

## Applications

For strengthening adhesives a **CYRANNUS®** plasma treatment of surface is an economic solution with high performance. Reactive hotmelts gain very good immediate adhesion (tag) which is a prerequisite for assembling of bonded parts. Treatment with **CYRANNUS®** technology can be operated in-line with less than 10 seconds cycle time per piece.



R&D100 Award 2003



Young Female  
Entrepreneur Award  
2000

„Aus den praktischen Erfahrungen mit den Hidden Champions lernte ich mehr über Management als in zwei Jahrzehnten wissenschaftlicher Forschung“

Prof. Simon (founder of Simon, Kucher & Partners)

**CYRANNUS®**  
cylindrical resonator with annular slots

int. patents approved or pending, e.g.

EP 97906173

EP 98928283

EP 0872164

US 6204603 B1

US 6198224

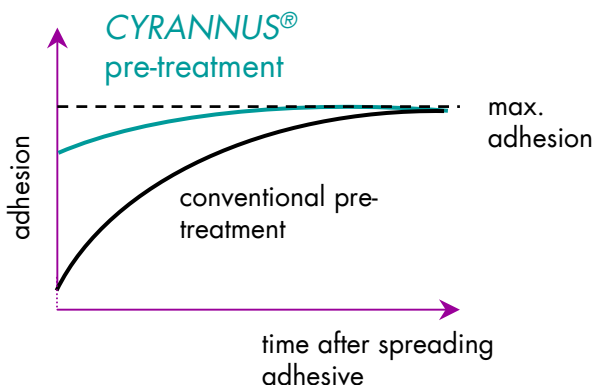
US 6543380

JP 531466

JP 524812

## Surface cleaning and activation

Improvement of adhesion between various plastic materials depends on the cleanness of the surface. Grease or other dirt are removed with a plasma cleaning step first and a following plasma doping of the polymer surface with carboxyl-groups. Bonding of materials with reactive hotmelts shows better performance (especially better tag) due to the high chemical reactivity at the surface. Processing at a medium pressure **CYRANNUS®** plasma enables the high reactivity after short time due to effective treatment.



## Advantages for users

- high tag with reactive hotmelt
- high activation ratio
- treatment of 3D Parts
- typical cycle time < 10 sec
- in-line/on-line plasma treatment possible
- low maintenance requirements

**iplas** innovative plasma systems gmbh  
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