

# Application story



## Sodium Hydroxide for Polymer and Resin Production

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| <b>Location</b>            | Brazil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Hydra-Cell model</b> | H25IKPGHFHPA        |
| <b>Type of application</b> | Sodium Hydroxide for Polymer and Resin Production                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Flow rate</b>        | 1800 L/hr (475 gph) |
| <b>Liquid</b>              | Sodium Hydroxide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Pressure</b>         | 8 bar (116 psi)     |
| <b>Application details</b> | <p>Braskem is the largest producer of thermoplastic resins in the Americas, the world leader in the production of biopolymers and largest producer of polypropylene in the United States.</p> <p>In the process of pumping Sodium Hydroxide to various points of use in its Polo Mauá petrochemical plant near São Paulo, magnetic drive centrifugal pumps were constantly breaking down. Operating far below their best efficiency point (BEP) this caused cavitation and wear of the impellers and casings. The cost of repair could be almost as much as the cost of replacing the pump.</p> <p>Tetralon, Wanner's partner in Brazil, recommended and supplied Hydra-Cell H25 pumps with Variable Frequency Drives (VFD), which immediately solved the problem and have been operating faultlessly for over 2 years with minimal maintenance.</p> <p>Handling the pressure and flow requirement far better than the centrifugal pump and having no mechanical seals, they have eliminated leak problems and will run dry indefinitely if the tank empties.</p> <p>Formerly using 3hp motors on the mag drive pumps, the Hydra-Cells, being far more efficient, now only require 1hp motors.</p> <p>The success of this application has opened up further opportunities within the plant, as alternatives to conventional metering pumps.</p> |                         |                     |

**Advantages of Hydra-Cell pump on this application**

Hydra-Cell was chosen for this application for the following reasons:

- Ability to run dry without damage if a tanks empties.
- Reduced maintenance & downtime.

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