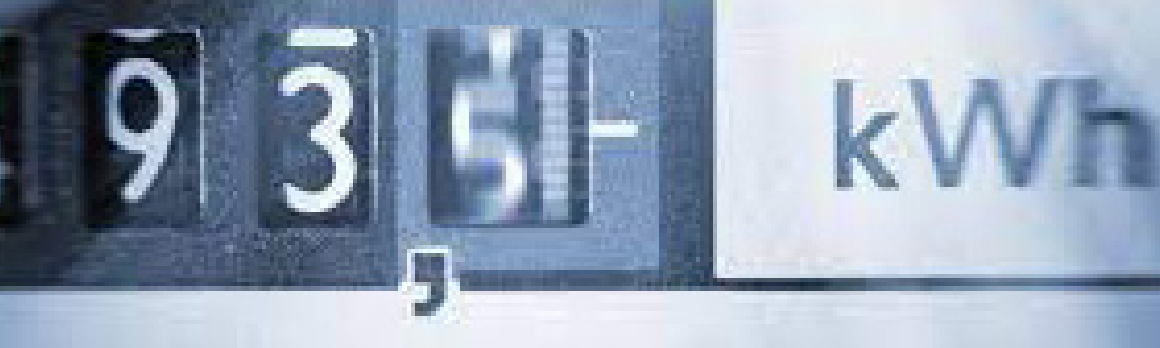




ENERGY-SAVING

water-based lacquer drying v. UV lacquer:

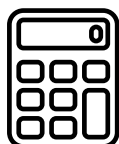
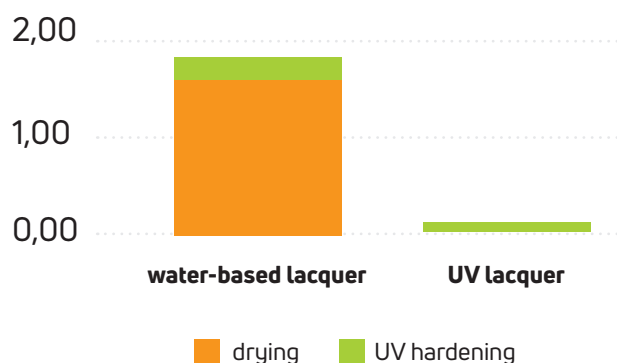
In an internal study, the CO² footprint of various lacquer systems were compared, taking application and drying into account.

Based on the data collected, energy consumption for lacquer drying and hardening can be determined.

If coating with a water-based lacquer and subsequent drying in a hot-air dryer is compared with that of a rolled UV surface, significant savings ensue.

Using the UV lacquer means energy savings of more than 90 % can be achieved!

Energy consumption KWh per mm²
(Drying and UV hardening)



Calculation example:

Water-based lacquer

Spraying unit, average
loading width 0.7 m, forward feed
rate 5m/min = 210 m²/h

Water-based lacquer hardening:

4 lamps 80W/cm at 150 cm;
48 KWh at 0.23 KWh/m²

Water-based lacquer drying:

332 KWh / 210 m² = 1.58 KWh/m²

UV lacquer

Spraying unit, average
loading width 0.7 m, forward feed
rate 20 m/min = 840 m²/h

UV lacquer hardening:

4 lamps 80W/cm + 3 lamps 120W/cm
at 150 cm; 102 KWh at 0.12 KWh/m²

If, with a new system design, energy-saving LED UV technology is also put in place, energy costs are reduced even further.

Details:



When the m² performance of both types of system are compared, the roller application also nudges ahead compared to the spraying process: Surface performance is 4 times higher in the roller application.

Energy consumption:

Water-based lacquer
hardening and drying:

1.81 KWh/m²

UV lacquer hardening:

0.12 KWh/m²