



湖北汇富纳材料股份有限公司
HUBEI HUIFU NANOMATERIAL CO.,LTD.



HIFULL-Fumed Titanium Dioxide | Hydrophilic

HIFULL NT-50

HYDROPHILIC Fumed Titanium Dioxide

NT-50 is titanium dioxide (TiO₂) prepared by pyrolysis process. It has ultra-fine particle size, high purity, high specific surface area and unique combination of anatase and rutile mixed crystal structure. This product is applied in the field of catalysis and photocatalysis, it can also be used as an effective UV filter.

01 Applications

- Efficient catalyst substrate with good thermal and hydrothermal stability;
- Efficient photocatalyst for formulation of self-cleaning construction materials;
- Suitable for the construction of efficient dye-sensitized solar cells;
- Heat stabilizer and flame retardant for silicone rubbers;
- Additive and raw material for ceramic and metal materials as bonding agent, sintering additive, or structural component;
- Dry coating of cathode materials in Li-ion batteries to increase performance and service time.

02 Properties

- Small particle size, high purity, high specific surface area ;
- Combination of anatase and rutile mixed crystal structure, mainly anatase structure;
- Good thermal and chemical stability;
- Outstanding catalytic and photocatalytic efficiency;
- Photoactive under UV radiation;
- Heat-stabilizing effect in silicone elastomers

03 Physical & Chemical Data

Properties	Unit	Typical Value	Testing Standard
Specific surface area (BET)	m ² /g	50±15	GB/T 20020
pH in 4% dispersion		3.5~4.5	GB/T 20020
Loss on drying(2 hours at 105°C)	%	≤1.5	GB/T 20020
Loss on ignition (2 hours at 1000°C)	%	≤2.5	GB/T 20020
TiO ₂ Conten(based on ignited material)	%	≥99.5	GB/T 19591
Tamped density	g/dm ³	140±40	GB/T 20020
Crystal Structure		anatase and rutile mixed crystal structure	GB/T 19591

※ customized products available for special physical or chemical data



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HIFULL-FUMED SILICA | Parameter Summary

FUMED NANOMATERIAL EXPERT

Grade	Specific Surface Area (nitrogen adsorption method) (m ² /g)	pH value in dispersion	Loss at 105°C (%)	Loss on ignition (%)	Sieve residue (45μm) (mg/kg)	Silica content (%)	Carbon content (%)	Tamped density (g/L)	Product application
Hydrophilic Fumed Silica									
HL-90	100±20	3.9~4.5	≤1.0	≤1.5	≤250	≥99.8	—	45~60	Surface-treatment for base materials, Polish & Grind, Coatings, Printing inks, Personal Care Products, Food
HL-150	150±15	3.9~4.5	≤1.5	≤2.0	≤250	≥99.8	—	40~60	Silicone rubber, rubber, offset printing, medicines, cosmetics, creams, thermal insulation materials
HL-200	200±20	3.9~4.5	≤2.0	≤2.0	≤250	≥99.8	—	40~60	Silicone rubber, adhesives, inks, coatings, pharmaceuticals, defoamers, thixotropic resins, gel coat resins
HL-260	260±20	3.7~4.5	≤2.0	≤2.0	≤250	≥99.8	—	40~60	HTV & LSR Silicone Rubbers, Adhesives, Coatings & Printing Inks, UPR resins, Thermal Materials
HL-300	300±25	3.7~4.5	≤2.0	≤2.5	≤250	≥99.8	—	40~60	Silicone rubber, rubber, coatings, paint
HL-380	380±30	3.7~4.5	≤2.5	≤2.5	≤250	≥99.8	—	40~60	Silicone rubber, defoamer, ink, adhesive, pesticide
HL-450	450±30	3.7~4.5	≤2.5	≤2.5	≤250	≥99.8	—	40~60	High transparent LSR, Adhesives, Coatings & Printing Inks, Deformers, Carrier
Hydrophobic Fumed Silica									
HB-612	140±20	5.0~8.0	≤0.7	≤2.0	—	≥99.8	0.7~1.3	40~60	Room temperature vulcanization (RTV) silicone rubber, ceramics, pesticides, defoamers
HB-615	140±20	5.0~8.0	≤0.7	≤4.0	—	≥99.8	1.0~1.7	40~60	Ink, electronic potting adhesive, defoamer, silicone rubber
HB-620	170±30	6.0~9.0	≤0.7	≤4.0	—	≥99.8	1.5~2.5	40~60	Silicone rubber, powder coating, defoamer, paint
HB-630	300±30	6.0~9.0	≤0.7	≤5.0	—	≥99.8	2.5~4.0	40~60	
HB-132	140±20	6.0~9.0	≤0.7	≤4.0	—	≥99.8	2.0~4.0	40~60	Silicone rubber, defoamer, adhesive, sealant
HB-139	110±30	4.0~7.0	≤0.7	≤10.0	—	≥99.8	4.0~7.0	40~60	Powder coatings, adhesives, coatings, sealants
HB-151	120±30	≥3.7	≤0.7	≤2.5	—	≥99.8	0.6~1.2	40~60	Coatings, inks, adhesives, MS adhesives
HB-152	170±30	≥3.7	≤0.7	≤2.5	—	≥99.8	0.8~1.6	40~60	
HB-202N	170±20	8.0~10.0	≤2.0	≤8.0	—	≥99.8	1.0~2.0	40~60	Coatings, anticorrosive coating products, grinding of copper products, water-based inks and water-based coatings
HB-701	150±25	4.0~6.0	≤1.5	≥4.5	—	≥99.8	4.5~6.5	40~60	Paint and coating systems, plastics and elastomers, dental composites
Testing Method	GB/T 20200								
HB-612、HB-615、HB-620、HB-630、HB-132(HMDS-Treated)									
HB-139(PDMS-Treated)									
HB-151、HB-152(DDS-Treated)									
HB-202N、HB-701(Special Silane Treated)									

Grade	Specific surface area (BET)	pH in 4% dispersion	Loss on drying (2 hours at 105°C)	Loss on ignition (2 hours at 1000°C)	TiO ₂ Content (based on ignited material)	Tamped density	Crystalline Structure	Product application
Fumed Titanium Dioxide								
NT-50	50±15	3.5~4.5	≤1.5	≤2.5	≥99.5	140±40	混合晶型	silicone rubber, photocatalyst, Li-ion batteries, self-cleaning coating, Antibacterial paint, sun-block cream

Grade	Specific surface area (BET)	pH in 4% dispersion	Loss on ignition (2 hours at 1000°C)	Al ₂ O ₃ Content (based on 300°C dried material)	Crystalline Structure	Product application
Fumed Aluminium Oxide Al₂O₃						
ALuna-100	100±15	≥3.9	≤2.0	≥98.0	混合晶型	powder coatings, printing ink, Li-ion batteries, electret masterbatch, thermal insulation material, fluorescent lighting