life.	
	Packaging waste: Recycle incoming recyclable packaging materials associated with the manufacture or supply of PVC products to the Australian market. Undertake actions to encourage the recycling of packaging materials leaving the Signatory's facility.	Divert ≥ 70 percent of packaging waste to recycling or reuse options.

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Publicly report the industry's progress in meeting commitments.

Monitor national and international scientific research and share pertinent information with Signatories and stakeholders, including updates on pertinent issues and developments related to aspects of the PVC life cycle.

Provide opportunities for stakeholders to offer feedback on the Program.

Publish a performance report by 30 July every year.

Publish an evaluation of the Program every five years.

2. Achievements since 2002 under the voluntary scheme

Our published, independently verified Annual Reports provide detail on the progress made against commitments. There are available at https://www.vinyl.org.au/news/publications

A copy of the recently published 2019 report is attached.

In summary, achievements under the program include:

- Reduced manufacturing emissions from PVC resin production (overseas producers)– compliance with stringent emission standards (see targets above)
- Avoiding supply chains where mercury is used in the process such as mercury cell chlorine production or acetylene carbide VCM production
- Voluntary phase out of toxic heavy metal stabilisers and pigments (lead, cadmium, hexavalent chrome) achieved in major PVC applications (eg pipes, cables) by 2012; new signatories joining the program recently have also now achieved phase out.
- Substituting phthalate plasticisers:
    - Phased out of food contact packaging films 2018
    - A Voluntary Commitment to phase out low molecular weight phthalate plasticisers by end 2022 from all applications, was introduced in 2018
- Energy efficiency and greenhouse gas emissions – a charter has been introduced to encourage energy efficiency and reduction of carbon emissions with specific policy, measurement and reporting requirements
- Diversion of post-industrial PVC waste from landfill to recycling/reprocessing – very high compliance achieved
- Commitment to use recycled PVC in products in the Australian market introduced in 2016
    - In 2019, virtually two thirds of signatories supplying PVC finished products use recycled PVC
    - Local PVC recyclate use by Signatories has more than doubled since 2016 introduction of commitment, totaling 2,500 tonnes of recycled PVC
- Commitment to divert minimum of 70% incoming packaging waste from landfill introduced and has high compliance (94% in 2019).
- The number of companies signed up to the Program has grown from 31 in 2002 to 47 currently.

Program Milestones

That 80% of Signatories achieve 80% compliance rate – ACHIEVED (2019: 88%)
That all Signatories achieve at least 50% compliance* - One non-compliance (2019)
(*excludes new signatories reporting for first time)

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3. The estimate of PVC contribution to marine pollution

Our reference to PVC contributing 3% to plastic leakage to the environment is derived from a UNEP report: "*Mapping of global plastics value chain and plastics losses to the environment, with a particular focus on marine environment*", UNEP Table 17.

In this report, Table 18 shows Oceania's contribution to plastic leakage to the environment is:

- 8000 tonnes of plastics from littering
- 16,800 tonnes from microplastics such as tyre abrasion and textile washing.

This totals 24,800 tonnes out of a global total of 8.28 Million tonnes = <0.3% global plastics leakage.

There appear to be wide variations in reporting of marine plastic pollution volumes. However, it is plastic waste which is improperly managed, i.e mismanaged, that is at significant risk of leakage to the environment. Australia's contribution to global plastic waste mismanagement is estimated at just under 25,000 tonnes p.a. according to https://ourworldindata.org or 0.04% of the global total of mismanaged waste.

PVC is predominantly used in building products in Australia – mostly pipe, conduit and profile – with decades-long life time use. Mismanagement of PVC waste in Australia is not expected to be significant and we therefore stand by our view that PVC would not be a significant contributor to marine pollution in this country.

4. The cost that this bill will impose on industry and consumers

The Vinyl Council has not undertaken an assessment of the costs this bill would impose on our industry and consumers. We are not in a position to provide such an estimate at this time. However, we are of the view that mandatory schemes will impose a cost burden on local industry. Mandatory approaches rely heavily on policing and enforcement which, if absent or insufficient, create an unlevel playing field in the market and risk penalizing trade-exposed, local manufacturers. Packaging manufacturing, in particular, is generally low margin, commodity manufacturing and is highly trade exposed.

The Australian manufacturing sector is relatively small in total (~6% of GDP according to Australian Industry Group) and yet it will be expected to be the recycler of all packaging material – imported and locally produced. Similarly, mandated standards in relation to 'recycled content' requirements, if adopted, must address importers of packaging materials and packaged products to ensure a level playing field. How will such 'recycled content' compliance be verified and policed?

There are significant structural issues in the Australian market that need to be overcome to address recovery of waste, sorting, reprocessing and reuse of resources effectively.

Our preference is encouraging effective voluntary stewardship approaches that incentivise industry participation and drive local innovation and high quality outcomes.

Summary of commitments

	ISSUE	TARGET	WHEN	
Production and storage	VCM emissions in PVC resin manufacture at Australian Vinyls' Laverton resins plant Domestic production closed in 2016	• Compliance with EPA licence standards for VCM in-plant and boundary readings • Residual VCM in finished resin powder not greater than 1 ppm • VCM emissions not greater than 50g/tonne PVC	In force Immediate Immediate	Achieved Achieved Achieved. Target subsequently reduced to 30g/t and achieved
	Use of appropriate environmental management systems at manufacturing and storage sites	Review environmental management systems status at all signatory sites Achieved - see current commitment	Dec 2003	
The safe use of additives	Lead and cadmium stabilisers	Implement industry Code of Practice for safe use (see Commitment 2)	Immediate	Achieved.
	Phase out the use of cadmium based stabilisers	• Tentative date for phase-out • Establish final date for phase-out	Dec 2003 Dec 2002	Achieved
	Long term phase-out of lead based stabilisers	• Review potential reduction and phase-out in all applications. Establish schedules for phase-out in applicable sectors.	Dec 2003	Achieved. Lead stabilisers and pigments phased out
	Phthalate plasticisers	Implement Policy Commitment (see Commitment 3)	Immediate	Ongoing. New commitments to substitute use introduced
	Other additives	Monitor any pertinent overseas developments	Ongoing	Ogoing
Waste management	National Packaging Covenant	All packaging sector signatories have submitted waste management action plans under the NPC	Oct 2002	Achieved.New commitments introduced
	Pipe off-cuts recycling	Recovery and recycling program in cooperation with major developers	Pilot project underway	Achieved. New commitments introduced
	Other recycling	Monitor overseas developments	Ongoing	
	Impediments to recycling	Independent review of impediments to recycling	Dec 2002	Completed
Research		(See Commitment 5)	Ongoing	
Public reporting	Performance against the commitments in this document	Publish annual performance report	Dec 2003	Annual progress reports published Independently verified
	PVC life cycle impacts	Publish annual product stewardship issues review	Dec 2002	Ongoing
	Review implementation and effectiveness of the Commitment	Publish a review and make recommendations for further commitments as appropriate	Dec 2007	3 Five Year Reviews undertaken and published


Vinyl Council Australia
PVC STEWARDSHIP
PVC
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PROGRESS REPORT 2019

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The PVC Stewardship Program (the Program) is one of Australia's longest running product stewardship schemes and one of the few that takes a life cycle view of the environmental and social impact impacts across the full supply chain.

The scheme provides industry with a platform to differentiate themselves in the marketplace and position themselves as industry leaders in sustainability.

The Program centres on five key themes associated with the life cycle of PVC (see *Figure 1,* page 8) under each of which are specific commitments and targets to be met within responsible, deliverable timeframes. Taken together, they reflect the intention of the Program to work towards a circular economy for vinyl whereby value is retained in a constant beneficial cycle. Specific details of each Commitment are detailed in the 'Summary of Key Commitments' below.

The Vinyl Council of Australia (VCA or the Council) works closely with the industry to drive continuous improvement within the program by expanding the scope, setting new targets and revising benchmarks for compliance.

Summary of Key Commitments

	COMMITMENT	TARGET
PROGRAM MILESTONES	All Signatories are to be above 50% compliance 80% of Signatories achieve above 80% compliance	100% of Signatories engaged in the program for >1 year 80% of Signatories
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	Recommend inclusion of approaches for safe plasticiser use in relevant Australian Standards or revisions as appropriate.	
	Open Disclosure: Disclose information on additives used in PVC products to stakeholders upon request.	Include in product technical data sheets or material safety data sheets.

Summary of Key Commitments (cont.)

PVC STEWARDSHIP **energy and greenhouse gas management** 3	Comply with the PVC industry's Charter on Energy Efficiency and Greenhouse Gas Emissions.	Improved energy and greenhouse gas emission profile of PVC products.
PVC STEWARDSHIP **resource efficiency** 4	Minimise post-industrial PVC waste sent to landfill.	< 2 percent of the total production of saleable PVC product.
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PVC STEWARDSHIP **transparency and engagement** 5	Publicly report the industry's progress in meeting commitments. Monitor national and international scientific research and share pertinent information with Signatories and stakeholders, including updates on pertinent issues and developments related to aspects of the PVC life cycle. Provide opportunities for stakeholders to offer feedback on the Program.	Publish a performance report by 30 July every year. Publish an evaluation of the Program every five years.

2019 in Review

Number of Signatories
(at 31 Dec 19)
47

Number of New Signatories
1

Number of Signatories Assessed
42

0
Signatories using Lead Stabiliser
(nil users)

Program Milestones
88%
of reporting Signatories achieved at least 80% compliance exceeding the Program milestone.
Only one (1) Signatory who had reported previously did not achieve the 50% compliance benchmark

Signatories achieving Excellence in PVC Stewardship Status
23
(55% of signatories)

Signatories Failing to Report
5
Two signatories recommitted to the Program.
Due to competing business priorities associated with the Covid-19 economic shut down, four Signatories did not report. One Signatory did not respond (and has subsequently withdrawn from the PSP

recoPVC used in Local Products
776 tonnes
Up by 8% on 2018 levels

8
Independent Verifications
telephone interviews conducted with Signatories.*

*Site based independent reviews were not possible due to travel and meeting restrictions imposed by State Government jurisdictions in response to the Covid-19 pandemic

Message from the Chairman

Welcome to the 2019 Annual Report of the PVC Stewardship Program of Australia.

