

PRODUCT MANUAL

INGRESSO CO.LTD

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COMPANY PROFILE

INGRESSOS CO, LTD WAS FOUNDED IN 1996. THE FIRM'S MAIN BUSINESS ARE IMPORTATION OF CHEMICAL SUBSTANCES NAMELY BROWN & WHITE ALUMINIUM OXIDE, BLACK & GREEN SILICON CARBIDE, SYNTHETIC CRYOLITE(ONODA JAPAN), AND MANY MORE.

WE HAVE BEEN DISTRIBUTING RAW MATERIALS FOR FACTORIES IN THAILAND FOR OVER 26 YEARS

WE HAVE A WAREHOUSE TO STORE THE SAID PRODUCTS HERE IN THAILAND WHICH IS READY TO BE DELIVERED TO OUR CUSTOMERS WHEN NEEDED.



BROWN ALUMINIUM OXIDE

BROWN FUSED ALUMINA IS ALSO KNOWN AS BROWN FUSED ALUMINUM OXIDE OR BFA. WITH A MOHS HARDNESS OF 9, BROWN FUSED ALUMINUM OXIDE IS A HIGH STRENGTH, WEAR-RESISTANT MATERIAL POSSESSING A STRONG ABILITY TO RESIST VIGOROUS CHEMICAL ATTACKS (SUCH AS ACID AND ALKALI) AT EXTREME TEMPERATURES. BFA CAN BE MELTED IN ELECTRIC-ARC FURNACE OF VERY HIGH TEMPERATURE ABOVE 2000 C WHICH HAS A LOW IRON CONTENT MAKING IT PARTICULARLY VALUABLE IN REFRACTORY APPLICATIONS.



PRODUCT FEATURES

- USED FOR MAKING HIGH GRADE REFRACTORY, CASTABLE, FIREBLACK
- ABRASIVE BLASTING
- RESIN ABRASIVE
- COATED ABRASIVES
- ANTI-SKID SURFACES
- FUNCTIONAL FILLER
- FILTER MEDIA
- HYDRAULIC CUTTING
- VITRIFIED PRODUCT

PRODUCE PROCESSING:

RAW MATERIAL SORTING -> ELECTROLYSIS -> CRUSHING -> MAGNETIC SEPARATION & DE-IRONING -> SCREENING -> PHYSICAL & CHEMICAL INSPECTION -> PACKAGING STORAGE

WHITE ALUMINIUM OXIDE

WHITE FUSED ALUMINA (WFA) IS A RAW MATERIAL FOR PRODUCTION OF REFRACTORIES MATERIAL. IT ALSO CALLED WHITE CORUNDUM OR WHITE ALUMINUM OXIDE. COMPARING WITH THE BROWN FUSED ALUMINA, IT IS MORE HOMOGENOUS IN TERMS OF CHEMICAL COMPOSITION, STRUCTURE AND PROPERTIES. THE RESULT IS A PRODUCT WITH HIGH HARDNESS, HIGH FRIABILITY, HIGH PURITY, HIGH MELTING POINT, AND LARGE CRYSTAL SIZE



PRODUCT FEATURES

- WHITE FUSED ALUMINA (WFA) IS MADE FROM HIGH QUALITY ALUMINUM OXIDE POWDER / ALUMINA POWDER WHICH MELTED POINT ABOVE 2200C
- IT HAS HIGH HARDNESS, HIGH FRAIABILITY, HIGH PURITY, HIGH- MELTING POINT
- DUE TO HARDNESS AND DURABILITY, ABRASIVE IS REUSABLE FOR MULTIPLE TIMES
- HARDER THAN MOST BLASTING MEDIA WHICH CAN ACHIEVE FAST CUTTING ACTION

BLACK SILICON CARBIDE

BLACK SILICON CARBIDE IS MADE FROM QUARTZ AND SMOKELESS ACETYLENE AS THE MAIN RAW MATERIAL. IT IS MADE VIA LIGHT RESISTANCE FROM HYDRO METALLURGICAL, IT IS BLACK OPAQUE BODY HEXAGONAL CRYSTAL AND MOHS-HARDNESS IN THE 9.15, WHICH IS AFTER DIAMOND AND BORON CARBIDE WITH CRISP AND SHARP PERFORMANCE AND CERTAIN DEGREE OF CONDUCTIVE HEAT.



