淄博尚水化工销售有限公司
ZIBO SHANGSHUI CHEMICAL SALES CO., LTD
地址：山东省淄博市张店区南定镇大旦村东
ADDRESS: EAST OF DADAN VILLAGE, NANDING TOWN, ZHANGDIAN DISTRICT, ZIBO CITY, SHANDONG PROVINCE

# 陶瓷原材料
# 耐火原材料

## CERAMIC&REFRACTORY RAW MATERIALS

淄博尚水化工销售有限公司
ZIBO SHANGSHUI CHEMICAL SALES CO., LTD

# 公司简介:
Company Profile:

淄博尚水化工销售有限公司坐落于齐鲁腹地，素有“北方瓷都”之称的山东省淄博市，是一家从事陶瓷、耐火新材料为主的专业销售公司，公司成立于2005年；自成立以来，一贯秉承“质量至上、诚信为本、服务高效、互利共赢”的经营理念，与上下游企业建立了良好持久的合作，形成了辐射国内外的购销渠道和营销网络，在行业内树立了良好的信誉和口碑。近年来，公司整体业务取得了迅猛发展，已覆盖全国各大陶瓷产区，还出口至伊朗、朝鲜、越南、台湾等地;公司领导高度重视新产品的技术创新，不断推出符合国家产业政策的环保、节能型新材料，具有较强的产品竞争力和广阔的市场前景。

目前公司国内业务主要经营台湾坯体增强剂、分散剂、硫酸钙晶须，碳酸钡、碳酸锶、白刚玉、霞石、五水偏硅、煅烧滑石、煅烧氧化锌、煅烧高岭土、锆英粉、锆英砂、硅酸锆、苏州土、钾长石、元明粉、硅微粉、木质素、柠檬酸、三聚磷酸钠、羧甲基纤维素钠、片碱、纯碱、白云石、方解石、中高铝球石、氧化铝等陶瓷、耐火原料以及各种熔块、釉用原料。

ZIBO SHANGSHUI CHEMICAL SALES CO., LTD. IS LOCATED IN ZIBO CITY, SHANDONG PROVINCE, WHICH IS KNOWN AS THE "NORTHERN PORCELAIN CAPITAL" IN THE HINTERLAND OF QILU. IT IS A PROFESSIONAL SALES COMPANY MAINLY ENGAGED IN CERAMICS AND NEW REFRACTORY MATERIALS. THE COMPANY WAS ESTABLISHED IN 2005; SINCE ITS ESTABLISHMENT, IT HAS ALWAYS ADHERED TO THE BUSINESS PHILOSOPHY OF "QUALITY FIRST, INTEGRITY-BASED, EFFICIENT SERVICE, MUTUAL BENEFIT AND WIN-WIN", ESTABLISHED GOOD AND LASTING COOPERATION WITH UPSTREAM AND DOWNSTREAM ENTERPRISES, FORMED PURCHASE AND SALES CHANNELS AND MARKETING NETWORKS AT HOME AND ABROAD, AND ESTABLISHED A GOOD REPUTATION AND REPUTATION IN THE INDUSTRY. IN RECENT YEARS, THE COMPANY'S OVERALL BUSINESS HAS ACHIEVED RAPID DEVELOPMENT, COVERING MAJOR CERAMIC PRODUCING AREAS IN CHINA, AND ALSO EXPORTED TO IRAN, NORTH KOREA, VIETNAM, TAIWAN AND OTHER PLACES; THE LEADERS OF THE COMPANY ATTACH GREAT IMPORTANCE TO THE TECHNOLOGICAL INNOVATION OF NEW PRODUCTS AND CONSTANTLY LAUNCH NEW ENVIRONMENTAL PROTECTION AND ENERGY-SAVING MATERIALS IN LINE WITH THE NATIONAL INDUSTRIAL POLICY, WHICH HAS STRONG PRODUCT COMPETITIVENESS AND BROAD MARKET PROSPECTS.