The Vinyl Council of Australia and the PVC Stewardship Signatories are proud of what the collective industry has achieved since the inception of the Program in 2002. The PVC Stewardship Program was borne out of desire to respond to the needs of our stakeholders, particularly within the built environment sector which consumes around 85% of products produced and sold by the vinyls sector. This proactive, transparent and accountable response has ensured that vinyl products remain a product of choice for many in the construction and infrastructure sectors. Today, the range and applications of vinyl products are wide and varied and include pipes, conduit, cables, flooring, permanent formwork, window frames, profiles, ducting, membranes as well as packaging, healthcare products, and banners to name a few. This reflects the excellent environmental performance, durability and affordability of vinyl products.

2019 has seen a renewed interest in product stewardship approaches from a wide range of Government and industry stakeholders, largely as a way of driving circular economy objectives, but also in response to the China Sword policy which had a significant and adverse impact on waste recovery and recycling in 2019. The China Sword policy has exposed numerous weaknesses in our domestic capabilities with regards to collection, sorting and processing of waste/resource streams. It is noteworthy however that the vinyl industry is typically only a minor contributor to national waste arisings – which can be attributed to the industry's approach to effective stewardship and life cycle thinking and our track record of producing long lasting products.

The experience we have gained from delivering the Program for close to twenty years has made the VCA both a credible and knowledgeable source of information which will enable us to:

- Assist our Signatories to continue to evolve their businesses and remain as leaders in sustainability; and
- Inform industry and policy makers to help shape the future and support our shared desire for a prosperous and productive circular economy.

At the time of writing the world has been gripped by the Covid-19 (corona virus) pandemic. Whilst the impact of this will play out over time, and particularly the remainder of 2020, it has, to date, already hampered numerous of our Signatories, typically those with either operations or key supply partners in China, in being able to collect information for the 2019 PVC Product Stewardship survey and/or meet reporting timelines. We acknowledge this and understand this has had some bearing on the overall outcome of the Program this reporting year.

We are very pleased to report that 23 Signatories attained Gold Excellence in 2019, which represents a 15% improvement on 2018 achievements. Equally pleasing is that 50% of reporting Signatories improved upon their 2018 result. This reflects our aspiration to see Signatories make continual improvement and build on outcomes from previous years. All in all, 88% of Signatories achieved a score in excess of 80% compliance, which we regard as a key performance measure for the Program.

We look forward to building on our achievements of the past and strengthening the value of the Program for the benefits of our Signatories, their customers and the wider vinyls industry.

Peter Byron

Chairman, Technical Steering Group, PVC Stewardship Program
Technical Manager, Armstrong Flooring

The Value of Product Stewardship to your Business

In the face of growing interest by Federal and State governments in developing and fostering circular economic policies, there has been a renewed focus on how product stewardship approaches can make a valuable contribution to economic growth and environmental sustainability.

The driving forces behind this renewed interest is the recognition of the lost economic opportunity associated with how we, as a nation, currently manage our waste resource streams; the issue – and environmental and human health impacts – of plastic pollution in our waterways and oceans; the drive for greater environmental sustainability and the broader concern over man-made climate change; the push for 'green procurement' mechanisms at all levels of government, as well as external factors such as the impact of the China National Sword policy.

The Council firmly believes that this focus can translate into tangible financial and reputational benefits for those organisations that embrace and commit to implementing product stewardship approaches that address environmental, health and safety issues across their product's life cycle. These benefits are evident both in the public realm but also in the disciplines it enforces on organisations in terms of how they manage and monitor their day to day operations.

These benefits are myriad and compelling and can include:

- **Differentiation in the marketplace that leads to competitive advantage** – establishing your stewardship credentials through independent third-party schemes demonstrates not only your commitment but may also differentiate you from your competitors. Increasingly, down-stream customers are wanting to know how their suppliers manage their environmental affairs. Independent and third-party verified schemes enable those involved to spruik their credentials and demonstrate their accountability and transparency.
- **Access to markets** – at present Governments at all levels are reviewing their procurement frameworks and policies to examine how these systems can be used to support and stimulate circular economy objectives, including boosting demand for recycled content products. In doing so, Governments are likely to preference those businesses who are members of recognised and reputable industry stewardship schemes. This will facilitate access to markets for those businesses participating in these stewardship schemes. In essence, this may mirror the Green Building Council of Australia's (GBCA) *'Green Star Responsible Building Material Credit'* which incentivises product suppliers to meet Best Environmental Practice PVC (BEP PVC) guidelines in order for their products to be specified in construction projects. Without it, their products may simply be overlooked.

- **Reducing liability** – A company is best positioned when it understands its products holistically. Product stewardship fosters a proactive approach within businesses to consider the supply chain risks and the various lifecycle stages of the products they are releasing into the market. It therefore reduces risk and better prepares them for future challenges.
- **More effective business management** – implementing product stewardships schemes within businesses imposes disciplines around establishing appropriate systems that enable organisations to measure performance, monitor outcomes and control direction. This can aid in minimising risks, enhancing profitability as well as in fulfilling obligations in relation to regulatory compliance.
- **Strengthening organisational culture** – embedding environmental and social sustainability as core values of a business' operations can support buy-in and pride from its workforce.

How the Program Works

The Australian vinyl industry's PVC Stewardship Program is one of the longest standing product stewardship schemes in Australia, with an emphasis on a whole-of-lifecycle approach. From its outset, it was deliberately designed to be a dynamic, evolving Program to drive best practice and continual improvement in the manufacture and supply of PVC products in Australia.

The Signatories consist of companies in the vinyl value chain conducting business in Australia. Some are resin suppliers and traders; some supply or manufacture intermediates and additives; some manufacture end products; some import products for local fabricators or end markets and some are recyclers. *Figures 2* and *3* below provide a summary of where our Signatories sit in terms of supply chain activity and with respect to the products and materials they produce.

Figure 1: **The commitment themes of the Program**

Given the varied nature of Signatory businesses, the list of commitments applicable to each company varies depending on its activity and position in the supply chain. As the Program evolves year to year with new or revised commitments, benchmarks or reporting requirements, the Program encourages constant improvement to reduce the environmental footprint of vinyl products in the market here. As a consequence this can make it difficult to compare the year on year results.

Each year, Signatories self-assess their performance and file a report with the Vinyl Council. A number of companies are selected for independent review to verify their self-assessments. Signatories' compliance performance is measured and benchmarked and the information collated to provide a measure of the industry's overall progress. This report details the 2018 performance of the industry and has been independently verified by Ernst and Young.

To measure whether the PVC Stewardship Program is driving improvement in the industry, key milestones have been set, as follows:

- All Signatories who have been in the Program at least 1 year are to be above 50% compliance
- Eighty percent of Signatories achieve at least 80% compliance.

Companies achieving full compliance (100%) with all commitments relevant to their business are recognised with an Excellence in PVC Stewardship award.

Photo: Vinidex

Armstrong Flooring's Australian Made Accolade Plus vinyl flooring played a key role in the fast delivery of mobile COVID-19 clinics for the Tasmanian Government

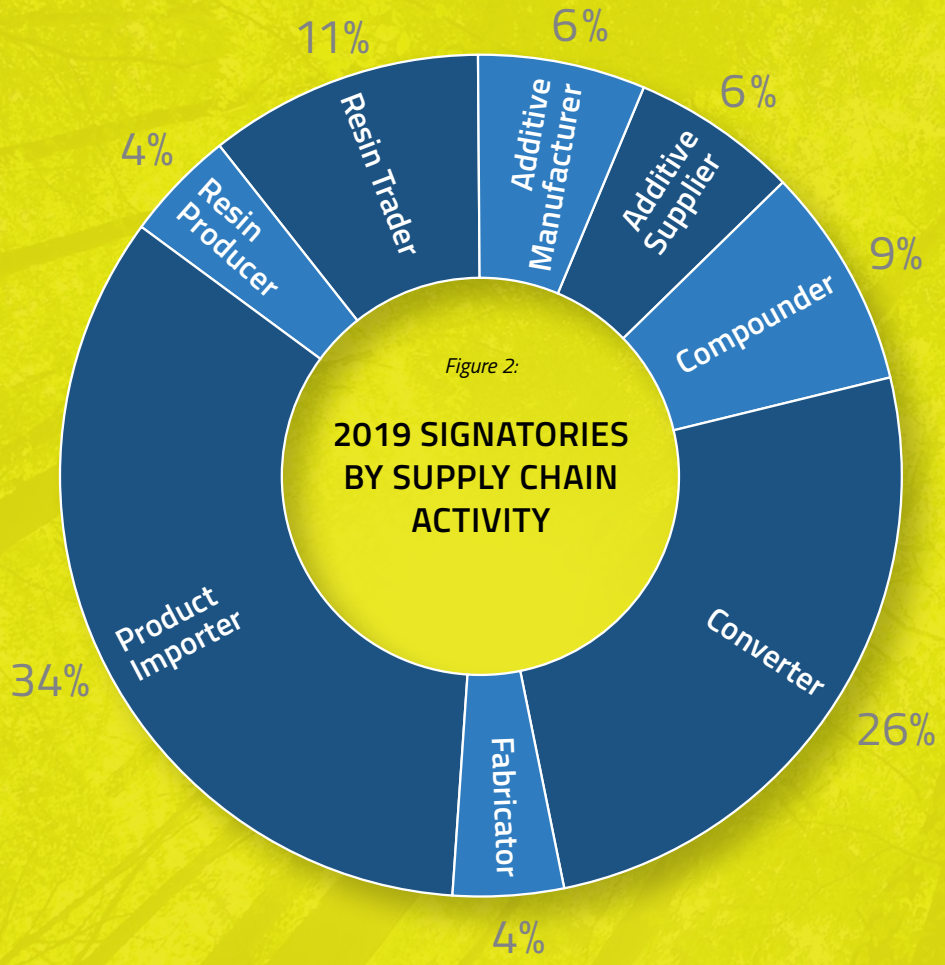


Figure 2:
2019 SIGNATORIES BY SUPPLY CHAIN ACTIVITY
Resin Trader
11%
Additive Manufacturer
6%
Additive Supplier
6%
Resin Producer
4%
Compounder
9%
Product Importer
34%
Converter
26%
Fabricator
4%


Figure 3:
2019 SIGNATORIES BY PRODUCT APPLICATION
Additives
13%
Resins
15%
Flexible Packaging
4%
Recyclates and Compounds
8%
Other Flexibles
11%
Profiles
19%
Flooring
19%
Pipes
11%

2019 Program Updates

Throughout the year, the Technical Steering Group considers new information and industry developments related to the manufacture of PVC and expectations of stakeholders. Revisions to the Program may be proposed, developed and consultation with industry participants and external stakeholders sought. Once the Technical Steering Group has approved a draft new commitment or revision to an existing commitment, the Council's Board is advised and consensus approval from current Signatories obtained.