PRODUCT FEATURES

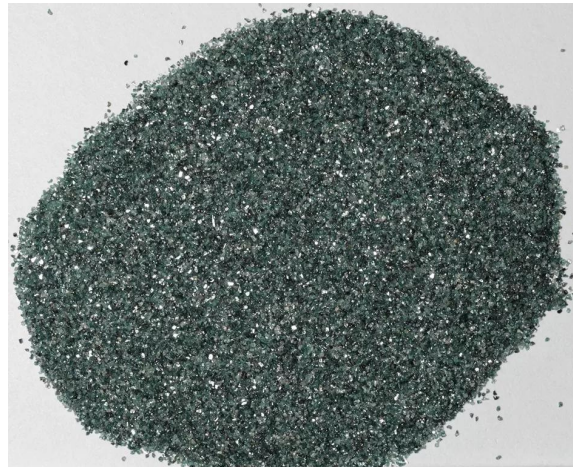
- POLISHING; COATING; CUTTING
- USED FOR GRINDING, PAINTING AND OTHER SURFACE TREATMENT

- MILLING& LAPPING
- HIGH TEMP SENSORS
- CERAMIC & GLASS & STONE PROCESS

- METAL MATRIX COMPOSITES
- WIRE-SAW SEMICONDUCTOR MATERIALS AND ETC.

GREEN SILICON CARBIDE

GREEN SILICON CARBIDE GC IS THE FINEST POWDER THAT ARE CRUSHED AND SIZED BY ADVANCED FINE POWDER TECHNOLOGY USING GREEN SILICON CARBIDE ABRASIVE AS RAW MATERIAL. IN ADDITION TO MAINTAIN HARDNESS CLOSE TO DIAMOND, IT IS ALSO EXCELLENT IN GRINDING AND POLISHING PROPERTIES WHICH WILL NOT BE AFFECTED BY CHEMICALS.



PRODUCT FEATURES

- POLISHING; COATING; CUTTING
- USED FOR GRINDING, PAINTING AND OTHER SURFACE TREATMENT

- MILLING& LAPPING
- HIGH TEMP SENSORS
- CERAMIC & GLASS & STONE PROCESS

- METAL MATRIX COMPOSITES
- WIRE-SAW SEMICONDUCTOR MATERIALS AND ETC.

SYNTHETIC CRYOLITE

SYNTHETIC CRYOLITE IS A WHITE CRYSTALLINE POWDER MANUFACTURED FROM HYDROFLUORIC ACID, SODIUM CARBONATE, AND ALUMINIUM. SYNTHETIC CRYOLITE IS USED CHIEFLY AS A FLUX IN THE ELECTROLYTIC PRODUCTION OF ALUMINUM AS IT EFFECTIVELY LOWERS DOWN THE MELTING POINT OF ALUMINA. IT IS USED IN THE GLASS AND ENAMEL INDUSTRIES, IN BONDED ABRASIVES AS A FILLER, IN MAKING SALTS OF SODIUM AND ALUMINUM AND PORCELANEOUS GLASS AND IN THE MANUFACTURE OF INSECTICIDES. CRYOLITE IS A RELATIVELY SAFE FRUIT AND VEGETABLE INSECTICIDE. THE FLUORIDE ION INHIBITS MANY ENZYMES THAT CONTAIN IRON, CALCIUM, AND MAGNESIUM.



PRODUCTION USED

- METAL SURFACE TREATMENT
- GLAZING FRITS
- SOLDERING AGENTS
- WELDING AGENTS
- BLASTING AND PYROTECNICS

BARIUM SULFATE

BARIUM SULFATE (OR SULPHATE) IS THE INORGANIC COMPOUND WITH THE CHEMICAL FORMULA BaSO_4 . IT IS A WHITE CRYSTALLINE SOLID THAT IS ODORLESS AND INSOLUBLE IN WATER. IT OCCURS AS THE MINERAL BARITE, WHICH IS THE MAIN COMMERCIAL SOURCE OF BARIUM AND MATERIALS PREPARED FROM IT. THE WHITE OPAQUE APPEARANCE AND ITS HIGH DENSITY ARE EXPLOITED IN ITS MAIN APPLICATIONS