AT PRESENT, THE COMPANY'S DOMESTIC BUSINESS IS MAINLY ENGAGED IN TAIWAN GREEN BODY ENHANCER, DISPERSANT, CALCIUM SULFATE WHISKER, BARIUM CARBONATE, STRONTIUM CARBONATE, WHITE CORUNDUM, NEPHELINE, PENTAHYDRATE SILICON, CALCINED TALC, CALCINED ZINC OXIDE, CALCINED KAOLIN, ZIRCON POWDER, ZIRCON SAND, ZIRCONIUM SILICATE, SUZHOU SOIL, POTASSIUM FELDSPAR, YUANMING POWDER, SILICA POWDER, LIGNIN, CITRIC ACID, SODIUM TRIPOLYPHOSPHATE, SODIUM CARBOXYMETHYLCELLULOSE SCHIST, SODA ASH, DOLOMITE, CALCITE, MEDIUM AND HIGH ALUMINA PEBBLE, ALUMINA AND OTHER CERAMICS, REFRACTORY RAW MATERIALS, AS WELL AS VARIOUS FRIT AND GLAZE RAW MATERIALS.

进出口业务主要包括产品台湾坯体增强剂、伊朗天青石原矿、氧化铝衬砖、马赛克衬片、中高铝球石、各种陶瓷、耐火原料。“大浪淘沙，适者生存。”

尚水化工正以不断崭新的精神面貌为客户提供高质量、高性价比的产品和服务，与广大客户精诚合作、共谋发展、共赢未来。

THE IMPORT AND EXPORT BUSINESS MAINLY INCLUDES PRODUCTS SUCH AS TAIWAN GREEN BODY ENHANCER, IRAN LAPIS LAZULI RAW ORE, ALUMINA LINING BRICK, MOSAIC LINING, MEDIUM AND HIGH ALUMINA PEBBLE, VARIOUS CERAMICS AND REFRACTORY RAW MATERIALS. "THE WAVES WASH AWAY THE SAND, AND THE FITTEST SURVIVE."

WITH A BRAND-NEW SPIRIT, SHANGSHUI CHEMICAL IS PROVIDING CUSTOMERS WITH HIGH-QUALITY AND COST-EFFECTIVE PRODUCTS AND SERVICES, AND SINCERELY COOPERATING WITH CUSTOMERS TO SEEK COMMON DEVELOPMENT AND WIN-WIN FUTURE.

服务热线：
（SERVICE HOTLINE）

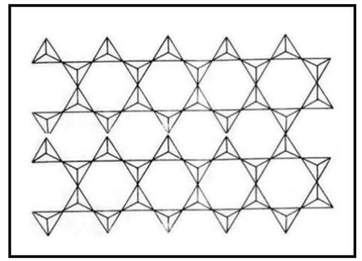
董经理：15288940587

郭经理：13589554197

地　址：山东省淄博市张店区南定镇大旦村东

# ○ 坯体增强剂：

Green body reinforcing agent：



坯体增强剂普遍存在粘度高或触变性大，易腐坏造成产品性能的减效或失效；增强剂增强效果不大，影响坯体的白度造成坯体的夹心黑心现象。

新型增强剂 CSP-001，能改善以上缺陷时可大幅提高坯体强度且还兼具解胶效果。

新型增强剂优点:（减水，助磨，增强，增塑)

GREEN BODY ENHANCERS GENERALLY HAVE HIGH VISCOSITY OR THIXOTROPY, WHICH IS EASY TO ROT, RESULTING IN THE REDUCTION OR FAILURE OF PRODUCT PERFORMANCE; THE REINFORCING AGENT HAS LITTLE REINFORCING EFFECT, WHICH AFFECTS THE WHITENESS OF THE GREEN BODY AND CAUSES THE SANDWICH BLACK CORE PHENOMENON OF THE GREEN BODY

THE NEW REINFORCING AGENT CSP-001 CAN IMPROVE THE ABOVE DEFECTS, GREATLY IMPROVE THE GREEN BODY STRENGTH AND HAVE THE EFFECT OF DEGUMMING.