In 2019, the Program was updated or amended in the following areas:

- **Modern Slavery** – a new commitment under Best Practice Manufacturing, which in its first year places an onus on Signatories to commence taking reasonable efforts to investigate the risk of modern slavery within their operations or tier one supply chain(s). This is the first social measure introduced into the Program and reflects a growing concern about labour risks and ethics in supply chains among key external stakeholders. Its introduction reflects the sector's recognition of community concern surrounding modern slavery and formal responses to this by jurisdictions including the Australian Commonwealth Government,
- **Open Disclosure** – existing Commitment amended to provide greater clarity around compliance evidence requirements.
- **Energy and Greenhouse Gas Emissions** – amended stringency to make it mandatory for local manufacturers to have a formal policy/procedure on energy efficiency and have commenced measurement of annual energy usage.
- **Packaging Waste** – amended to make this Commitment mandatory for applicable Signatories (namely those manufacturing within Australia, or importers of finished/semi-finished goods) and to provide greater clarity on required compliance evidence and verification requirements. The definition of 'packaging waste' was also amended to address mis-reporting evident in previous years.

Planned Program and Activity

A key feature of the Council and our stewardship program is that we strive to evolve for the betterment of our sector and the benefit of our Members. Within the realm of the stewardship program we do this by both broadening the scope of commitment requirements and continually raising the bar to drive better organisational and industry outcomes. The Council, through its various collaborative mediums, including the Board of Directors, staff, Technical Steering Group (TSG), the PVC Circularity Task Force and Member forums, plays an active role identifying needs and opportunities and pushing these forwards. We envisage that 2020 will be no different in that regard and will include (but not be limited to) the following:

MODERN SLAVERY

As noted above, this was a new Commitment in 2019. In developing our Modern Slavery Commitment the Council was cognisant that various jurisdictions, including the Australian Commonwealth Government and the New South Wales Government had commenced with the introduction of Modern Slavery Acts, which would come into force from 2019 and require "liable" organisations to report on steps taken to identify and address the risk of modern slavery within their respective supply chains. These Acts will only apply to organisations that exceed defined revenue / annual turnover thresholds. They therefore do not apply to all Signatories that are party to the PVC stewardship program. The Council recognises that many Signatories are at the start of the journey in terms of identifying relevant risks and proactively tackling these where they are present. To meet compliance in 2019, Signatories were required to advise if they had internal policies governing fair work and remuneration and/or were taking action to investigate the risk of modern slavery in their tier 1 upstream supply chain, or were captured by one or both of the Australian or NSW Acts. Over the course of 2020, the Council plans to:

- ensure Signatories have completed investigations of their Tier 1 upstream supply chains and have commenced taking appropriate action if necessary: and
- assess if the reporting requirement stipulated under the relevant Australian and NSW Acts (or other jurisdictions or programs) meet the needs of our Program so Signatories can simply comply with these and thereby avoid duplication in reporting.

RECOPVC

The purpose of this Commitment is to encourage the use of recycled PVC (recoPVC) in new products to drive demand for recyclate and thereby encourage the recovery of PVC wastes. It is worth noting that Importers of Finished Goods and Local Converters comprise 60% of our Signatories, which indicates that the VCA is well placed to work with the sector to grow the uptake of recoPVC – both by expanding the number of Signatories who utilise recoPVC in the products they bring to market and by optimising the amount used in product applications.

The consumption of recoPVC in domestically made and imported goods has grown encouragingly over the past few years. Particularly pleasing is the 8% increase between 2018 and 2019 by local manufacturers to a total of approximately 776,000 kilograms.

Introduced as a Commitment in 2015, a review of performance against the Commitment found that overall consumption of recoPVC has steadily grown to 2019. However, compliance remains relatively low i.e. a number of relevant Signatories are not yet reporting recoPVC use in the products they put into the Australian market. Further investigation revealed that those Signatories gave a variety of reasons including:

- limited availability and unreliability of supply.
- cautionary approach given possible presence of legacy additives in recyclate restricted under European legislation.
- invalidates the ability to provide warranties (where source of recyclate cannot be established with certainty).
- product specifications that 100% virgin material be used.

However, there is also evidence that efforts are being made to incorporate recyclate in the future. There is significant room to increase the consumption of recyclate, both in Australia and in imported products. The Council plans to work with its Members and relevant government agencies to foster domestic capacity to improve collection and recycling, including the quality of recyclate, to facilitate greater use of this resource and to support our circular economy objectives.

The Council will continue to address some of the barriers experienced by our Signatories and where possible work to improve the overall circularity of our industry.

Photo: Tarkett

Photo: Armstrong Flooring

In 2019, the Council commenced work on the development of a recycled content labelling program. The initiative, which will be supported by an appropriate quality control and verification program, aims to provide a transparent mechanism that product marketers can use to communicate and promote the use of recycled content in their products. We believe this will strengthen our overall efforts to boost the demand of recyclate.

PACKAGING WASTE COMMITMENT

In 2019 the Packaging Waste Commitment became a compulsory element of our stewardship program. The Packaging Commitment focuses on the management of incoming recyclable packaging. This reflects the fact that for most of our Signatories, incoming packaging waste is significantly greater in volume than what they send out into the marketplace. Many of our Signatories, particularly those supplying products to the building and construction sector, use only small amounts of transport packaging. The majority are therefore unlikely to be captured by the National Environment Protection Measures (NEPM) governing Used Packaging Materials, which applies only to companies and brand owners that contribute significantly to the waste stream.

GROW SIGNATORY BASE

2019 saw a slight contraction in the number of Program Signatories, due to Signatories withdrawing from the Australian market and/or the PSP program, the first in the history of our Scheme. The Council is confident that the value and relevance of the Program nevertheless remains strong. This is evidenced by a growth in new members to the VCA in 2019 who expressed interest in formally committing to the Program but had not established their data capture and reporting frameworks necessary to complete the annual survey return.

The VCA intends to strengthen the value of the PSP program by having it formally recognised in governmental sustainable and preferential procurement frameworks and we anticipate if this is successful, it will serve to grow further interest in our Scheme.

Emerging Issues

The vinyls industry, both locally and globally, operates in a dynamic and ever-changing regulatory environment.

The Council, via the TSG plays an active role in monitoring and discussing these developments in order to assist the sector to remain informed and able to adapt to new market conditions. 2019 has seen both national and international policy and regulatory developments emerge that have the potential to impact product formulations as well as how businesses manage their operations and deal with end of life product. Below is a summary of the most significant developments as they relate to the use of additives and waste, recovery and recycling which will continue to play out in 2020 and beyond.

Photo: Chemson

Additives

Throughout 2019 there was a considerable amount of discussion and concern with regard to titanium dioxide (TiO^2). TiO^2 is commonly used as a pigment in production of plastics, including PVC, and numerous other products to provide resistance to discoloration under ultraviolet light in exposed applications. As reported in the 2018 PVC Stewardship Program Annual Report, concerns had arisen that TiO^2 was suspected of being a carcinogen if inhaled. In response The European Chemicals Agency (ECHA) determined that the scientific evidence was sufficient to classify TiO^2 under the Classification, Labelling and Packaging (CLP) Regulation as a substance suspected of causing cancer and is therefore seeking to impose appropriate amendments to the governing Regulations. Despite some objections being raised by Member States, a majority of the European Parliament voted to classify TiO^2 as a suspected Category 2 carcinogen in certain powdered forms. The classification was published as an amendment to the CLP Regulation in the EU official journal on 18th February 2020 and will enter into force on 1st October 2021 in the European Union.

The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1% or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤10 micrometre (μm). At the time of writing, it is unclear how Australian regulatory authorities will respond to the changes and what the impact will be on local industry.

Some titanium dioxide manufacturers have said they may explore legal action following publication of the European Commission's decision to classify the substance as a category 2 carcinogen by inhalation suggesting the issue is not fully settled.

Waste, Recycling and Pollution

The issue of waste and resource recovery has at many times dominated the political agenda and remains as a key issue for the community, and by extension the vinyls sector, going into 2020 and beyond. In part, this has been driven by the China National Sword policy which has seen China, and now numerous of its Asian neighbours, introduce rulings that have led to these nations purchasing significantly lower volumes of recyclable materials from other countries, including Australia, and only if more stringent non-contamination standards are met. This has placed a considerable strain on Australia's current domestic recycling system which was heavily geared to undertaking only preliminary sorting and aggregation of these materials and shipping offshore. Governments at all levels recognised that not only was this solution not defensible, it also led to a loss of local economic opportunity and left third world countries with the problem of managing our unwanted waste, often in an environmentally unsustainable manner.

Comparatively low levels of plastic recovery and recycling, combined with its prominence in the litter stream, including as a significant contributor to marine pollution, has resulted in numerous jurisdictions seeking to act, both at the global and domestic level. The Council is broadly supportive of these initiatives providing they take account of the evidence base at our disposal and the need to address system failures. We have therefore been active in advocating for measures that support the adoption of 'intelligent' policy and regulatory outcomes.

PLASTIC WASTE EXPORT

On the public policy front, this led to the Federal Government, along with all States via the Council of Australian Governments (COAG), announcing plans to ban the export of mixed waste plastic by July 2021. This followed an earlier proposal which would have seen a blanket ban on all plastic waste exports, including unprocessed clean and single stream polymer waste from being exported. The Vinyl Council formally expressed its concern with regards to this earlier proposal as numerous Signatories to the PSP currently collect and export their unprocessed single stream waste back to their offshore manufacturing facilities for value-adding by recycling into new products. Had the ban been enacted in its original form this would have led to the landfilling of this waste stream in the absence of domestic viable alternatives. The Council appreciates the consideration shown by the Government of our concerns and the reshaping of the policy to focus on 'mixed plastics'.

