



By means of an automated injection moulding process at the production facility of AVK Plastics, tonnes of plastics are processed into high quality surface boxes and accessories daily. Synthetic products have many advantages; they are lightweight, corrosion and maintenance free, durable and recyclable. AVK Plastics' products are very sustainable due to the use of recycled synthetic materials.

ISO14001

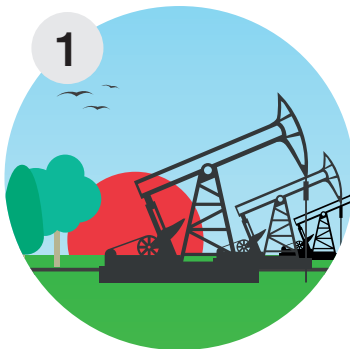
The ISO14001 environmental management system is the framework used by AVK Plastics to manage and reduce the environmental impact of its organization. Implementation of ISO 14001 has led to a good overview of the relevant environmental aspects for AVK Plastics. By setting clear priorities, AVK Plastics is able to control and improve environmental performances of the organization in a thorough manner. The most important environmental focus areas for AVK Plastics are:

- Raw material consumption
- Energy consumption
- Water consumption

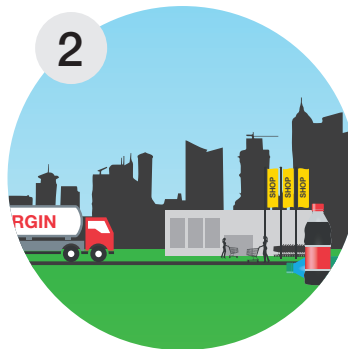
Recycling

Recycled materials are used in the AVK Plastics production process, creating products that last for decades and which can also be recycled at the end of their life. Additionally this, in turn, provides savings in cost, energy and materials. Being ISO14001 certified, AVK has committed itself to have a strong focus on continuous reduction on the environmental impact.

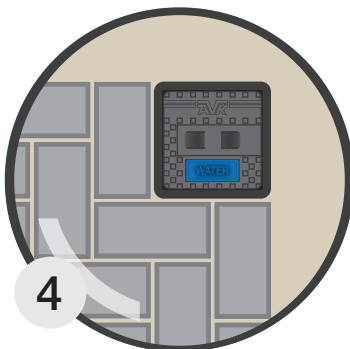
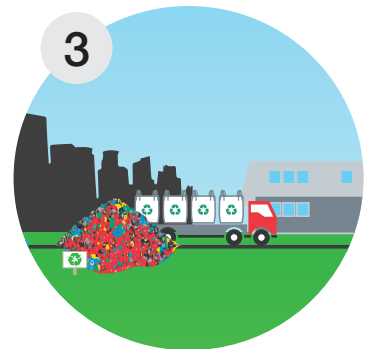
Extraction of oil and gas.
 About five percent is used to make plastics and rubbers.



Virgin plastics, used in e.g. consumer goods.



From plastic product to shredded pieces ready for recycling.



Production and installation of AVK Plastics' synthetic surface boxes.



Used synthetic surface boxes can be recycled or reused for energy recovery.

Carbon footprint

To analyse the environmental impact of the surface boxes produced by AVK Plastics, a tool has been developed by BECO (part of Ernst & Young) to calculate the carbon footprint (CO₂ emissions) of a product. AVK Plastics uses this information as starting point for improving the environmental performance of the products. Synthetics have a significantly lower carbon footprint compared to for example cast iron meaning less impact on the environment. Besides the usual assessment criteria, such as price and quality, this carbon footprint is increasingly used or required as a decision parameter, by customers who want to compare products with each other and appreciate the environmentally friendly character of synthetic surface boxes.

