2.3.3. Responsible management of the end-to-end water cycle

Water is essential for life, and also for the viability of Viscofan's business, since the casing production process and a large part of raw materials used depend on water. We acknowledge that it is a resource whose availability is affected by climate change and by a growing global demand.

Viscofan's production plants require water withdrawal for different phases of the process, mainly in the cleaning of casings, refrigeration, steam production and the moistening of said casings.

At Viscofan's production plants, in 2023, 13% of the captured water was evaporated, was incorporated into the product, or was consumed, while the remaining 87% was conducted to purification plants installed at Viscofan's production plants to be processed before being returned to freshwater surfaces or conducted to municipal processing plants.

Viscofan's water management focuses its efforts two-fold. Firstly, by seeking production technology with a lower water requirement, mainly in phases of the process that involve the washing of casings. Once the water has been used, Viscofan works to improve the quality of what we discharge even further and to understand the risks associated with its availability and use in the areas in which we operate.

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Withdrawal, responsible use of water

Water collection by source type. m³	2023	2022	2021	2020	2019	2018
Surface water	4,127,443	4,127,443	4,269,619	4,107,250	3,849,469	3,755,026
Groundwater	2,929,859	2,929,859	2,810,428	2,756,290	2,643,301	2,636,088
Municipal supplies	3,634,433	3,634,433	3,701,020	3,515,107	2,947,574	3,021,961
Rainwater	0	0	0	0	0	0
Waste water	0	0	0	0	0	0
TOTAL	**10,691,735**	**10,691,735**	**10,781,067**	**10,378,646**	**9,440,345**	**9,413,076**
Consumption in process	**1,770,905**	**1,770,905**	**2,348,446**	**2,107,470**	**1,679,531**	**1,745,719**

During the year, water withdrawal and its intensity per metre of extruded casings were reduced by 5.4% and 3.3%, respectively, in a context of lower casings production activity and thanks to water consumption efficiency initiatives implemented during the year and the consolidation of initiatives implemented in previous years. Of particular note:

• **At the Cáseda plant (Spain)**, installation of the new evaporation plant allows the water to be used for a washing circuit, the change in filtering technology requires less water consumption in cleaning operations on the equipment itself, and a new Legionella treatment in cooling towers requires fewer circuit purges.

• **In the New Jersey (USA)** plant, the installation of production lines under dry-tech technology to produce collagen casings, with lower water requirements than the previous production technology, the better use of the wash flow in post extrusion, and optimisation of raw material recipes to reduce washing.

• **At the Danville plant (USA)** the stabilisation of the plant with the new cellulose casings technology.

• **At the Ermelino plant (Brazil)** a greater control in consumption processes and reuse of water when washing viscose filters.

In addition, as part of its efficient water management strategy, Viscofan seeks the greatest possible reuse of water. In 2018, it was endeavoured to make greater use of reused water in China, but it did not have the expected results. However, the reuse project at the Pando plant (Uruguay) commenced in 2020 is being consolidated and various projects have been implemented in Brazil to reuse water from the production process to wash the equipment, to supply the fire system, and to irrigate the garden.

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These projects, of great importance and technical complexity, have increased the percentage of water reuse:

	2023	2022	2021	2020	2019	2018
Water reused in m3	85,341	57,077	16,942	15,172	1,069	26,635
% of the water consumed	6.7%	3.2%	0.7%	0.7%	0.1%	1.5%

All captures are strictly regulated by Public Administrations, which assign permits and determine the maximum permitted capture volumes to preclude significant effects. Hence, in 2023 there have been no recorded water sources significantly affected by the withdrawal of water from the organization.

On another note, according to the World Resources Institute list, the plants of Belgium, Mexico, Brazil and China are located in countries of high or extremely high water stress, a risk that the Group has identified. They account for 22% of total water withdrawal and 23% of the Viscofan Group's total water discharge in 2023. In the year, problems of water supply were not declared in these areas.

Responsible discharge

Protecting the quality of the water that we discharge is one of Viscofan's commitments. Adequate water management also includes correctly purifying its wastewater and minimising the impact of its activities on the environment; thus, we apply the best available technologies in an on-going process such as that of the Group.

As a result, Viscofan has water purification plants at its manufacturing facilities, where the treatment of water makes it possible to improve the quality of discharges. Factories that treat 100% of the water are: Cáseda (Spain), Zacapu (Mexico), Koteks (Serbia), Itu (Brazil), Pando (Uruguay) and Suzhou (China).

Water discharge broken down by destination is as follows:

Viscofan has water purification plants at its manufacturing facilities, where the treatment of water makes it possible to improve the quality of discharges.

Water discharge in m3	**2023**	2022	2021	2020	2019	2018
Freshwater surface	5,415,241	5,157,283	4,643,755	4,588,313	4,354,863	4,279,568
Municipal processing plant	3,425,199	3,763,547	3,788,866	3,682,863	3,405,950	3,387,789
TOTAL	**8,840,440**	**8,920,830**	**8,432,621**	**8,271,176**	**7,760,813**	**7,667,357**

2030 commitment to reduce the intensity of water withdrawal

The United Nations Global Compact, of which Viscofan is a signatory member, is committed to SDG 6. Clean water and sanitation. Viscofan's commitment has materialised with a target by 2030 of a 10% reduction in water withdrawal over a million extruded metres with respect to 2018.

The installation of new production technologies with lower water needs, efficiency measures in the use of water and its reuse have allowed Viscofan to achieve in advance, in 2023, the objective set for 2030. This milestone makes us optimistic about analysis to look for new targets.

The variations in the ratio on a baseline of 100 for 2018 are as follows:

Base 100 year 2018	**2030 Commitment**	**2023**	2022	2021	2020	2019	2018
Water withdrawal in m^3 / Extruded metres	**90**	86	89	95	100	101	100