PVC SEPARATION AND RECYCLING

The Council is mindful that one barrier to securing better recovery and recycling outcomes is the lack of domestic infrastructure for sorting and processing PVC waste coupled with the limited end markets for PVC recyclate. We therefore have, and will continue, to play a role in working with stakeholders to build capacity which will enable the sector to improve recovery and recycling outcomes. Rigid PVC packaging materials are recyclable when separated and cleaned from co-mingled plastics waste and the Council is exploring how existing how existing sorting facilities can play a part to support this. We also believe it is important that governments and the waste/recycling sector work with the vinyl industry to support the development, through research and development and commercialisation, to fast track new technologies that produce suitable clean and sorted PVC waste streams needed to deliver circular economy objectives. In 2020 the Council plans to engage with the University of Queensland as it embarks on a project to convert contaminated PVC waste to carbon fibers.

Photo: Recofloor

INTERNATIONAL AGREEMENTS

There has been growing community concerns coupled with calls for action to address the phenomenon of plastic waste in our environment, particularly in regard to our marine ecosystem. To counter this, amendments have been proposed to the Basel Convention which aim to put in place stricter controls on transboundary movements of plastic waste. The Basel Convention is a multilateral environmental agreement. Its aim is to protect human health and the environment against the adverse effects of hazardous wastes. The proposal, if adopted and ratified by the OECD, would see certain plastics including PVC now treated as 'other' wastes and subject them to the Convention's prior informed consent (PIC) procedure. The Council shares the concerns of the Parties to the Basel Convention about the risk of marine plastic pollution and that there should be controls over transboundary movement of contaminated or hazardous plastic waste, particularly to countries where there is a risk of disposal of these waste imports in environmentally damaging ways. However, it is also important to avoid creating barriers to genuine recycling systems which may cross boundaries. Given a major part of the intent of these latest Basel amendments relates to reducing marine pollution, it should be noted that PVC, predominantly used in durable building products, is relatively a very minor marine plastic pollutant. Yet the proposal is largely exempting the polymers that dominate marine plastic pollution, and there is therefore no justification for excluding PVC from the list of polymers that are exempted. The Council has raised these concerns with the Federal Government given that Australia is a signatory to the Basel Convention and an Organisation for Economic Co-operation and Development (OECD) member country, seeking that modifications to the proposal put forward by the US be ratified.

Photo: Australian Vinyls

SINGLE USE PACKAGING

Numerous stakeholders have advocated for the "phase out of problematic and unnecessary single use plastics packaging". Whilst we are in agreement over the phase out of "unnecessary single use plastics" the Council remains concerned at the current lack of clarity surrounding what constitutes "problematic" plastics. The vinyls industry is cognisant that some stakeholders view PVC packaging as "problematic" based on first, current low levels of recovery from mixed plastics municipal waste collected at kerbside, and second, the view that PVC is a contaminant when trying to recover other polymer waste streams. PVC use in packaging is small (around 4–5% of all plastics packaging is PVC) but its use meets specific purposes and results in a net environmental benefit over its full life cycle. The low recovery levels are in part a function of its low volume (in waste arising) but also the narrow focus of plastics separation that has traditionally been undertaken in Australia. The VCA is unequivocal in its belief that the lack of sorting infrastructure for polymers other than PET and HDPE lies at the heart of the problem. The practice of crudely aggregating, sorting, baling and exporting mixed plastics (polymers 3–7) waste to offshore destinations has mitigated against its recovery in Australia. PVC packaging is imminently recyclable, uncontaminated sorted PVC has a value in the local market and markets for processed PVC exist both in Australia and overseas. Actions implemented to address "problematic plastic" must therefore be considered carefully to ensure that substitution of packaging does not lead to adverse outcomes including increased food waste or product spoilage, or increased use of alternative materials which may lead to other unintended consequence.

STATE POLICY DEVELOPMENTS

Over the past twelve months, the Victorian Government consulted on and released its circular economy framework (titled Recycling Victoria: A new economy) whilst the Queensland government formalised it plastics pollution reduction plan (Tackling plastic waste). The Council actively engaged in the consultation process for both these frameworks and sought to provide input on behalf of our Members and the sector in general. The NSW government is in the meantime developing its 20-year waste strategy initiatives. All this provides a momentum for our industry to work more closely with Government to enhance the sustainability of our sector. In particular, we are hopeful that support will be made available for better sorting of recyclables and for new technologies which enable the processing of composite wastes and extracting resources so they can be kept circulating within the productive economy. Shortcomings in both these areas have seen a portion of the PVC waste stream end up in landfill, which we feel is avoidable.

We would also like to take this opportunity to commend the Victorian Government for its policy announcements (made in February 2020) which aim to transform the recycling sector, reduce waste, improve waste management and accountability, and generate employment. The $300M package presents as a comprehensive response to a range of issues that have plagued the sector over recent years. We are also pleased to see land fill levies being re-injected into the economy in order to enable the policy framework to be implemented.

2019 Industry Performance

In 2019, we were pleased to witness the evolution and ongoing improvements in environmental and social sustainability outcomes delivered by our Signatories. In benchmarking the performance of our Signatory base, we can see that over time continual improvements have been made which resulted in higher, total raw scores as assessed by the Program. *Figure 4* below highlights the improvements made by Signatories in the recent history of the Program – growing from 81% in 2015 to 95% in the past year. This has come despite some Signatories being unable to obtain all the data or evidence required as a result of disruptions to supply chains and/or their own operations during the reporting period (first quarter of 2020) because of the impact of Covid-19.

It is a key purpose of the Program to support ongoing improvement in the performance of our Signatories as we recognise that organisations commence the journey of responsible stewardship at different starting points and will make progressive improvements over time.

Figure 5 below summarises the improvement by Signatories over time and shows proportionally greater numbers of Signatories have achieved Gold Excellence (full compliance). Equally significant is that fewer Signatories failed to achieve a rating of some description – be it Gold, Silver or Bronze.

In totality, 50% of Signatories improved their performance when benchmarked against 2018 levels. Twenty-three (23) Signatories (55% of reporting Signatories) attained Gold Excellence in 2019. The trajectory in Signatories achieving Gold Excellence is evidence of the success of the program in advancing the sustainability of our industry.

Of equal importance is that 88% of Signatories accomplished a score of 80% or more. This ensured we achieved one of the Program's key performance indicators, being that 80% of Signatories are to be at or above 80% compliance. The result reflects both the improvements made in overall performance outcomes as well as the fact that we provided greater clarity as to what was required to achieve Commitments and the evidence requirements. The latter was particularly evident in relation to the Packaging Commitment where compliance levels improved from 62% in 2018 to 95% in 2019.

Figure 4: **Average Raw Signatory Scores 2015–2019**

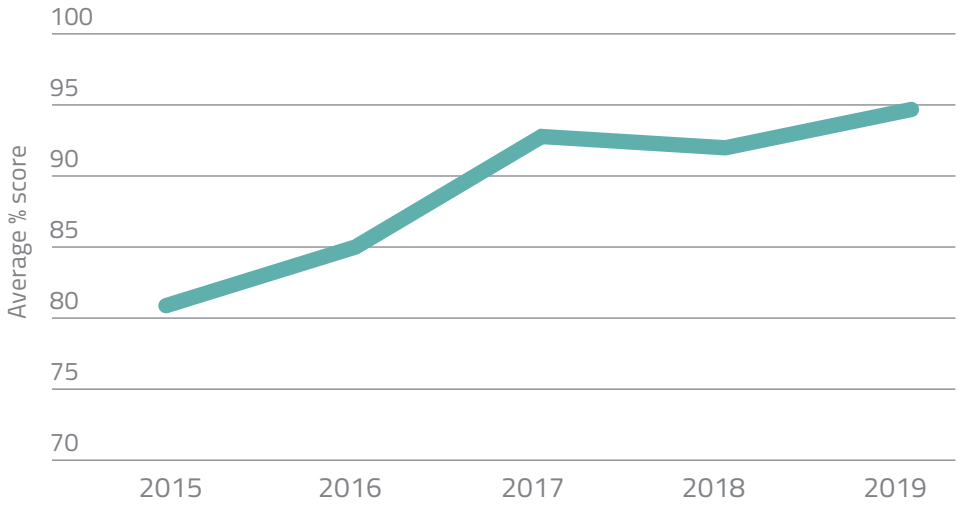


Figure 5: **Benchmark Status Attained 2015–2019**

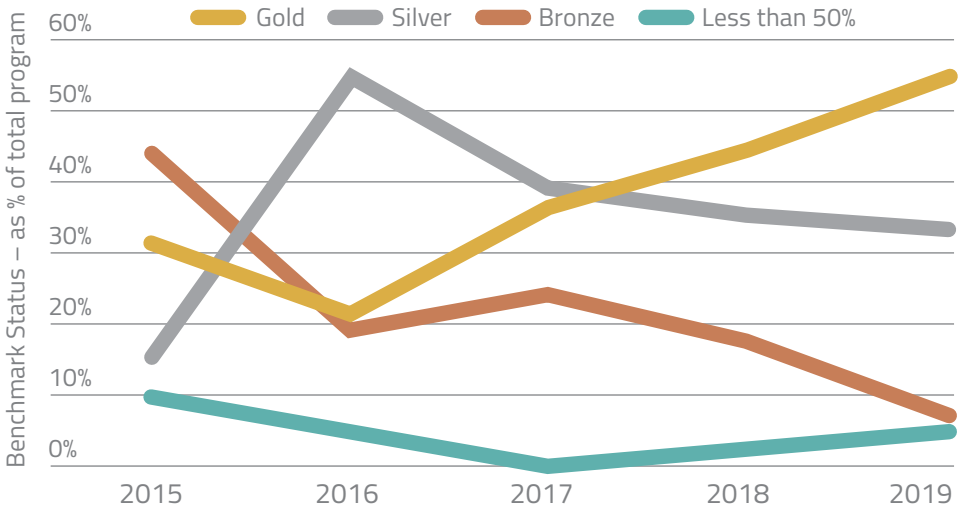


Figure 6: **An overview of the total scores (on points basis) attained by all reporting Signatories**

