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| | | Nucap 290W | NuloK 390 | Polyfil 80 | Polyfil DL | Polyfil WC |
| Description | | Reinforcing filler/extender for elastomeric systems. Nucap®290W is a high brightness kaolin with the highest level of surface treatment to impart the best mechanical properties and water resistance. Silane treated clays mix in quicker and may allow the formulator to reduce the amount of added silane. The treatment aids dispersion in soft, low shear compounds such as stoppers, tubing, and printing blankets. | High brightness, ultra-fine kaolin extender for white or bright colored rubber or plastic, spray dried bead form. | Higher brightness, medium particle size, calcined kaolin. | Large, platy delaminated clay that reduces gas/vapor permeability, spray dried bead form. | Polyfil®WC clay is an organo-functional calcined kaolin clay used in Wire and Cable and other thermoplastic applications. It is designed to reduce water vapor transmission, yields excellent wet and dry electrical properties, and also long-term stability in EPR and cross-linked polyethylene. Calcined clays have low conductivity due to the elimination of bound water during the calcined process. Compounds with calcined clay extrude smoothly and reduce stickiness in processing. |
| Description(和訳) | | エラストマー系用の補強用フィラー/エクステンダーです。最高の機械的特性と耐水性を付与した高輝度のスルフィドシラン化処理をしたカオリンです。 | 高輝度のアミノ化シラン処理を水簸カオリンです。形状はスプレー乾燥により、ビーズ状。白または明るい色のゴムやプラスチック用の高輝度超微粉末エクステンダーとして用いられます。 | 輝度が高く、粒子径が中程度の焼成カオリンです。一般的な水簸クレーよりも明るい色をしています。優れた加工性があり、補強性が限定的であるという特徴を備えています。焼成工程で結合水が除去されるため、優れた電気特性を示します。 | 湿式粉碎機によって、薄層に加工しスプレードライにより乾燥したビーズ状のカオリンです。ガス・蒸気の透過性を低下させます。 | ワイヤ&ケーブルや熱可塑性樹脂用途等に使用される無水・シラン化焼成カオリンです。焼成粘土は、焼成過程で結合水が除去されるため、低い電気伝導率を示します。 |
| Benefit | | Nucap 290W is a high brightness sulfur-functional silane treated kaolin with the highest level of surface treatment to impart the best mechanical properties and water resistance. Silane treated clays mix in faster and may allow the formulator to reduce the amount of added silane. The treatment aids dispersion in soft, low shear compounds. | Nulok 390 is a high brightness, amino-functional silane treated water-washed kaolin, designed for peroxide curing systems. The treatment aids dispersion in soft, low shear compounds. | Calcined clays, such as Polyfil 70, Polyfil 80 and Polyfil 90, are brighter than most water-washed clays, offering excellent processing and limited reinforcement. They impart outstanding wet/dry electrical properties due to the elimination of bound water during the calcining process. Compounds with calcined clays extrude smoothly and reduce stickiness in processing. These high brightness calcined kaolin clays are used to extend elastomeric and thermoplastics products, including wire and cable applications. | Polyfil DL and Polyfil DLX have platy particles that reduce gas/vapor permeability and help improve gas retention properties in rubber inner liners and other applications. C | Polyfil WC is an anhydrous silane-modified calcined kaolin clay used in wire and cable and other thermoplastic applications. It is designed to reduce water vapor transmission, yields excellent wet and dry electrical properties, and also good long-term stability in EPR and cross-linked polyethylene. Calcined clays impart low conductivity due to the elimination of bound water during the calcining process. Compounds with calcined clays extrude smoothly and reduce stickiness in processing. |
| Benefit (和訳) | | シラン処理されたカオリンは、より早く混ざり、シランの添加量を減らすことができます。シラン処理によって柔らかく低せん断性の化合物に高い分散を持ちます。 | シラン処理によって柔らかく低せん断性の化合物に高い分散を持っており、特に過酸化硬化システム用に設計されています。 | 焼成処理によって、加工時のべたつきが少なく、スムーズに押出すことができます。エラストマーや熱可塑性プラスチック製品の機能化に用いられ、電線やケーブルの用途にも使用されています。 | 平板状の粒子を有しており、ガス/蒸気の透過性を低下させ、ゴム製インナーライナーなどのガス透過率を下げます。板状の構造は、シールやローラーなどのゴム製品の弾性率やヒステリシスを向上させ、異方的な補強ができます。 | 水蒸気の透過を低減するように設計されており、EPRや架橋ポリエチレンでの高い安定性を示します。焼成粘土を使用したコンパウンドは、加工時のべたつきが少なく、滑らかなに伸びます。 |
| Region | | North America | North America | North America | North America | North America |
| Industry | | Rubber, Plastic | Rubber, Plastic | Rubber, Plastic | Rubber, Plastic | Rubber, Plastic |
| Application | | Non-Black Rubber, Tire, General Rubber Goods, Butyl Rubber, EPDM | Non-Black Rubber, Tire, General Rubber Goods, Butyl Rubber, Thermoset, Thermoplastic, EPDM, Wire & | Non-Black Rubber, General Rubber Goods | Non-Black Rubber, Tire, General Rubber Goods, Butyl Rubber, MasterBatch | Non-Black Rubber, General Rubber Goods, EPDM, Wire & Cable |
| Physical Form | | Dry | Dry | Dry | Dry, Slurry | Dry |
| CAS No. | | Proprietary | Proprietary | 92704-41-1 | 1332-58-7 | Proprietary |
| Screen Residue, 325 mesh, % | | 0.005 | 0.05 | 0.01 | 0.005 | 0.01 |
| Median Particle Size, microns (Malvern Laser) | | 0.4 | 0.4 | 3.2 | | 3.2 |
| Average Stokes Equivalent Particle Diameter, microns | | 0.2 | 0.2 | 1.3 | 0.75 | 1.4 |
| Oil Absorption, g/100g | | | | 54 | 45 | 54 |
| Brightness, % Reflectance (TAPPI) | | 91 | 91 | 92 | 87.5-89 | 91 |
| Specific Gravity | | 2.6 | 2.6 | 2.63 | | 2.6 |
| Bulking Value: lb/gal; gal./lb. | | | | 21.9; 0.046 | | 0.046 |
| Bulk Density, Loose, (lb/ft3) | | | | 23; 28 | | 40; 47 |
| Hegman Grind: | | | | 5+ | | 4+ |
| Surface Area, BET, m2/g | | 22 | 22 | 8 | 15 | 7-9 |
| Slurry Solids | | | | | | 67-69 |
| Crystalline Silica (quartz), % | | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Shipping Point | | Wrens, GA | Macon, GA | Macon, GA | Macon, GA | Macon, GA |
| pH | | 6 | 8.5 | 6 | 6 | 6 |