

Charaterisation of a wettability defect of a surface

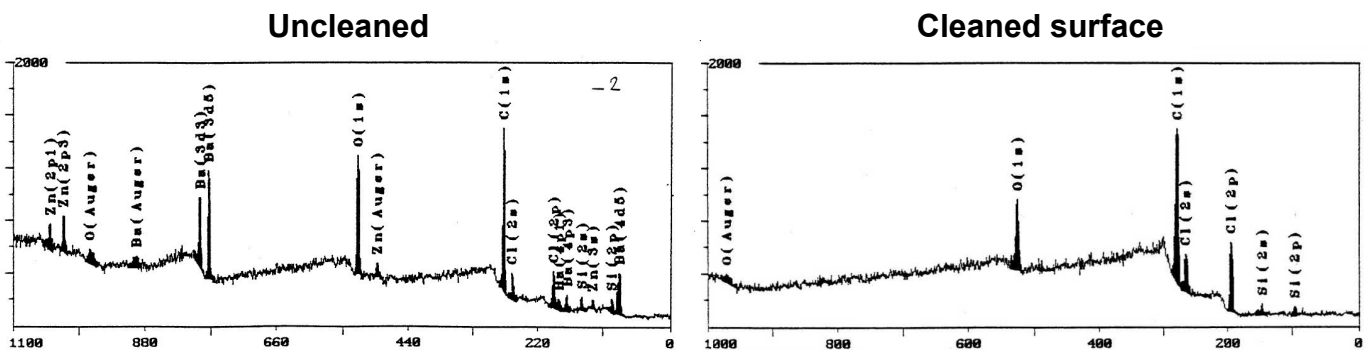
Subject: What is the influence of cleaning on PVC surface before paint application ?

- water cleaned PVC is easily painted
- uncleaned PVC shows paint adhesion failure

Technique: XPS

- ✓ For wettability, first atomic layers are involved
- ✓ Elemental and chemical analysis of the outmost surface (<10 nm)

Results:



Quantitative analysis

at. %	C	O	Cl	Si	Ba	Zn
1 (cleaned)	74	13	11.5	1.5	-	-
2 (not cleaned)	67	20	6.5	3	2	1.5

Conclusion:

Ba and Zn come from a mould release agent

⇒ Water rinsing eliminates the fatty acid type (soap) from mould release agent contamination