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Additive Manufacturing of Photocatalytic Reactors

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Supplementary Information.

A Physical and Chemical Properties of TiO2 Aeroxide® P25 (Evonix)

Table 1 shows the characteristic physical and chemical data.

Table 1 Physical and Chemical Properties of TiO_2 Aeroxide® P25 (Evonix).

Specific surface area (BET)	35-65 m^2/g
pH value in 4% dispersion	3.5-4.5
Loss on drying (2h at 105 °C)	≤1.5 %
Tamped density	100-180 g/l
Titanium Dioxide based on ignited material	≥99.50%
Al_2O_3 based on ignited material	≤0.300%
SiO_2 based on ignited material	≤0.200%
Fe_2O_3 based on ignited material	≤0.010%
HCl based on ignited material	≤0.300%
Sieve residue (by Mocker, 45µm)	≤0.050%

B Conditions of Rheological Tests

In rotational tests, all the resins were tested and classified under the conditions set in Table G.2.

Table 2 Experimental Conditions used in CSR and CSS Tests.

Test	**R1**	**R2**
Type of curve	Viscosity curve (VC)	Flow curve (FC)
Temperature (°C)	20	20
Shear Rate $\dot{\gamma}$ (s^{-1})	1-100	-
Shear Stress τ (Pa)	-	1-100
Increasing	linear	linear
Measurement Time	100 points 5 s/point	100 points 5 s/point

Table 3 Step conditions of the Temperature-dependent viscosity (TC) test.

	Pre-shear	***Ramp Up***	***Ramp Down***
Temperature (°C)	20	20-40	40-20
Shear Rate $\dot{\gamma}$ (s^{-1})	100	100	100
Increasing	-	Linear	-
Measurement Time	1 point 3 min/point	100 points 5s/point	3 points 2 min/point