PRODUCTION USED

- DRILLING FLUIDS
- PIGMENT
- PAPER BRIGHTENER
- PLASTICS FILLER
- NICHE USES
- CATALYST SUPPORT
- PYROTECHNICS
- COPPER INDUSTRY

AMMONIUM BIFLUORIDE

AMMONIUM BIFLUORIDE IS THE INORGANIC COMPOUND WITH THE FORMULA NH_4HF_2 OR $\text{NH}_4\text{F} \cdot \text{HF}$. IT IS PRODUCED WITH AMMONIA AND HYDROGEN FLUORIDE. THIS COLORLESS SALT IS A GLASS ABRASIVE AND IS INTENDED AS AN INTERMEDIATE IN THE PRODUCTION OF HYDROFLUORIC ACID. IT IS SOLUBLE IN WATER AND DISSOLUTION PRODUCES HYDROFLUORIC ACID.

OTHER NAMES ARE AMMONIUM HYDROGEN FLUORIDE; AMMONIUM ACID FLUORIDE; AMMONIUM HYDROFLUORIDE; THEY ARE AMMONIUM DIFLUORIDE AND AMMONIUM HYDROGEN DIFLUORIDE.

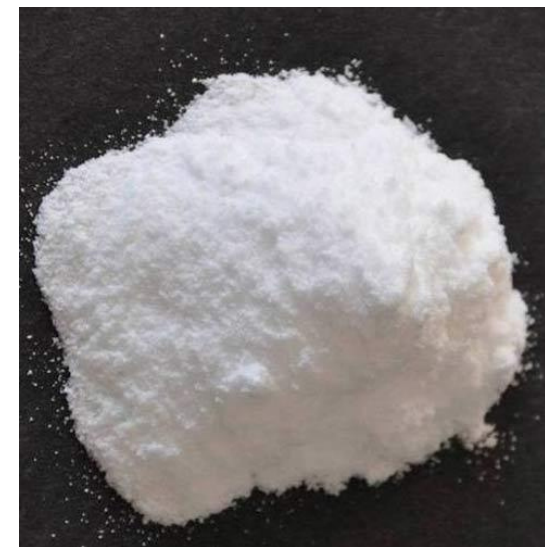


PRODUCTION USED

- METAL INDUSTRY
- FOOD INDUSTRY
- DAIRY PRODUCTS
- POWER STATIONS
- GLASS MANUFACTURING
- ALCOHOLIC BEVERAGE
- SURFACE CLEANER

AMMONIUM SULFATE

AMMONIUM SULFATE IS AN INORGANIC SULFATE SALT OBTAINED BY REACTION OF SULFURIC ACID WITH TWO EQUIVALENTS OF AMMONIA. A HIGH-MELTING (DECOMPOSES ABOVE 280°C) WHITE SOLID WHICH IS VERY SOLUBLE IN WATER (70.6 G/100 G WATER AT 0°C; 103.8 G/100 G WATER AT 100°C), IT IS WIDELY USED AS A FERTILIZER FOR ALKALINE SOILS. IT HAS A ROLE AS A FERTILIZER. IT IS AN AMMONIUM SALT AND AN INORGANIC SULFATE SALT.



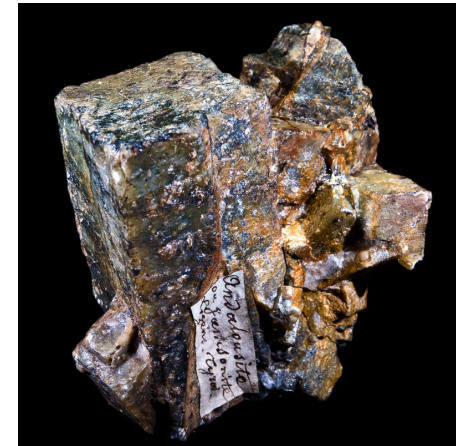
PRODUCTION USED

- WOOD PRESERVATIVE
- WOOD PULP
- METAL FASTENER
- DOUGH CONDITIONER
- FIRE EXTINGUISHER POWDER
- FLAME PROOFING AGENTS

ANDALUSITE

ANDALUSITE IS AN ALUMINOSILICATE MINERAL WITH A CHEMICAL COMPOSITION OF Al_2SiO_5 . IT FORMS AT LOW TO MEDIUM METAMORPHIC TEMPERATURES AND PRESSURES WHERE ARGILLACEOUS ROCKS (SUCH AS SHALE) ARE EXPOSED TO REGIONAL AND CONTACT METAMORPHISM.