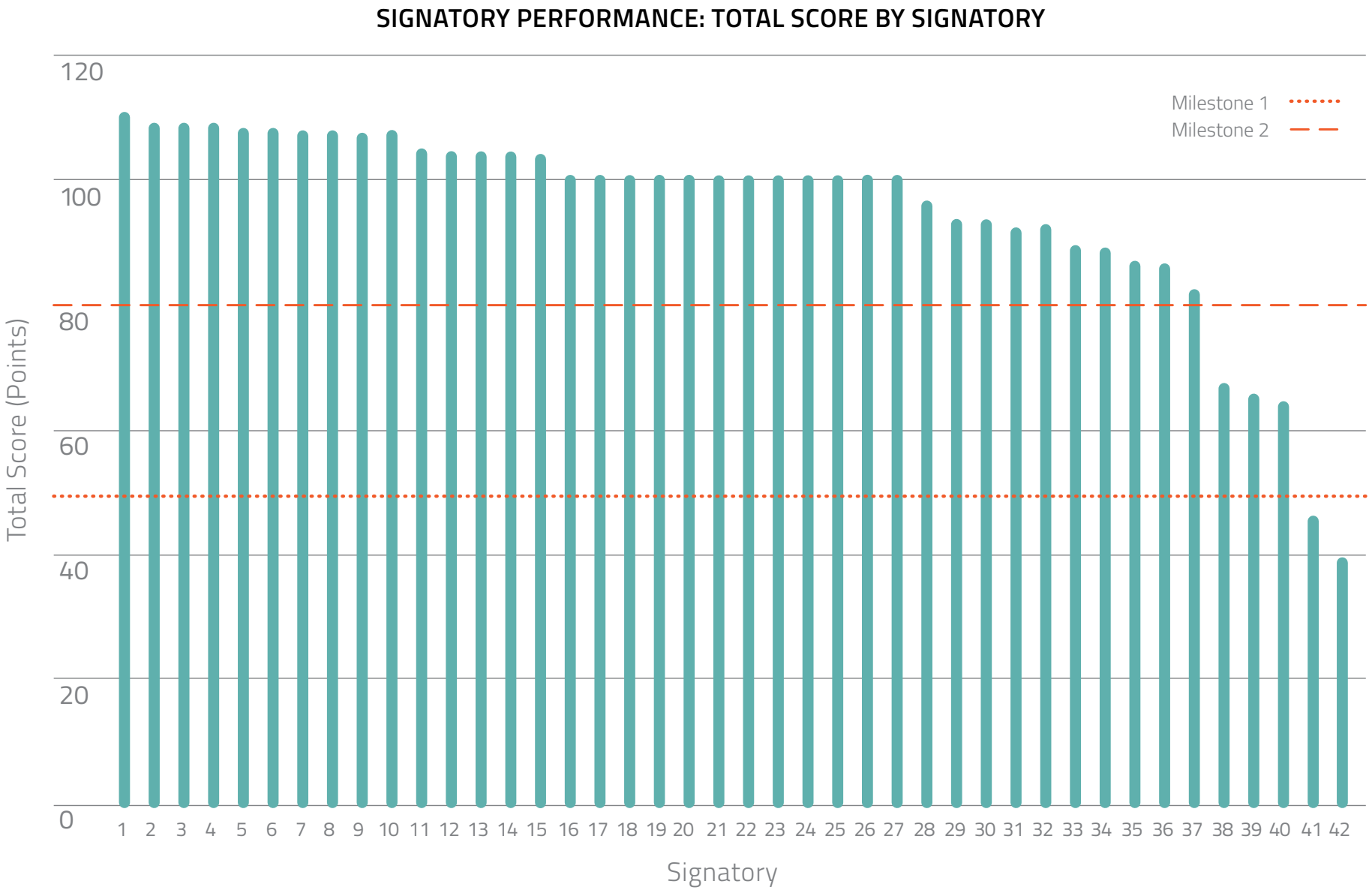


Figure 7: **Signatories compliancy status with Commitments relevant to their operations**

Increasingly, Signatories have been successful in fulfilling the requirements of Commitments relevant to their respective operations. This is readily apparent from *Figure 7* below which shows that non or partial compliance mostly sits at the margins for each Commitment.

The Council is very pleased to highlight that the use of lead stabilisers has now been fully eliminated by our Signatories. This has been an area of focus for the Council and our Members since the inception of the Program. Whilst significant advancements were made in the formative years of the Program, as evidenced by 96% reduction in lead stabiliser used by 2010 (when measured against 2002 levels) there continued to be some use for specific low volume applications where technically feasible alternatives had not yet been identified and a small number of new Signatories joining the Program since 2010 were using lead stabilisers. For most applications, there are no regulatory requirements in Australia to cease the use of lead-based stabilisers and the action has been entirely voluntary by industry here.

In relation to the second milestone target – all Signatories other than first time reporters should achieve greater than a 50% compliance rate – two Signatories were assessed as attaining a score of less than 50% compliance in 2019, which included the first time reporter. Both these Signatories did not fully complete self-assessments nor provide all the necessary evidence requirements. Both communicated that the advent of the Covid-19 pandemic meant that they did not have resources to complete their 2019 PSP surveys. On this basis we have reason to believe these results reflect an under reporting of their true performance. Both of these companies, as well as those companies that failed to submit a self-assessment survey, will be put on notice in 2020 to demonstrate improvement in performance for the 2020 reporting year or risk being de-listed from the program.

As the VCA has repeatedly done over time we will continue to work directly and collaboratively with low scorers and non-reporters to address and improve performance. Subject to review and discussion with the TSG consideration will be given to reviewing milestone targets and raising the bar in terms of our compliance levels now that 88% of Signatories have attained at least the 80% compliance benchmark.

The following sections will provide a more detailed commentary on outcomes for each of the individual commitment areas covered by the program.

Photo: Chemson

Photo: Australian Vinyls

PVC STEWARDSHIP

1 best practice manufacturing

Target 3.9 Target 6.3 Target 8.8 Target 9.4 Target 12.4 Target 14.1 Target 16.6 Target 16.10

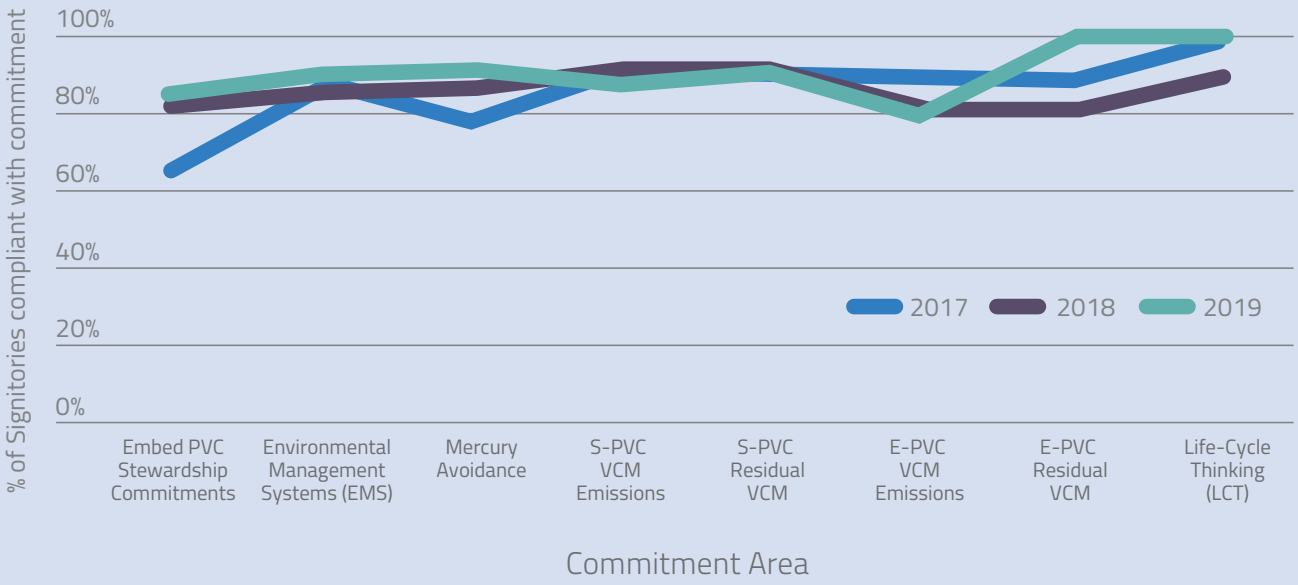
Best Practice Manufacturing encompasses a range of measures including embedding the PVC Stewardship commitments in the business, meeting or exceeding the *Minimum Acceptable Standard for Environmental Management* of manufacturing plants, avoiding the use of mercury in products and processes, minimising VCM emissions, complying with usage standards for VCM in manufactured products and applying life cycle thinking for all new products for the Australian market.

Compliance rates for most Commitments within this theme area improved or remained on par with outcomes from the past two years as can be seen in *Figure 8* below.

VCM EMISSIONS

The only area of performance decline in 2019 for this theme related to the vinyl chloride monomer (VCM) emissions from manufacturing emulsion PVC (S-PVC) commitment and PVC (E-PVC). In line with this Commitment Signatories seek to ensure that total VCM emissions from S-PVC manufacture are no greater than 43g/tonne S-PVC on a 12 months basis and that E-PVC for use in Signatories' products will be no greater than 500 grams per tonne E-PVC measured on a 12-months basis. Two Signatories, both of whom had been fully compliant with this undertaking in 2018, did not meet the compliance requirements for 2019 as they were not able to obtain the required verification, either in the form of supplier declarations or Best Environmental Practice (BEP) certification covering all their products.

Figure 8: **Compliance Performance – Best Practice Manufacturing commitment: 2017 to 2019**



MODERN SLAVERY RISKS

In 2019, the PSP included for the first time a commitment related to Modern Slavery risks in the supply chain. We believe it is noteworthy that in doing so our stewardship program is expanding beyond environmental sustainability into social sustainability, which we believe is a first amongst stewardship schemes in Australia. For the purposes of our program, modern slavery practices are defined as major violations of human rights and serious crimes including trafficking in persons, slavery, slavery-like practices (including forced labour) and the worst forms of child labour (including using children in hazardous work).

This Commitment was introduced in late 2019 and placed the onus on Signatories to commence the process of investigating risks, both within their organisations and within their tier one upstream supply chain. A compliance rate of 86% was attained in 2019 which bears out that most Signatories have taken swift action, typically through seeking supplier declarations or questionnaires. Our efforts on this front are in step with actions being taken at both the national level and in New South Wales. Both these jurisdictions introduced Modern Slavery Bills in 2018 that require certain entities to prepare annual statements on potential modern slavery risks within their operation and supply chain and take steps to address these risks. Both the Federal and New South Wales Acts came into force in 2019. The VCA plans to raise the bar for future compliance with our own Commitment in that all Signatories will take reasonable efforts to identify Modern Slavery risks in their supply chain, but will seek to ensure that those of our Signatories captured by the Federal or New South Wales Acts are not duplicating efforts to demonstrate their fulfilment of this obligation.

