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## **PHOTOREACTIVE SOLVENT-FREE LOW VISCOSITY SYSTEMS (LVS-PSA) AS RAW MATERIALS FOR MANUFACTURING OF DIVERSE ADHESIVE TAPES**

Environmental concerns dealing with reduction in volatile organic compounds (VOC) effected with a growth of interest in solvent-free pressure-sensitive adhesives development. On the market are known photoreactive hotmelt pressure-sensitive adhesives (HMPSAs) based on acrylics. According to BASF photoreactive solvent-free self-adhesives are small, but relatively stable market. The UV-crosslinkable pressure-sensitive adhesives are rapidly expanding technology. UV-crosslinkable at room temperature coatable low viscosity solvent-free PSA based on acrylics are relatively new PSA systems (SF-LVS) are at the moment not commercially available on the market. They are characterized by low viscosity which allows for coating at ambient temperatures, de facto at room temperature, using conventional roll coating equipment. Production of low viscosity photoreactive solvent-free acrylic pressure-sensitive adhesives ran as following:

- Synthesis of photoreactive solvent-borne acrylic PSAs in the presence of monofunctional photoreactive diluents and photoinitiators
- Evaporation of polymerization medium to obtain solvent-free PSA
- Addition of multifunctional photoreactive diluents and "UV-transparent" soft resins after polymerization
- Addition of conventional crosslinking agents for ameliorating of shear strength