ANDALUSITE IS A ROCK-FORMING MINERAL MOST COMMONLY FOUND IN SCHIST, GNEISS, AND HORNFELS. MINOR AMOUNTS ARE ALSO FOUND IN GRANITE AND GRANITIC PEGMATITE.



PRODUCTION USED

- HEAT-RESISTANT BRICKS
- CERAMIC OBJECTS
- STEEL-MAKING
- METAL PROCESSING INDUSTRIES
- CERAMIC PRODUCTS

SILLIMANITE

SILLIMANITE, WITH THE CHEMICAL FORMULA Al_2SiO_5 THE TERM SILLIMANITE WAS FIRST DESCRIBED IN 1824 FOR AN OCCURRENCE IN CHESTER, US. A COMMON FORM OF SILLIMANITE IS KNOWN AS FIBROLITE. IT IS NAMED FIBROLITE BECAUSE THE MINERALS OCCUR LIKE A BUNCH OF FIBER TWISTED TOGETHER WHEN OBSERVED IN THIN SECTIONS OR BY NAKED EYES. BOTH THE FIBROUS AND COMMON FORMS OF TRADITIONAL SILLIMANITE ARE FOUND IN METAMORPHOSED SEDIMENTARY ROCKS.

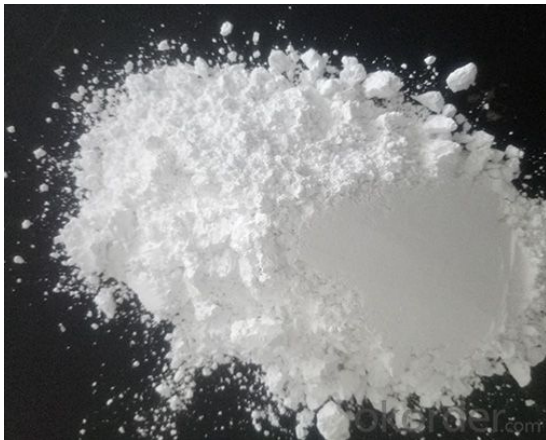


PRODUCTION USED

- HIGH QUALITY ALUMINI REFRACTORIES
- ALUMINA BRICK

CALCINED ALUMINA

CALCINED ALUMINA IS GENERALLY USED IN THE MANUFACTURE OF HIGH-GRADE CERAMIC SHAPES, REFRACTORIES AND FUSED ALUMINA ABRASIVES. IT CAN BE COMPRESSED TO PRODUCE A FIRED DENSITY OF 3.8 OR MORE. AMAZINGLY, CERAMIC BODIES CONTAINING 95% OR MORE ALUMINA ARE BEING EMPLOYED TO PRODUCE CERAMIC PARTS FOR A WIDE RANGE INDUSTRIES (FIRED TO 1400C OR MORE). FABRICATION METHODS AND GLAZING VARY ACCORDING TO APPLICATION. ALUMINA HAS A VERY HIGH MELTING TEMPERATURE (ABOUT 2000C) AND ALUMINA CERAMICS CAN MAINTAIN UP TO 90% OF THEIR STRENGTH ABOVE 1100C.



PRODUCTION USED

- HIGH GRADE CERAMIC SHAPES
- MANUFACTURE OF REFRACTORIES
- GLASS, ENAMEL
- ELECTRONIC CERAMICS
- PORCELAINS

BAUXITE

BAUXITE IS A MIXTURE OF MINERALS THAT CONTAIN, AS WELL AS IMPURITIES, DIFFERENT CONCENTRATIONS OF HYDRATED ALUMINIUM OXIDES. GIBBSITE (ALUMINA TRIHYDRATE), BOEHMITE, AND DIASPORE (ALUMINA MONOHYDRATES) ARE THE MAIN ORE MINERALS. BAUXITE IS A HIGH-ALUMINIUM-CONTENT ROCK. THAT IS THE MAIN ORE THAT ALUMINIUM IS MINED FROM. ONE OF THE MOST COMMON ELEMENTS ON EARTH IS BAUXITE. IT CONTAINS ALMOST 25 PERCENT-30% ALUMINA. IN THE BELT AROUND THE EQUATOR, BAUXITE IS COMMONLY FOUND.