Compliance rates across all other Commitments, whilst satisfactory, indicate there is room for overall improvement. The analysis of 2019 indicates that the overall results may be understated on account of several Signatories not being able to lodge fully completed surveys (and supporting verification requirements) as a consequence of having to deal with business imperatives imposed by outbreak of the corona virus. Notwithstanding this the Council believes further improvements can be made to support greater compliance. Actions proposed include the following:

- Provide greater clarity to Signatories as to what is deemed as acceptable verification evidence for embedding PVC Stewardship commitments into their businesses.
- Improve uptake of the above commitment, particularly for those Signatories which have parent companies in overseas locations,
- Ensure Signatories are acting to address marine pollution and that measures are incorporated into their Environmental Management Systems (EMS) or those of their key suppliers.
- Strengthen and evolve our sector's commitment to investigating modern slavery and taking appropriate action where necessary to mitigate risks.

PVC STEWARDSHIP

2 safe and sustainable use of additives

Target 3.9 Target 6.3 Target 12.4

Signatories are committed to the safe and transparent use of additives in PVC products such as avoiding the use of lead, cadmium and hexavalent chrome; responsible recycling of any PVC products that may contain legacy additives; avoiding the use of ortho-phthalates in food contact packaging materials; reducing the use of low molecular weight ortho-phthalates in all applications and openly disclosing to interested stakeholders details of additives used.

Significant improvements were evident when compared to 2018 in this general Commitment area – particularly in the areas of Stabilizers and Pigment and Recycling PVC containing legacy additives. Marginal improvement was evident for Open Disclosure whilst the compliance with the Plasticiser Commitment remained at 100%.

As noted in the section titled *'2019 Industry Performance'* above one of the most pleasing advancements in this year has been the elimination of lead stabiliser use. *Figure 10* charts the history of lead stabiliser use (in kilograms) and depicts this achievement.

In relation to plasticiser use, Signatories producing food contact films complied with the requirement to avoid phthalate plasticisers. In 2019, four out of 18 Signatories that supplied flexible PVC products were still using LMS ortho-phthalate plasticisers. In addition to these Signatories, the VCA is aware that one non-reporting Signatory was still using these plasticisers. These companies are working towards a phase out of LMW phthalates by the end of 2022. All flooring supplier Signatories have already reported zero use since 2018.

Lower levels of compliance with Open Disclosure were also noted when compared to 2018. It is apparent that some Signatories are still not cognisant of what is required to fulfill this Commitment, or in some cases, are averse to detailing explicitly what additives are used due to commerciality concerns and therefore are not making information easily available in a form that meets evidence requirements (such as a product technical data sheet). They have nevertheless shared information on specific request by stakeholders.

Actions proposed to improve performance for this overall theme include:

- Open disclosure – provide greater clarity as to what is required and what constitutes adequate documentation for verification purposes.

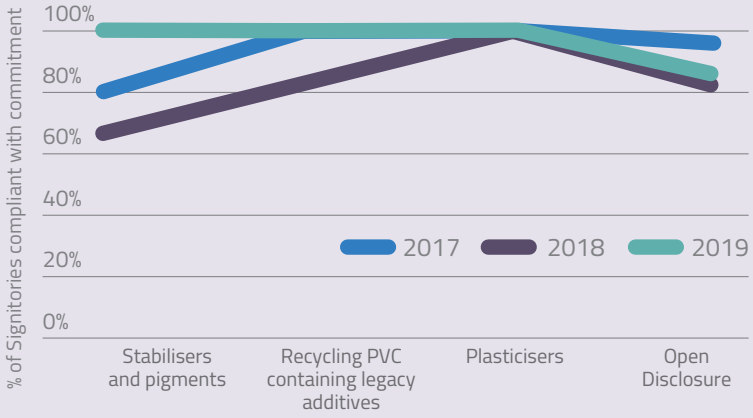


Figure 9: **Compliance Performance – Safe and Sustainable Use of Additives commitment: 2017 to 2019**

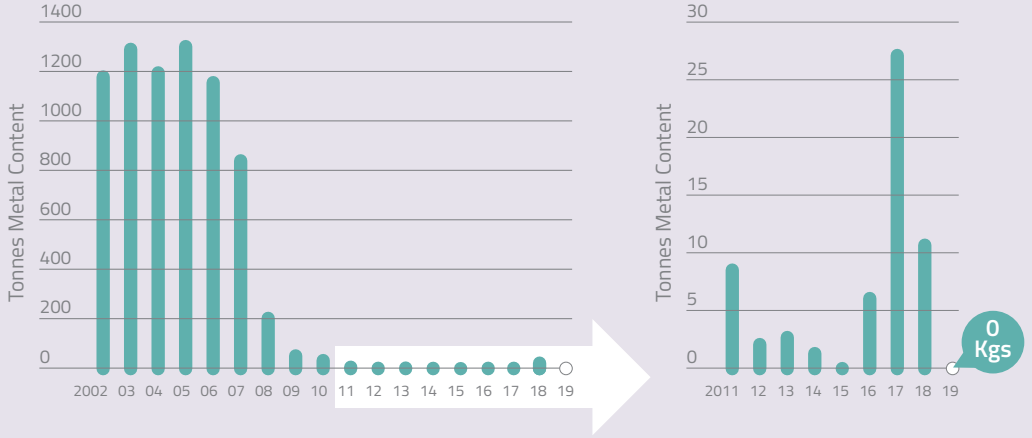


Figure 10: **Lead stabiliser use by the Program Signatories 2002 to 2019**

PVC STEWARDSHIP

3 energy and greenhouse gas management

Target 7.1 Target 9.4 Target 12.2 Target 13.1

Signatories commit to improving their performance with regards to energy consumption and greenhouse gas emissions including working with their respective supply chains and considering the potential for available recycled post-consumer PVC to reduce their overall footprint.

The PSP Signatories continue to make year on year improvements with regards to Energy Efficiency and Greenhouse Gas Emission improvements as indicated by the trend-line in *Figure 11*. Compliance with this Commitment reached 98% percent, some seven percentage points higher than in 2018.

Whilst this Commitment is applicable to all Signatories in the Program, a considerable portion of these have a limited influence and/or impact on energy usage and greenhouse gas emissions on account of their role and function in the vinyl value chain. Collectively resin traders, additive suppliers, and importers of finished and semi-finished goods account for 51% of the total PSP Signatories, and for 48% of the Signatories that responded to the 2019 survey; however, by and large their direct operations are not energy intensive and they therefore seek to drive improvements through their upstream supply chain. The VCA is mindful of this and has therefore worked with the Signatories to establish appropriate goals.

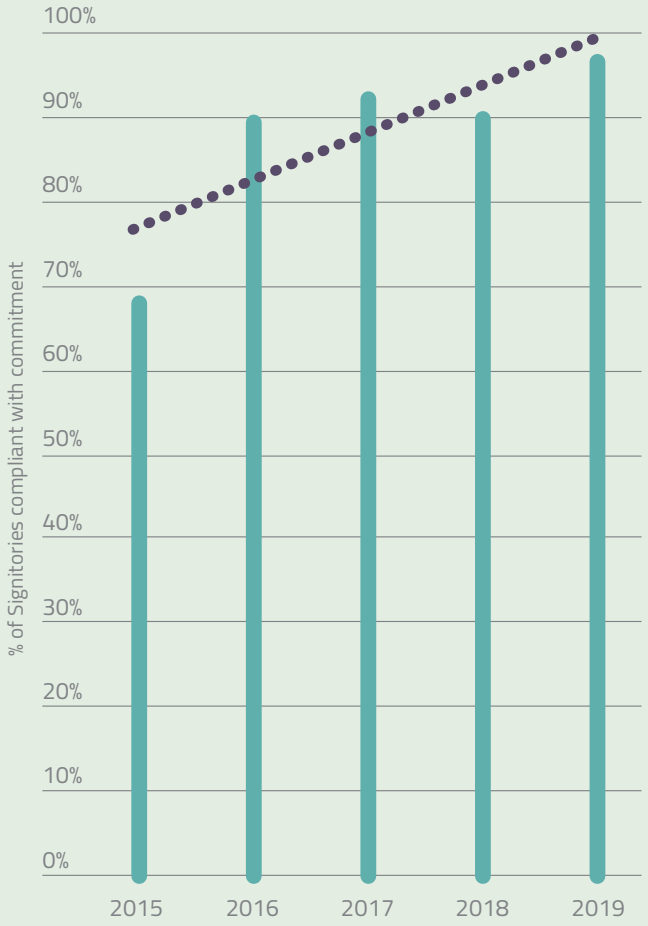


Figure 11: **Compliance Performance – Energy Efficiency and Greenhouse Gas Emissions commitment: 2015 to 2019**

The Commitment allowed a range of activities to be recognised. However, in 2019, the VCA discussed with the Technical Steering Group options for raising the bar with regards to energy efficiency and greenhouse gas emissions outcomes. It was agreed that a stepped approach should be implemented with certain activities becoming mandatory requirements for compliance. Signatories with local manufacturing operations would only be assessed as compliant if they demonstrated they:

- Had in place a formal policy/procedure on energy efficiency and greenhouse gas emissions management; and
- Had commenced measurement of annual energy usage for the local manufacturing operations to implement energy efficiency improvement measures.

We are confident that over time this will enable our sector to drive further improvements.

PVC STEWARDSHIP

4 resource efficiency

Target 9.5 Target 11.6 Target 12.3 Target 12.5 Target 13.2

This commitment has a focus on specific waste streams common to the sector which can be managed in accordance with the waste hierarchy as well as seeking to encourage the downstream consumer base to manage packaging in a responsible manner.

Figure 12 shows the overall performance of Signatories against the Commitment areas covered by the Resource Efficiency theme. Highlights include:

- Maintaining levels of compliance with regards to minimising the quantity of post-industrial PVC waste requiring landfill disposal (and resulting in very low levels of post-industrial waste requiring landfill). Only one Signatory did not achieve full compliance, however they were successful in making significant inroads on previous years.
- The number of Signatories who achieved compliance with the recoPVC Commitment, which encourages use of recycled PVC in new products, remained steady at 63% (up 2% points on 2018). However, the amount of recyclate used by domestic manufacturers grew for a third successive year to close to 776 tonnes, 8% higher than 2018 (see *Figure 13*).
- Compliance with the industry's Commitment to manage and report on incoming packaging waste rose from 62% in 2018 to 94% in 2019. By and large, this can be attributed to improved clarification of reporting requirements. Compliance with this Commitment is determined by Signatories detailing the destination pathways for all recyclable packaging materials entering their operations and explicitly confirming that 70% or more is diverted from landfill. In addition, Signatories are encouraged to implement processes to record and measure packaging waste volumes managed on site, support the recovery and recycling efforts of packaging leaving their facility, and instigating design for sustainability as it relates to the packaging on their products.