Carbon footprints

Product	Total Kg. CO ₂ eq.*	Product	Total Kg. CO ₂ eq.*
H-4055 HD-GG	27.0	H-4057P MD-KU	4.4
H-4055 MD-GG Air Valve	19.9	M-4055 MD-GG	18.6
H-4056 HD-GG	11.1	M-4056 MD-GG	7.4
H-4056-2 HD-GG	22.0	M-4057 MD-GG	3.9
H-4057 HD-GG	5.7	M-4057H MD-GG	4.0
H-4059 HD-GG	6.2	M-4055 MD-KU	12.7
H-3581 HD-GG	11.6	M-4056 MD-KU	5.6
H-3582 HD-GG	29.6	M-4057 MD-KU	3.8
H-3583 HD-GG	69.1	M-4057H MD-KU	3.8
H-3584 HD-GG	119.2	M-4055P MD-GG	19.9
H-3584 HD-GG CC3	unknown	M-4056P MD-GG	7.6
H-3584 HD-GG CC4	unknown	M-4057P MD-GG	4.4
H-4055 MD-KU	14.3	M-4055P MD-KU	14.0
H-4056 MD-KU	6.5	M-4056P MD-KU	5.8
H-4057 MD-KU	4.3	M-4057P MD-KU	3.9
H-4059 MD-KU	4.5	M-4055 MD-GG Air Valve	18.3
H-3581 MD-KU	7.4	Purbra HD-GG	24.9
H-3583 MD-KU	26.5	Pera HD-GG	9.9
H-3584 MD-KU	38.4	Purdie HD-GG	5.5
H-4055V HD-GG	30.6	Normpot Brandkraan HD-GG	16.3
H-4055VF HD-GG	31.8	Normpot Afsluiter HD-GG	7.7
H-4055VB+ HD-GG	31.6	Normpot Afsluiter H HD-GG	7.5
H-4055V MD-GG Air Valve	23.5	Normpot Afsluiter RH HD-GG	8.2
H-4056V HD-GG	12.6	Surface Box MP LD-GG	2.3
H-4056VF HD-GG	13.1	Surface Box MPV LD-GG	2.9
H-4056-2V HD-GG	22.7	Surface Box MPVH LD-GG	2.9
H-4057V HD-GG	6.8	Surface Box MPVP LD-GG	3.0
H-4057VF HD-GG	6.8	Surface Box Multi Purpose LD-KU	1.2
H-4059V HD-GG	7.3	Surface Box CPH	4.5
H-4059VF HD-GG	7.3	Support tile I	1.2
H-3581V HD-GG	12.4	Support tile I FSS	1.3
H-3581VF HD-GG	13.0	Support tile I FSL	1.2
H-3582V HD-GG	31.8	Support tile I SI	1.1
H-3583V HD-GG	76.1	Support tile II	2.9
H-4057VH HD-GG	6.9	Support tile III	2.8
H-4057VP HD-GG	7.1	Support tile IV	2.3
H-4055VB HD-GG	31.8	Top frame distribution valves	8.4
H-4056VB HD-GG	13.5	Top frame service connection valves	8.6
H-4057VB HD-GG	7.1	Top frame hydrants (Normpot)	13.7
H-4059VB HD-GG	7.7	Top frame hydrants (4055P)	13.7
H-3581VB HD-GG	13.3	Top frame hydrants (Purbra)	13.5
H-3582VB HD-GG	33.2	Torque adaptor I	2.9
H-4055P HD-GG	28.4	Torque adaptor IIA (incl. top frame)	9.9
H-4056P HD-GG	12.1	Torque adaptor IIB (incl. top frame)	9.7
H-4057P HD-GG	5.8	Transition piece I	1.0
H-4055P MD-KU	15.8	Transition piece III	2.3
H-4056P MD-KU	7.6		

*Calculation based on Lifecycle Assessment methodology by ISO 14040-44 standards.

This data is based on a life cycle assessment performed by EY on behalf of AVK Plastics in 2016 based on 2015 data for surface boxes and pallets. The impact assessment method used is the global warming potential, using the GWP factor of IPCC 2007 (100 years). The inventory is modelled in SimaPro 8.0.5.13 using the Ecoinvent 3.1 and ELCD 3.0 databases. The results of this application are only intended to supply stakeholders with sustainable product information.

CO₂ Impact of type 4056 surface box: cast iron vs. plastics

