



**Company**  
Vestolit

**Sector:**  
PVC resin

**Location:**  
Tlalnepantla de Baz, Mexico

**Date:** September, 29<sup>th</sup>, 2020

**ABOUT VESTOLIT**



Mexichem Resinas Vinílicas, known as Vestolit, is a worldwide company that belongs to Orbia business group. It has production plants in Germany, USA, Colombia and Mexico. Produces and markets PVC resins (Polyvinyl Chloride). One of its plants in Mexico is located in Tlalnepantla de Baz and is called Planta La Presa. This plant manufactures PVC resin through the polymerization of VCM by micro suspension. Its annual production is approximately 17,000 tons, (2019 data).



**MAIN PRODUCTS**

PVC comes from the polymerization of Vinyl Monochloride (VCM). It is classified as one of the most versatile plastics, when mixed with additives can be transformed into rigid, flexible and thermoplastic products. Its properties include a high capacity for thermal, electrical and acoustic insulation, low flammability, non-toxicity, impermeability to liquids and gases, excellent mechanical resistance and a sepsis. It is 100% recyclable. The micro suspension type PVC resin is mainly used for the manufacture of low viscosity pastes such as plastisols or other flexible materials.



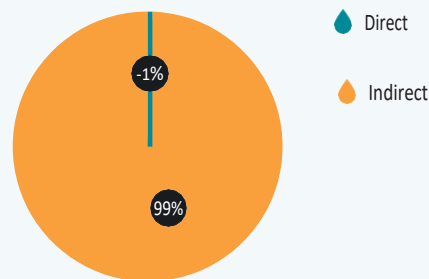
**WATER CONSUMPTION**

Total water consumption includes both: indirect consumption during the manufacture of raw materials and their transport to Mexico, as well as direct consumption in the plant associated with the production process.

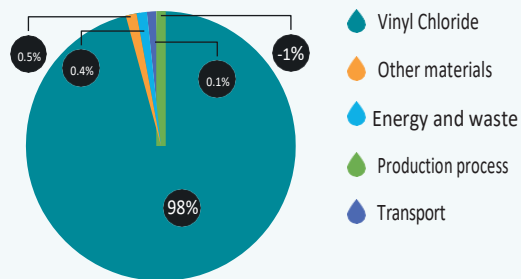


**CONTEXT**

The polymerization process is carried out in a liquid medium consisting mainly of water. For this purpose, the plant is supplied with water in 41% of underground wells (the Moctezuma river basin is part of it) and in 59% of the wastewater treatment plant managed by The Water Users Society of San Juan Ixhuatpec (ASJISU) whose water comes from the Cutzamala basin. The final discharge is conducted into the Río de los Remedios, a body of water that receives all industrial and municipal waters that are treated by ASJISU.



Detail of both direct and indirect consumption



**GOAL AND SCOPE**

Quantify the water footprint of micro suspension PVC resin produced at Vestolit La Presa plant, in 2019.



**SYSTEM BOUNDARY**

From raw material supply to manufacture stage (cradle to gate).



**FUNCTIONAL UNIT**

**Production of 1 ton of micro suspension PVC resin.**



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**WATER FOOTPRINT PROFILE**

The main impact on water scarcity is due to Vinyl Chloride production in Texas-USA, which has a medium water stress. The impact of Vestolit plant is mainly related to electricity and natural gas consumption for the operation of machinery and equipment, steam generation, resin drying and the use of wooden pallets as auxiliary material for the packaging of the product.

Scarcity derived from the production process is minimal since La Presa plant consumes wastewater as a supply source.



**AREAS OF OPPORTUNITY**

Review the possible supply of energy from renewable sources or cogeneration projects, since the consumption of water associated with electricity generation contributes with a considerable impact on the water footprint.

Look for alternative materials to wooden pallets that are required for packaging and transport of resin, since their impact on ecotoxicity is significant.



**MAIN MITIGATION ACTIONS**

Establishment of objectives for corporate water management, which reduce the consumption of fresh water from underground wells and promote the use of waste and industrial water.