One area that continues to require further compliance improvement is that of 'Encouraging Consumer Responsible Care'. The intent of this Commitment is to ensure that Signatories make information publicly available for final consumers, on how to and where to reuse, recycle or dispose of their products safely at end-of-life. Compliance for this Commitment was measured at 70% (down from 76% in 2018). It is apparent that several Signatories have yet to provide information for final consumers.

Actions:

- Provide support to non-compliant Signatories to address low compliance with Consumer Responsible Care.
- Evaluate outcomes from the 2019 survey as they relate to recoPVC and its reasons for non-use by non-compliant Signatories and consider introduction of a long term target for recoPVC in the order of 1,000MT in the medium term.

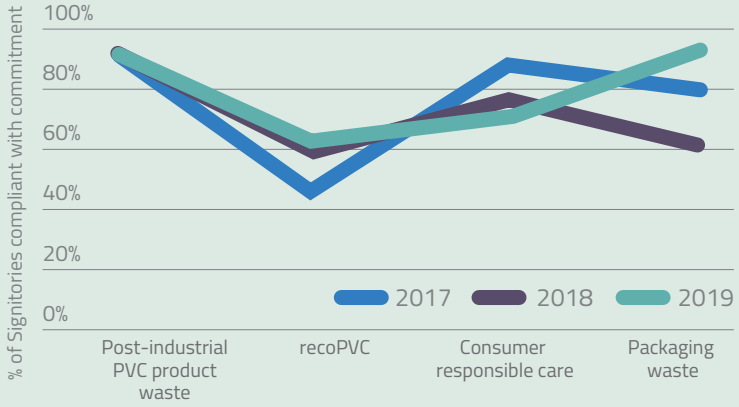


Figure 12: **Compliance Performance – Resource Efficiency commitment: 2017 to 2019**

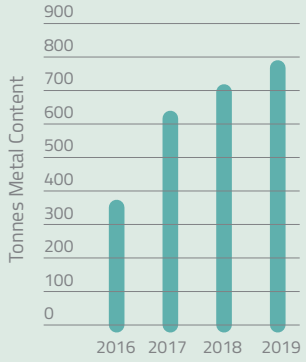


Figure 13: **Domestic consumption of recoPVC (recyclate)**

Vinyl Industry Recycling Strategy

In addition to our efforts with Signatories through our stewardship program the VCA and its members also continue to drive sustainability and improved resource efficiency through other complementary initiatives. These include the following:

PVC CIRCULARITY ECONOMY TASKFORCE

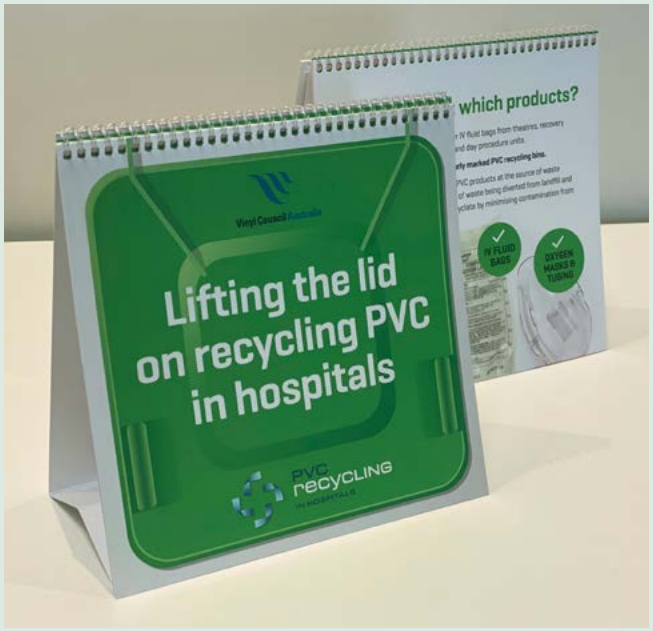
This taskforce, established in 2018, serves to guide the implementation of our broader recycling strategy. This encompasses taking action to continually increase the recovery of end-of-life vinyl as a way of building demand and capacity for the use of recyclate. As detailed previously in this Report, the use of recyclate on the domestic front continues to grow. In order to support and foster further growth the Taskforce has commenced the development of a verification scheme for use of recycled PVC products. The scheme will include a system which will ensure that those companies using the label have attained the agreed benchmarks and are independently verified to provide confidence and transparency to the market. The scheme, once implemented, will bring to the fore the credentials of the product and that of its manufacturer and be of value to procurers, including government agencies, who are seeking to meet sustainable procurement objectives.

In addition to the above we have, and will continue, to be active in facilitating and establishing the physical systems and infrastructure necessary to collect, sort, separate and process end-of-life vinyl waste in its various forms. During 2019 we worked closely with our Members and potential proponents to assess the viability of expanding the current capacity as well as drawing together potential funding parties, including State Government agencies which are working in this space.

PVC RECYCLING IN HOSPITALS PROGRAM

Our PVC Recycling in Hospitals Program (PRIHP), first established in 2009, continues to grow both in terms of participation and the volumes of waste collected for recycling. During 2019 participation climbed over the 200 mark. In Australia the PRIHP was successful in collecting and recycling 142 tonnes of PVC which contributed to savings of $130,000 for the sector which would have otherwise been spent on disposal. Efforts are now underway which can enable us to measure the overall effectiveness of the program on a hospital by hospital basis by establishing a recovery rate that is benchmarked against a facility's consumption. Once established this will make it possible for us to work with the sector and set targets to drive further improvement.

Over the course of the past year the VCA also worked with the relevant Government Departments and hospitals to reduce contamination levels in the volumes collected in order to improve and increase the amount of medical items that could be recycled within the program. This initiative led to the development of supporting communications materials such as the *'Lifting the lid on recycling PVC in hospitals'* which proved to be a valuable resource to the champions responsible for implementation and running the program at individual hospital level.



The amount of recycleables collected from hospitals and number of hospitals involved. Source: Baxter Healthcare

PVC STEWARDSHIP

5 transparency and engagement

Target 12.2 Target 16.6
Target 12.3

Transparency and engagement are key elements of the Program in terms of Signatories seeking to better understand supply chains and industry being willing to share information and disclose performance against specific metrics. Signatories agree to report annually, implement recommendations from the periodic evaluation program, monitor national and international developments and share information with other Signatories and relevant government stakeholders.

Annual Progress Report

The 2018 annual report was published in August 2019 following third party verification of the report and ten Signatory company independent reviews.

2019 REPORT VERIFICATION

The Council has had the annual report subjected to a limited assurance and verification assessment for a number of years. The purpose of the verification process is to provide an independent opinion on the accuracy of the data and statements made in the report. EY conducted reviews via teleconference with eight Signatories. All procedures were conducted by phone due to protocols established to manage the risk of Covid-19. The independent reviews encompassed interview(s) with relevant personnel and supporting documentation where supplied by the Signatory.

In the order of 20% of Signatories are reviewed each year which ensures all participants are independently assessed at least once over a five-year cycle. All but one of the 2019 Signatories selected had not been included for verification in the past four years or longer. Ten Signatories were selected for review in 2019. However, two of these did not complete the review process as they were not able to make staff available for the assessment phase due to competing business priorities resulting from the global Covid-19 pandemic and the associated economic slowdown. A third Signatory did not complete a survey return for the 2019 year and requested to use data from 2018 as the basis for its 2019 assessment as operationally the business had not changed its model or supply chain. However, following a preliminary review of this Signatory by EY it was recommended that their results not be included in the 2019 Annual report given the changes made to the overall PSP Program.

Signatories reviewed for the 2019 operational year were Australian Vinyls Corporation, Breathe Fresh (Australia), PT Asahimas Chemical, Profine International, Stormtech, Forbo, Plastral and Aluplast.

Research and Monitoring

The Vinyl Council monitors national and international developments in scientific research relevant to the potential health and environmental impacts of the PVC product life cycle. It keeps members, Program Signatories and stakeholders informed through Technical Steering Group meetings, member meetings and events, conferences and seminars, regular emailed news briefings, operations reports, website etc. The Vinyl Council is a member of the Global Vinyl Council and the Asia Pacific Vinyl Network, both of which are forums for sharing information on the health and safety of PVC products and industry initiatives to advance the sustainability of the industry.

Technical Steering Group

Name	*Organisation*
Peter Byron	Armstrong Flooring – Chairman
Nigel Jones	Australian Vinyls
Nick Hayhurst	Baerlocher Rep
Ian Rayner	Breathe Fresh
Dieter Klamann	Chemson
Brad Scharenguivel	Deceuninck
Wendy Davis	Gerflor
Matthew Hynes	Iplex
Carlos Torres	Primaplus
Colin Marks	RBM
John Candela	Specialty Products & Chemicals
Troy Creighton	Stormtech
Ian Lilja	Sun Ace
Michael Glover	The Andrews Group (AFRA)
Greg Aylett	Vinidex
Paul Evely	Welvic

Changes to Signatories

There was one new signatory (Austech) who joined the PVC Stewardship program in 2019. Two companies (Premier Extrusions and Dunlop Flooring) resigned from the program whilst Rehau withdrew from the Australian window market and as a consequence left the program in late 2019.

Stakeholder Engagement and Advocacy

The Council plays a leading role in working to advance the sustainability and credibility of the vinyls sector. This is achieved by keeping our eyes on the horizon, engaging regularly with relevant stakeholders and sharing information with our members. By doing so, we remain at the forefront of change and can thereby support our Signatories to evolve their businesses in their quest for enhanced sustainability and improved performance. During 2019, Council staff attended, presented and advocated for the vinyls sector at a wide range of forums including:

- Challenging Plastics: The PVC Forum (Queensland)
- Metropolitan Waste and Resource Recovery Group (Melbourne) – Commercial & Industrial Waste Strategy workshop
- Australian Council of Recyclers – Product Stewardship workshop
- Department of Agriculture, Water and the Environment (Federal) – Consultation on Voluntary Product Stewardship Schemes
- Department of Environment, Land, Water & Planning (Victoria) – Circular Economy Policy Workshop
- Victorian Government (environment portfolio) – Improving Victoria's Kerbside Recycling System
- Good Environmental Choice Australia – Carbon Reduction Standard for Products.

