

June 4th - 7th, La Rural Buenos Aires, Argentina www.argenplas.com.ar

La Rural, Green Pavilion, June 4 to 7, 2024

hours from 2:00 p.m. to 8:30 p.m.

Entry of minors under 18 years of age is prohibited

Plastics in the circular economy (First part of two)

By Engineer Ariel Galbiati for Editorial Emma Fiorentino.

Introduction

As we know, plastics are synthetic chemical substances called polymers, their structure is macromolecular and they can be molded by means of heat and/or pressure.

These polymers are large groups of monomers joined together through a chemical process called polymerization and offer a very interesting balance of properties compared to other materials, such as light weight, mechanical strength, resistance to environmental agents, optical properties, good surface finish, ease and speed of production, etc.

The term "plastic" refers to the state of the material and not the material itself. Synthetic polymers, normally called plastics, are synthetic materials that can reach the plastic state, which is when the material is fluid or viscous and does not offer resistance to mechanical stress, so it can be molded.

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Therefore, "plastic" is a way of referring to certain synthetic materials that are capable of entering a "plastic state" that is achieved when the material is transformed from a solid state to a plastic state, usually by means of heat. Today there is a huge variety of plastics with different characteristics and properties, each one for specific applications.

Properties

Some of the main properties and general characteristics of plastics are:

- ✓ Ease of processing
- ✓ Low production cost
- ✓ Reduced weight
- ✓ Good electrical insulation
- ✓ Good acoustic insulation
- ✓ Good optical properties
- ✓ Good thermal insulation
- ✓ Impermeability
- ✓ Corrosion resistance
- ✓ Recyclability

And among all of them, one of the main characteristics of plastics is that they can be "recycled".

Plastic recycling

Plastic recycling is the process of recovering waste or residue from plastic materials.

The main destinations of recycled plastic are direct reuse, use as raw material for the manufacture of new products and its use as fuel or as new chemical products.

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PET Polletilentereftalato PEAD Polletileno de Alta Densidad PVC Polloloruro de Vinilo Pensidad Proprieti Pensidad Pvinilo Pensidad Pvinilo Pensidad Proprieti Pensidad Pvinilo Pensidad Pvinilo Pensidad Pvinilo Pensidad Pvinilo Pensidad Pvinilo Pvi

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Not all plastics are recovered, the main plastics recovered worldwide are the following:

- ✓ Polyethylene (LDPE)
- √ High density polyethylene (HDPE)

Polipropileno

- ✓ Polypropylene (PP)
- ✓ Polyvinyl chloride (PVC)
- ✓ Polystyrene (PS)
- ✓ Polyethylene terephthalate (PET)
- √ Polyurethane (PUR)

Stages in recycling plastics

Different stages can be considered in the plastic recycling process, basically they would be collection, concentration or storage, classification and chemical or mechanical processing.

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Harvest

A differentiated collection system is based on the fundamental principle of separating waste in homes, businesses and companies into two basic groups, organic waste on the one hand and inorganic waste on the other. Organic waste is generally made up of food remains and inorganic waste is made up of metals, glass and plastics.

In a properly organized collection system, waste should be placed in differentiated bags, on public roads, so that they can be collected and sent to their respective forms of treatment.

In a disorganized system, it is the informal collectors who open the bags of undifferentiated waste on public roads and extract the different recyclable materials.

Collection center

It is the place where plastic waste is received in bulk or already compacted in bales and is normally stored outdoors, so there are limitations for prolonged storage in these conditions since ultraviolet radiation can affect the structure of the material, which is why Therefore, it is recommended not to leave the material exposed for more than two or three months.

Classification

After receipt, the products are classified by type of plastic and color. This can be done manually or through automatic classification technology used in developed countries.

Obviously this stage is facilitated if there is a differentiated delivery of the material, which can be achieved with the support of municipal organizations.

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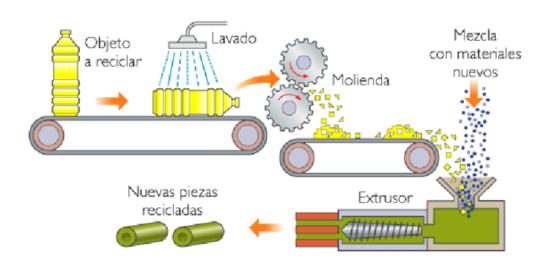
2024

Mechanical Recycling

Mechanical recycling is a physical process through which industrial or postconsumer plastic is recovered to allow its subsequent use. It is the most widespread process, but by itself it is not enough to process all the waste. Plastics that are mechanically recycled come from two sources:

On the one hand, manufacturing waste or scrap, which is the waste that remains at the foot of the machine, both in the petrochemical and processing industries.