PRODUCTION USED

- MANUFACTURE OF ALUMINIUM
- REFRACTORY PRODUCTS
- CHEMICALS
- CEMENTS

TABULAR ALUMINA

TABULAR ALUMINAS ARE FULLY SHRUNK COARSE CRYSTALLINE ALPHA ALUMINAS THAT HAVE BEEN CONVERTED TO THEIR CORUNDUM FORM. TABULAR ALUMINA IS PRODUCED BY SINTERING BALL-FORMED, INTERMEDIATELY BURNED CALCINED ALUMINA AT A TEMPERATURE JUST UNDER 2040 C MELTING POINT OF ALUMINUM OXIDE. THESE TABULAR ALUMINA BALLS ARE THEN CRUSHED, GRADED OR SCREENED, GROUND AND BLENDED TO A WIDE RANGE OF GRANULAR OR POWDERED PARTICLE SIZE DISTRIBUTIONS.



PRODUCTION USED

- REFRACTORY MATERIAL
- CERAMIC MATERIAL
- INSULATING MATERIALS.

FUSED SPINEL

FUSED Al_2O_3 -MGO SPINEL IS MADE FROM INDUSTRIAL ALUMINA AND HIGH-PURITY CCM, MELTING IN ELECTRIC ARC FURNACE. THE RESULTING FUSED SPINEL HAS LARGE CRYSTALS AND EXHIBITS EXCELLENT CORROSION RESISTANCE TO MOLTEN METALS AND SLAGS, THERMAL SHOCK RESISTANCE, AND GOOD HOT STRENGTH.

IT IS AN IDEAL MATERIAL FOR PRODUCTION OF HIGH-GRADE MAGNESIA-ALUMINA BRICK, HIGH PERFORMANCE MAGNESIA-ALUMINA CASTABLE, LARGE CEMENT KILN, MAGNESIA-ALUMINA LADLE CASTABLE, BLAST FURNACE IRON RUNNER CASTABLE, SLIDE GATE NOZZLE, CONTINUOUS CASTING SLIDE BOARD AND NOZZLE BRICK.



PRODUCTION USED

- HIGH GRADE MAGNESIA-ALUMINA BRICKS
- MAGNESIA-ALUMINA CASTABLE
- SLIDING NOZZLES
- SLIDE PLATES

REACTIVE ALUMINA

REACTIVE ALUMINA IS A FULLY GROUND CALCINED ALUMINA OF WHICH A SUBSTANTIAL PORTION (20 TO 90%) IS MADE OF PRIMARY CRYSTALS LESS THAN 1 MM. IN THEIR MAKING, REACTIVE ALUMINAS REQUIRE INTENSIVE GRINDING SUCH AS BATCH DRY GRINDING IN A CERAMIC-LINED BALL MILL WITH CERAMIC GRINDING MEDIA FOR MORE THAN 24 HR. REACTIVE ALUMINAS ARE SPECIALLY DESIGNED FOR THE PRODUCTION OF HIGH-PERFORMANCE REFRACTORIES WHERE DEFINED PARTICLE PACKING, RHEOLOGY, AND CONSISTENT PLACEMENT CHARACTERISTICS ARE AS IMPORTANT AS THE SUPERIOR PHYSICAL PROPERTIES OF THE FINAL PRODUCT.



PRODUCTION USED

- ADVANCED CERAMICS
- HIGH QUALITY REFRACTORY PRODUCTS

DEAD BURNT MAGNESITE

DEAD BURNED MAGNESITE IS A RAW MATERIAL USED IN THE MANUFACTURING OF REFRACTORY. DEAD BURNT MAGNESITE IS PRODUCED IN THE ROTARY KILN BY SINTERING RAW MAGNESITE AT A CONTROLLED TEMPERATURE OF 1750 DEGREES CENTIGRADE AND IS CHEMICALLY INACTIVE. DEAD BURNT MAGNESITE IS CONSUMED ALMOST EXCLUSIVELY IN THE PRODUCTION OF REFRACTORY FIELD.