ADVANTAGES OF NEW REINFORCER: (WATER REDUCTION, GRINDING AID, REINFORCEMENT, PLASTICIZATION)

## 增强原理（Enhancement principle）

增强剂主要结构 :层状结构，奈米SIO2

在坯体可降低膨胀系数，抗急冷急热化学稳定性好，和釉面结合时可提高釉面和坯体结合度平整度，SIO2-NACO3在坯体中是网络形成剂，AL2O3是网络中间体，NA2O网络变形体。

所以坯体以 SIO2-NACO3-R2O 成份，以形成桥氧构成的硼氧四面体，使部分形成三维空间架状结构，使坯体及烧后强度增加。

THE MAIN STRUCTURE OF THE ENHANCER: LAYERED STRUCTURE, NANO SIO2 THREE-DIMENSIONAL STRUCTURE.

IN THE GREEN BODY, IT CAN REDUCE THE EXPANSION COEFFICIENT, HAVE GOOD CHEMICAL STABILITY AGAINST RAPID COOLING AND HEATING, AND IMPROVE THE BONDING DEGREE AND FLATNESS OF THE GLAZE AND THE GREEN BODY WHEN COMBINED WITH THE GLAZE. SIO2-NACO3 IS A NETWORK FORMING AGENT IN THE GREEN BODY, AL2O3 IS A NETWORK INTERMEDIATE AND NA2O NETWORK DEFORMER.

THEREFORE, THE GREEN BODY IS COMPOSED OF SIO2-NACO3-R2O TO FORM A BORON OXYGEN TETRAHEDRON COMPOSED OF BRIDGE OXYGEN, SO THAT SOME PARTS FORM A THREE-DIMENSIONAL SPACE FRAME STRUCTURE, SO AS TO INCREASE THE STRENGTH OF THE GREEN BODY AND AFTER BURNING.

## 产品特性（Product characteristics）

易溶于水水溶液没有粘度还具有解胶性，加入泥浆后对泥浆流速无任何影响，同时减少泥浆的含水率，节约喷雾干燥塔的能耗。

溶解性好可与泥料一起球磨或外加混合搅拌都能达到使用效果。

产品加入泥料长时间不腐坏，不会出现时间超过24小时就失效或大大减效的状况(高温研磨质变断键)。使泥浆触变性减小，在放浆及输送上更加顺畅。替代目前越来稀少的粘土，减少砖坯配比的加入量，节省大量成本。每添加0.3%将可相应减少粘土3%，生坯强度在干燥前(和0.3%木质素强度相当)，干燥后(强度大于0.3%木质素)。替代塑性粘土后可使坯体强度增加明显，添加后对于通体砖将明显改善其发色力，节省色料比例加入量。可改善施釉后釉面平整度,施釉后水分向坯体渗透均匀减少产生施釉针孔凹釉,(可适当提高干燥坯温度降低干燥坯体含水率及提高入窑温度)砖坯由于粘土类的减少，使得塑性泥的烧失量降低，可实现低温快烧,提高窑炉产成率，节约燃料成本；且由于粘土质的泥料水分更不易挥发，减少其加入量可减少坯面乃至釉面的缺陷，减少类针孔现象的发生。

在陶瓷砖的生产中是一种很好的坯体增强剂，对坯体的增强有着显著效果，能够大大减少产品在生产过程中的开裂破损问题。

由于少加黏土，经配方结构调整后，球磨可以节省能源成本；减少泥浆水分；(降低噴喷粉粉料含水率)；可降低粉料制造成本及降低坯体膨胀系数。

IT IS EASY TO DISSOLVE IN WATER SOLUTION WITHOUT VISCOSITY AND ALSO HAS A COLLOIDAL PROPERTY. AFTER ADDING MUD, IT HAS NO EFFECT ON THE MUD FLOW RATE, AND AT THE SAME TIME, REDUCES THE WATER CONTENT OF THE MUD, AND SAVES THE ENERGY CONSUMPTION OF THE SPRAY DRYING TOWER.

IT HAS GOOD SOLUBILITY AND CAN BE MILLED TOGETHER WITH MUD OR MIXED AND STIRRED TO ACHIEVE THE USE EFFECT.

