



PVC STEWARDSHIP CASE STUDY

"We saw an opportunity in entering the Stewardship program to showcase ourselves as committed to manufacturing in the best possible way... the market had moved towards a 'greener' approach and the only real way we saw that we could move with that was to be part of the program."

RBM Plastic Extrusions General Manager, Alex McWilliam

Goals

- Showcase commitment to sustainability and recycling
- Drive recycling initiatives across both Divisions
- Grow capacity for post-consumer waste recycling

Achievements

- Implemented a take-back scheme for purging and scraps
- Over 100,000kg of external PVC recycle used in each of the last four years
- Development of a 'Clean Up' program for reprocessing of spare recut materials

Member Status

- VCA member and PSP Signatory since 2016
- Fully compliant with relevant PSP commitments since 2017

Introduction

PVC COMPOUNDING AND EXTRUSION

PVC, or vinyl, is in fact made up of a blend of PVC resin and various additives called PVC compound. As the particular PVC resin used in PVC compound can be made flexible by the addition of plasticisers, manufacturers generally produce PVC compound in different degrees of flexibility ranging from soft and supple to semi rigid. This high level of customisation in manufacturing opens up the market to create products for a range of industries including flooring, building & construction, medical, footwear, packaging, wire & cable and many more.

Meanwhile, extrusion involves the process of applying heat and pressure to melt raw plastic, such as PVC. Molten PVC is pushed through a die to form a continuous profile, and the profile shape is determined by the requirements of the final application.

About the Company

RBM Plastic Extrusions was incorporated in 1964, with the original business extruding custom profiles for industry. Over the years the business has grown significantly, and it is now one of the largest privately-owned plastic extrusion manufacturing companies in Australia. RBM Plastics is a leader in the extrusion of a wide range of PVC & plastic profiles and tubing, and currently manufactures over 5,000 different extruded profiles and tubes for use in multiple industries.

The company today includes two divisions: a PVC Compounding Division and Custom Extruded Profile & Tubing Division. The Compounding Division supplies PVC compound into the market for a range of industries and includes a total annual capacity of close to 20,000 tonnes per annum, while the Extruded Profile & Tubing Division includes 20 extrusion lines which extrude a number of profiles and tubes for both Australian and international markets.



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The Program

The Vinyl Council's PVC Stewardship Program (PSP) represents an ongoing, voluntary undertaking by the Australian PVC industry to recognise and address relevant environmental, health and safety aspects within the lifecycle of PVC products. The program includes over 50 Signatories from across the industry striving to meet a range of stringent commitments in the consumption and manufacturing of raw materials, safe and sustainable use of additives, energy efficiency & greenhouse gas management and resource efficiency. Each year signatories record and report their progress in reaching the program's commitments, with eighty percent of signatories achieving the key program benchmark of 80% compliance with relevant commitments in 2021.

Manufacturing more Sustainably

Recognising an industry-wide shift towards a greater focus on more sustainable practices in manufacturing, RBM joined the Stewardship Program in 2016. According to RBM General Manager Alex McWilliam, through entering the PSP the company saw an opportunity to showcase themselves as a compounder and extruder that was committed to manufacturing in the best possible way. At the time, the company had recently undergone a large expansion and identified the value of joining the PSP as a way of demonstrating to customers that RBM was serious about sustainability and recycling in the industry.

As the market continued to move towards greener and more sustainable approaches in recent years, RBM saw joining the PSP as an opportunity to join the change and improve their own sustainability practices working alongside other industry leaders to further PVC stewardship standards and commitments.



The PVC manufacturing plant at RBM Plastic Extrusions

Stewardship Practices

In order to ensure that the continual improvement of their sustainability practices are an ongoing focus in the business, RBM have looked at what they can do across both of their divisions as part of their involvement in the PSP. In the PVC compounding division, RBM has implemented a take-back scheme to recover materials such as purging and scraps from their customers, that they can then granulate to either re-compound and supply back into the market as a pelletised material, or use within their extrusion division. RBM have also implemented similar practices within the extrusion division, with all start-up scraps and off-spec materials being granulated & re-pelletised to be extruded again.

In addition to recycling their internally generated PVC waste, RBM has used over 100,000kg of externally-sourced, post industrial PVC recyclate in their products in each of the last four years, including a high of 158,787kg in 2020. The majority of the recyclate used by RBM is in products manufactured for the construction industry, including the supply of high-quality recycled PVC flooring material.

An eye to the Future

Realising the need to keep evolving and exploring ways to further their sustainability and recycling practices, RBM has recently started its own 'Clean Up' program, in which any recut materials on site are taken for reprocessing.

As there is generally a large quantity of rigid PVC recut on site, RBM is exploring the possibility of adding small amounts of wax to the recut which would help them to re-pelletise it for use in new PVC compounds. RBM aims to put in place measures to convert 98% of the PVC scrap generated at its manufacturing plants to be re-pelletised and used through the plant again. While RBM does not currently take back any post-consumer waste because they don't currently have the facilities to process it, they are looking to establish links with a number of recyclers as alternatives if and when needed.

As the entire PVC industry faces increasing pressure from government and regulatory bodies to meet ever-increasing environmental benchmarks, the emphasis RBM have put on their own recycling and sustainability practices within the commitments of the PSP will hold them in good stead to meet the future demands of the market.

To find out more about how joining the PVC Stewardship Program can benefit your business, go to: www.vinyl.org.au/sustainability/stewardship