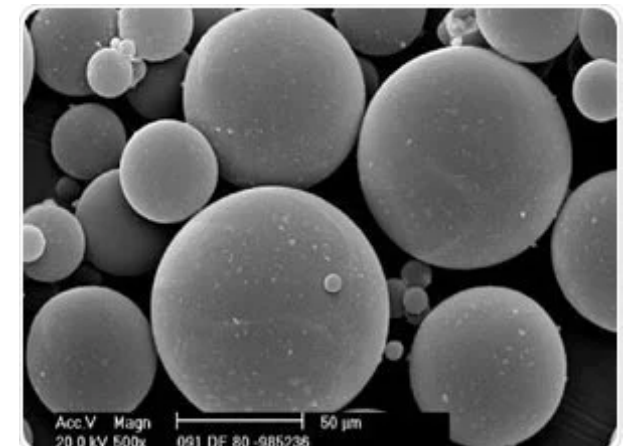
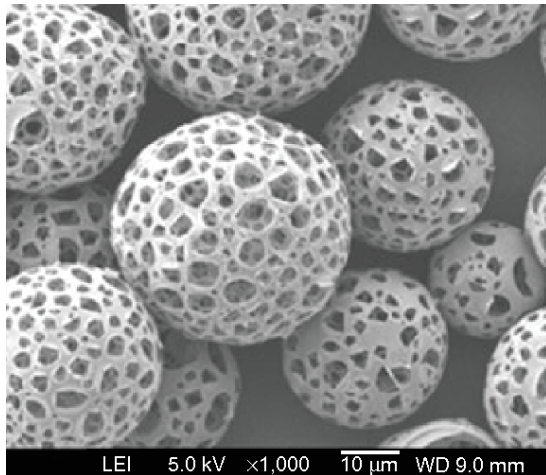


PRODUCTION USED

- BASIC REFRACTORY BRICKS
- COATING MATERIAL IN STEEL INDUSTRY
- SLAG BENEFICIATION AND IN SLAG SPLASHING IN ARC FURNACES.

MICROSPHERE

MICROSPHERES ARE SMALL, SPHERICAL PARTICLES USUALLY MADE UP OF BIODEGRADABLE AND BIOCOMPATIBLE POLYMERS HAVING THE SIZE RANGING FROM 1 TO 1000 μm AND INCORPORATING DRUGS AND OTHER BIOACTIVE WITHIN THEIR CORE. THEY OFFER NUMEROUS ADVANTAGES INCLUDING MASKING AND PROTECTING THE ENCAPSULATED DRUGS FROM THE HARSH ENVIRONMENT OF THE GASTROINTESTINAL TRACT, SUSTAINED AND CONTROLLED DRUG RELEASE, IMPROVED STABILITY, AND BIOAVAILABILITY



PRODUCTION USED

- BULKING AGENTS
- EMBOLIC- OR DRUG-DELIVERY PARTICLES
- COLORED OR LUMINESCENT LABELS FOR DETECTION

SODIUM CHLORIDE, IODINE SALT, POOL SALT

SODIUM CHLORIDE IS AN INORGANIC COMPOUND COMPOSED OF SODIUM CATION AND CHLORIDE ANION. IT IS COMMONLY KNOWN AS SALT SINCE THE SALT WE CONSUME AS A FOOD ADDITIVE IS MAINLY COMPOSED OF SODIUM CHLORIDE ALONG WITH SOME TRACE COMPOUNDS (SODIUM CHLORIDE ABOUT 99.8% IN SALT). THE CHEMICAL FORMULA OF SODIUM CHLORIDE IS NaCl .

SODIUM CHLORIDE IS AN IONIC COMPOUND. IT HAS 1:1 SODIUM IONS AND CHLORIDE IONS. SODIUM CHLORIDE IS THE COMPOUND THAT IS RESPONSIBLE FOR THE CHARACTERISTIC TASTE IN SEA WATER. THE FORMULA WEIGHT OF SODIUM CHLORIDE IS 58.44 G/MOL. SODIUM CHLORIDE IS WHITE WHEN IT IS PURE.



PRODUCTION USED

- FOOD SEASONING
- NATURAL PRESERVATIVE
- CLEANING POTS AND PANS
- PREVENTING MOLD
- SALTING ROADS IN THE WINTER
- ENHANCING THE NATURAL COLORS OF FOODS