Members of the Global Vinyl Council at 2019 meeting

Sophi MacMillan and Ettore Nanni (President of the European Stabilisers Producers Association)

In June 2019, representatives of the TSG met with the Honourable Minister Trevor Evans, the Assistant Minister for Waste Reduction and Environmental Management and outlined the challenges and opportunities for improved sustainability in the vinyls industry. In addition, formal representations were made to government on a broad range of global and local policy issues that have the potential for adverse impact on our sector's sustainability. This encompassed expressing our concerns relating to the Basel Convention and planned changes to the transboundary movements of plastic waste, the COAG mooted waste export ban, and providing input to a proposed Commonwealth Members Bill for *'Mandatory Product Stewardship Scheme for Consumer Packaging and Single Use Plastics'.* Over and above this, written submissions were made to the Victorian Government with regards to its circular economy policy development, to the Australian Sustainable Built Environment (ASBEC) *'Bringing embodied carbon upfront'* proposal, the draft *'Cradle to Cradle'* Standard, and the Australian Green Buildings Council (GBCA) *'Green Star for New Buildings Future Focus'* consultation paper.

On the international stage the VCA attended and presented at the European VinylPlus *'Sustainability Forum: Accelerating Innovation'* (Prague) and the Asia Pacific Vinyl Network summit (Mumbai).

The Council also plays a key role in fostering cooperation between member companies, governments and organisations which facilitates the drive towards enhanced environmental sustainability. In 2019, this was achieved by having a wide range of guest speakers and presenters attend our quarterly Technical Steering Groups (TSG) to share their expertise and knowledge for the benefit of our Signatories. Over the calendar year, this included presentations from the following organisations:

- University of Melbourne – *'Phthalates and Reproductive Health'*
- NSW Office of Environment and Heritage – *'Energy Saving Funding opportunities in NSW'*
- Department of Agriculture, Water and the Environment (Federal) – *'National Waste Policy and update on the Review of the Product Stewardship Act 2011'*
- NSW EPA – *'Cleaning Up Our Act: Transition to a Circular Economy'*
- Global Product Stewardship Council – *'Global Trends in Product Stewardship'*
- Australian Council of Recyclers – *'The opportunities ahead.'*

Verification Audit Statement

Photo: Gerflor

Photo: Australian Vinyl

Photo: Rediwall

EY
Building a better working world

Independent Limited Assurance Statement to the Management and Directors of the Vinyl Council of Australia

Our Conclusion:

Ernst & Young ('EY', 'we') was engaged by the Vinyl Council of Australia ("VCA") to undertake 'limited assurance' as defined by Australian Auditing Standards, hereafter referred to as a 'review', over the extraction of 57 selected statements and inclusion in the 2019 PVC Stewardship Program Progress Report ("PSP Report") for the year ended 31 December 2019. Based on our review, nothing came to our attention that caused us to believe that the extraction of 57 statements and inclusion in the 2019 PSP Report has not been prepared and presented fairly, in all material respects, in accordance with the criteria defined below.

What our review covered

We reviewed 57 selected statements presenting data and activities which indicate the performance of the VCA signatories against the Commitments– as set out in Appendix A.

Criteria applied by VCA

In preparing the selected statements, VCA applied the Australian PVC industry's PVC Stewardship Program in the form of a 'Commitment and Verification Guide'.

Key responsibilities

EY's responsibility and independence

Our responsibility was to express a conclusion on the extraction of data from the VCA signatories' self-assessment survey responses presented in the PSP Report based on our review.

We were also responsible for maintaining our independence and confirm that we have met the requirements of the *APES 110 Code of Ethics for Professional Accountants* have the required competencies and experience to conduct this assurance engagement. EY has not had any part in collecting and calculating data, or in preparing any part of the Report.

VCA's responsibility

VCA's management ("management") was responsible for selecting the Criteria, and preparing and fairly presenting the Subject Matter in accordance with that Criteria. No conclusion is expressed as to whether the selected methods used are appropriate for the purpose described in this report. Further, VCA's responsibility includes establishing and maintaining internal controls, adequate records and making estimates that are reasonable in the circumstances.

Our approach to conducting the review

We conducted this review in accordance with the Australian Auditing and Assurance Standards Board *Australian Standard on Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* ('ASAE 3000')] and the terms of reference for this engagement as agreed with VCA on 23 November 2017.

Summary of review procedures performed

A review consists of making enquiries, primarily of persons responsible for preparing the data presented in the PSP Report and related information, and applying analytical and other review procedures.

Our procedures included the following:

- Confirmed the factual accuracy of the information presented in the PSP Report by examining the data and information contributing to the 57 statements (covering all commitments presented in the Criteria) and ensuring that it had been extracted correctly from the VCA's internal systems
- Read the PSP Report for any significant anomalies, particularly in relation to VCA's activities and trends in data
- Obtained an understanding of the VCA's key systems and processes used for managing, analysing and reporting Signatory performance information
- Conducted interviews with key personnel responsible for collating and writing sections of the PSP Report to understand the reporting process.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

In addition, as part of our engagement, but not included in the scope of our extraction assurance, we conducted seven site assessments via teleconference and checked information submitted by the following seven Signatories to supporting sample documentation:

- PT Asahimas Chemicals
- Forbo
- Australian Vinyls Corporation
- Profine International Profile Group
- Breathe Fresh
- Plastral
- Storm Tech.

Limited Assurance

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

While we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

Limitations

The scope of work covered the Subject Matter referred to above as included in the PSP Report. EY did not provide assurance over the data. Specifically excluded from our scope was source data presented to the VCA from Signatories, other than for those Signatories listed above, which were assessed by undertaking site visits and documentation reviews, on a limited basis.

Use of our Assurance Statement

We disclaim any assumption of responsibility for any reliance on this assurance report to any persons other than management and the Directors of VCA, or for any purpose other than that for which it was prepared.
Our review included web-based information that was available via web links as of the date of this statement. We provide no assurance over changes to the content of this web-based information after the date of this assurance statement.

Ernst & Young

Ernst & Young
8 Exhibition Street, Melbourne, Victoria, Australia
August 6, 2020

2019 Signatory Benchmarking

Gold: 100 percent

APN Compounding
Australian Plastic Profiles
Australian Vinyls Corporation Ltd
Baerlocher (M) Sdn Bhd
Baxter Healthcare
Chemiplas Australia
Chemson Pacific
Formosa Plastics Corporation
Gerflor Australasia
Integrated Packaging
Iplex Pipelines Aust
Karndean International
Pipemakers
Plastral
Plustec
Polyflor Australia
Polymer Direct
PT Asahimas Chemical
RBM Plastic Extrusions
Speciality Polymers & Chemicals
Sun Ace Australia
TechPlas Extrusions
Vinidex

[1] First year reporting as a Signatory to the Program.

Silver Commendation

The Andrews Group

Silver: 80–99 percent

AFS Systems
Altro APAC
Armstrong Flooring
Breathe Fresh (Australia)
Brenntag Australia
CMS Electracom
Cryo Grind (Aust)
Forbo
Kenbrock Flooring
Qenos eXsource
Sekisui Rib Loc Australia
Serge Ferrari
Stormtech

Bronze: 50–79 percent

Profine International Profile Group
Tarkett Australia
Veka Plastics (Singapore)

Non Compliance: < 50 percent

Deceuninck Australia
Teknor Apex

Failed to Report

Aluplast
Austech
Primaplas
Rojo Pacific
Welvic Australia

AWARD	AWARD ASSESSMENT	DATA SURVEY ASSESSMENT SCORE	DATA SURVEY ASSESSMENT SCORE PLUS BEYOND COMPLIANCE POINTS
Excellence in PVC Stewardship (Gold)	Signatories who scored full compliance in all commitment areas.	100%	100%
Silver Commendation	Signatories who scored silver status but were awarded bonus points for demonstrating beyond compliance in one or more commitment area and received no more than one partial compliance.	90–99%	99%
Silver Award	One or more non-compliance.		80–98%
Bronze Award			50–79%

Glossary

APC	Australian Packaging Covenant (Organisation)
ARFA	Australian Resilient Flooring Association
ASBEC	Australian Sustainable Built Environment Council
BEP PVC	Best Environmental Practice PVC
COAG	Council of Australian Governments
Converter	Manufacturer of PVC resins/compounds into a finished products
Covid-19	Corona Virus Disease 19
CLP	Classification, Labelling and Packaging (CLP) Regulation
DBP	Dibutyl phthalate
DEHP	Diethylhexyl phthalate
DIBP	Diisobutyl phthalate
DINP	Diisononyl phthalate
EMS	Environmental Management System being a set of processes and practices that enable an organisation to reduce its environmental impacts and increase its operating efficiency
EU	European Union
E-PVC	Emulsion PVC
EY	Ernst and Young
GBCA	Green Building Council of Australia
LMW	Low molecular weight – refers to phthalate plasticisers with 3 to 6 carbon atoms in their backbones such as DBP, DEHP, DIBP
Ortho-phthalates	Group of industrial chemicals used as plasticisers that add flexibility and resilience to many plastic consumer products
Phthalates	A group of chemicals used as plasticisers
Plasticisers	Chemical substances used to soften PVC and provide flexibility to end products
The Program	The PVC Stewardship Program signed by members of the Australian PVC industry
PSP	Product Stewardship Program (alternatively The Program)
PVC (Vinyl)	Polyvinyl chloride
PRIHP	PVC Recycling in Hospitals Program
Signatories	The members of the Australian PVC industry who have signed the Program as an indication of their Commitment to product stewardship
S-PVC	Suspension PVC
Stabiliser	A compound used to improve the PVC thermal stability during processing and the weathering and/or UV stability of the end-use product
Stakeholders	The PVC industry, its employees, suppliers and customers, the local and wider communities, consumers, government and regulators, and any other groups significantly impacted by the industry
TiO^2	Titanium dioxide
TSG	Technical Steering Group
µm	Micrometre
VCA	Vinyl Council of Australia
VCM	Vinyl Chloride Monomer
VinylPlus	The VinylPlus Program represents the voluntary commitment of the European PVC industry

Vinyl Council Australia

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