



Base treatment for adhesion

Comparison of surface processing methods

Accelerates water and an abrasive with compressed air and projects the mixture against workpieces to be processed or cleaned.

Projects an abrasive against workpieces with compressed air to process them.

Chemically processes workpieces in a chemical solution.

Projects high-energy electrons and ions against work pieces to generate new substrate and remove dirt.

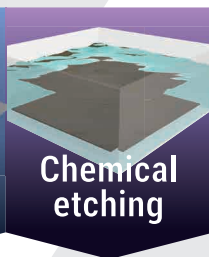
process



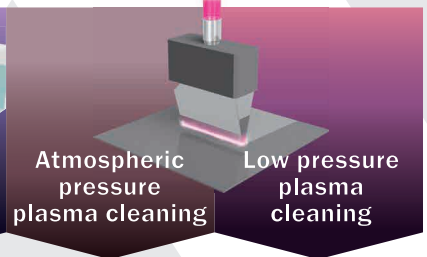
Wet Blast



Dry blast



Chemical etching



Atmospheric pressure plasma cleaning

Low pressure plasma cleaning

Uniformity of treated surface



Good



Large areas are processed unevenly because the nozzle opening is narrow.



Good



Possible with wide gun



Possible with large area electrodes

Wettability



Good



Depends on the surface state before processing.



Good



Temporarily good, but performance rapidly deteriorates.



Temporarily good, but performance rapidly deteriorates.

Presence of residue



Very few abrasive residues remain.



Abrasive residues remain.



None



None



None

Fine processing



Good



Abrasives less than 50 μm are difficult to use.



Good



Good



Excellent

Material selectivity



Materials and types of contamination do not matter because of physical treatment.



Materials and types of contamination do not matter because of physical treatment.



For some materials there are no suitable chemicals.



Organic substances only



Both inorganic and organic substances can be used depending on the reaction gas to be used.

Processing time



Fast



Fast



Fast



Fast



Slow

Dust



Little dust generation



Dust work



None



None



None

Equipment cost



Low



Low



Low



Low



High