This type of waste is easier to recycle because it is clean and homogeneous in its composition as it is not mixed with other types of plastics.



Some transformation processes, such as thermoforming, generate between 30% and 50% scrap, which is normally recycled.

And on the other hand, the plastic waste coming from the mass of Urban Solid Waste or MSW, which in turn is divided into three classes: simple plastic waste that has been classified and separated, mixed waste in which the different types are mixed together and waste combined with other various waste such as paper, cardboard and metals.

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Basically the method consists of separating the plastics by type, washing them and crushing them to turn them into small pieces that are then melted in molds to produce new products.

Data sheet:

Event:

ARGENPLAS XIX Exposición Internacional de Plásticos 2024

Date: June 4th - 7th, 2024

Number of visitors: more than 12.000

Exhibition Hours: 2:00 p.m. to 8:30 p.m.

Accreditation Hours: 1:45 p.m. to 8:00 p.m.

Place: La Rural, Predio Ferial de Buenos Aires

Pavilion: green

Organised by: CAIP - Cámara Argentina de la Industria Plástica

Development by: MBG & EVENTS

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Official catalogue, press and diffusion: Editorial Emma Fiorentino...

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Entry of minors under 18 years of age is prohibited, even if they are accompanied by an adult.

Exclusive and free event for professionals in the sector who pre-accredited themselves through the website or by presenting the invitation.

Organised by: CAIP: Cámara Argentina de la Industria Plástica.

Development by: MBG & EVENTS

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Visitor profile

Argenplás 2024 is a meeting of professionals with a profile selected to provide the exhibitor with a favorable environment to do business:

- Entrepreneurs, executives, engineers, technicians and professionals related to the sector.
- Manufacturers, processors and users of plastic products.
- Raw material transformers.



MBG & EVENTS MANAGEMENT BUSINESS GROUP



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People from management, technology and production, sales and marketing levels from all industry sectors:

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- Automotive and Transportation
- Construction
- Electric engineering
- Electronics and mechanics
- Telecommunications
- Home's products
- medicinal laboratories,
- Veterinary and cosmetic
- Medicine and health care, among others.

Items

Argenplás 2024 is the obligatory event that every two years, national and international companies from the following sectors find themselves in the appropriate space to face the future of their companies:

- Machines and Equipment
- Automation and Quality Control
- Molds and Tools
- Raw Materials and Chemical Products
- Rubber
- Packaging
- Plastic Transformers, Products
- Finished and Semi-Finished
- Environment and Recycling
- Reinforced plastics, composites, polyurethane and rotomolding.
- Entities, Associations, Banks, Services and Technical Magazines

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For more details of what you can experience during Argenplás 2024, the most important event of the year, consult:

www.argenplas.com

Who makes ARGENPLAS 2024



MBG & EVENTS

It strives to create high-profile, highly focused events, where buyers and suppliers from all over the world come together to do business.

Every year MBG & Events holds events that attract more than 1,000 exhibiting companies, and more than 150 thousand buyers from the most diverse industries.



PWI EVENTS

It develops and operates more than 25 annual events without losing focus on each business generating long-term exponential growth and added value for its clients.

A team of professionals with more than 20 years of international experience in the exhibition sector are the key to producing high-quality events, focused on their clients and with a high return on investment.

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Cámara Argentina de la Industria Plástica - CAIP

It is the institutional business entity that brings together the Argentine Plastic Transforming Industry and was founded on December 28, 1944, with clear and concise objectives:

- Gather, relate and link industry entrepreneurs with each other;
- Represent and defend your rights;
- Manage provisions or measures that tend to preserve the interests of the sector:
- Resolve problems that affect associates;
- Establish business-labor links;
- Promote the progress of the Argentine Plastic Industry.

The CAIP actively participates in different levels of leadership of the Argentine Industrial Union (UIA) and is a member, along with its counterparts in the region, of the Latin American Association of the Plastic Industry (ALIPLAST).

PARTNERS: With an important component of creativity and with the support of the highest technology, the Argentine Plastic Industry satisfactorily supplies the domestic market and exports finished products that correspond to international quality standards.

Today, the CAIP represents more than 1,300 companies and among the services it provides, the following stand out: Advice, Undergraduate and postgraduate training of manpower, Publications, Specialized Library, Permanent Exhibition of the Plastic Industry and Participation in Fairs and Exhibitions.

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