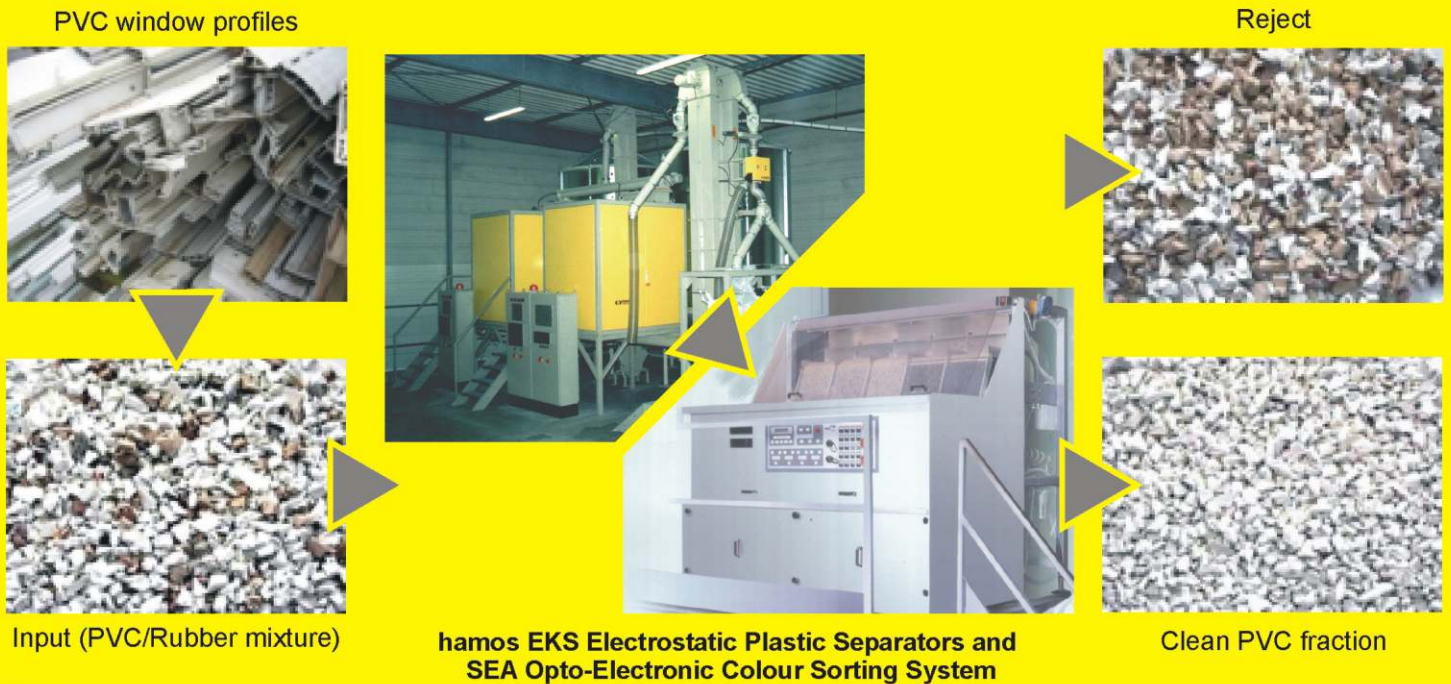


PVC Window Profile Recycling System

hamos EKS & SEA



Problem

Clean PVC granules coming from PVC window profile recycling are a valuable commodity and can be used again for high quality PVC products. But even small amounts of rubber, nylon, flexible PVC etc., from the sealing as well as colour impurities can reduce the field of application. Usually the rubber sealings are removed manually. This is a labour-intensive process with low capacity.

The solution

Dry working EKS electrostatic separators separate practically all impurities from granulated PVC window scrap, independently from colour, specific weight etc. Both production scrap and post consumer windows can be recycled with high purities. From a typical production scrap infixed of 90 % PVC and 10 % rubber or other impurities, a PVC purity of up to 99,5% can be achieved by using **hamos** EKS separators.

To increase the purity of the final PVC (with black or coloured rubber sealings) a SEA optical sorter is used in line. Coloured particles are optically detected and fully automatically rejected. After this re-separation step the PVC material will have a product purity of up to 99,995 % or better.

Your advantages

- Dry separation processes, no liquids
- Independent from specific weights
- Efficient technologies
- Well proven system combination
- High purity of PVC
- Quick return on investment
- Low manpower, easy operation
- Low power consumption
- Flexible system

hamos separators EKS and SEA enable

- Separation with PVC purity of > 99,995 %
- Minimum PVC losses
- Even highest throughputs possible
- Dry separation technologies
- Detection and separation of unwanted colours is possible as well
- Better degree of whiteness
- Separation of other non-plastic impurities like wood, metal, glass etc.

The function I - EKS electrostatic separation

In the EKS the granulated PVC/rubber mixture is tribo-electrically charged in a special charging unit. PVC particles are charged negatively, rubber and other plastics achieve positive charges on mutual contact. This effect happens by changing electrons from one plastic to the other. After charging the particles are separated in a high voltage field. Negatively charged PVC is attracted by a positive electrode. Due to the special electrode design, also most of metal, glass, wood and other impurities are separated as well.

The function II - SEA colour sorting

The good PVC fraction is re-separated by SEA colour sorting machines to improve the product quality. The PVC to be sorted is spread and falls in between two optical detection units. Thus the particle surface is checked from almost all sides. The characteristic electric signal of each color is processed in a microprocessor operated control unit. Particles with wrong colours (like rubber or dark PVC) are blown out by a quick acting air valve. This increases the PVC purity tremendously. If white PVC with mixed colour impurities is processed, it is possible to achieve a clean white PVC fraction with higher profits.

Performance data

- PVC granules with plastic contaminations like rubber, nylon, flexible PVC etc.
- Particle size > 2 mm, max. 12 mm (de-dusted product)
- PVC re-separation with colour separator
- Colour separation of mixed PVC material
- Capacity 750/1500/2250 kg/hr. Systems for higher capacities are available.
- Material handling systems (infeed silos, conveyors, big-bag filling stations etc.) available on request.
- Well proven system with > 20 installed machines world-wide
- Separation of different PVC compositions possible

Our Offer

Please contact us if you are interested in a separation test in the hamos and SEA laboratories. We will show you which added value your PVC could have if it is free of rubber, other plastics and colour impurities.

hamos supplies the following systems:

- **ERP** Electronic Scrap Recycling Plant.
- **KWS** Electrostatic Separators for recovery of fine metallic particles
- **ECS** Eddy Current Separators
- **HS, FFS, LCS** Electronic All-Metal Separators
- **SEA** Colour Sorters
- **SEA** Sorters by Resonance
- **Magnets**

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