THE MUD ADDED TO THE PRODUCT WILL NOT DECAY FOR A LONG TIME, AND THERE WILL BE NO FAILURE OR SIGNIFICANT REDUCTION OF EFFICIENCY AFTER MORE THAN 24 HOURS (HIGH-TEMPERATURE GRINDING QUALITY BREAKS THE KEY). THE THIXOTROPY OF SLURRY IS REDUCED, AND THE SLURRY DISCHARGE AND TRANSPORTATION ARE SMOOTHER. REPLACE THE CLAY THAT IS BECOMING SCARCE AT PRESENT, REDUCE THE ADDITION OF BRICK PROPORTION, AND SAVE A LOT OF COSTS. EACH ADDITION OF 0.3% WILL REDUCE THE CLAY BY 3%, AND THE GREEN BODY STRENGTH IS BEFORE DRYING (EQUIVALENT TO THE STRENGTH OF 0.3% LIGNIN) AND AFTER DRYING (STRENGTH GREATER THAN 0.3% LIGNIN). AFTER REPLACING PLASTIC CLAY, THE GREEN BODY STRENGTH CAN BE SIGNIFICANTLY INCREASED. AFTER ADDING, IT WILL SIGNIFICANTLY IMPROVE THE CHROMOGENIC POWER OF THE WHOLE BRICK AND SAVE THE PROPORTION AND AMOUNT OF PIGMENT. IT CAN IMPROVE THE FLATNESS OF THE GLAZE SURFACE AFTER GLAZING, EVENLY PENETRATE THE WATER INTO THE GREEN BODY AFTER GLAZING, AND REDUCE THE GENERATION OF GLAZED PINHOLE CONCAVE GLAZE. (IT CAN APPROPRIATELY INCREASE THE TEMPERATURE OF THE DRY GREEN BODY, REDUCE THE MOISTURE CONTENT OF THE DRY GREEN BODY AND INCREASE THE KILN TEMPERATURE). DUE TO THE REDUCTION OF CLAY, THE LOSS ON IGNITION OF THE PLASTIC MUD IS REDUCED, WHICH CAN REALIZE LOW-TEMPERATURE RAPID FIRING, IMPROVE THE KILN PRODUCTION RATE AND SAVE THE FUEL COST; AND BECAUSE THE WATER CONTENT OF CLAY MUD IS LESS VOLATILE, REDUCING ITS ADDITION CAN REDUCE THE DEFECTS OF GREEN SURFACE AND EVEN GLAZE, AND REDUCE THE OCCURRENCE OF PINHOLE LIKE PHENOMENON.

IT IS A GOOD GREEN BODY REINFORCING AGENT IN THE PRODUCTION OF CERAMIC TILES. IT HAS A SIGNIFICANT EFFECT ON THE REINFORCEMENT OF GREEN BODIES AND CAN GREATLY REDUCE THE CRACKING AND DAMAGE OF PRODUCTS IN THE PRODUCTION PROCESS.

DUE TO LESS CLAY, AFTER ADJUSTING THE FORMULA STRUCTURE, BALL MILLING CAN SAVE ENERGY COST; REDUCE MUD MOISTURE; (REDUCE THE MOISTURE CONTENT OF SPRAYED POWDER); IT CAN REDUCE THE MANUFACTURING COST OF POWDER AND THE EXPANSION COEFFICIENT OF GREEN BODY.

## 产品型号 (Product model)

Product number
产品编号：CAS NO：371120171118064760

Importer series
进口商编: 3207400000

Product appearance
产品外观：白色粉末

Product application
产品应用：加入量为 0.3%-0.5%，

视配方中塑性泥料比例及压机性能而定。

Storage methods and precautions
储存方法及注意事项：塑料袋密封包装,置于干燥阴凉处。

Package specification
包装规格：25KG/袋

## 著名泉州陶瓷厂测试资料：

TEST DATA OF FAMOUS QUANZHOU CERAMIC FACTORY:

| 测试项目 | CSP-001 | 木质素 | CSP-001 | 木质素 |
|---|---|---|---|---|
| 加入量 | 0.3% | 0.3% | 0.5% | 0.5% |
| 生坯强度 | 0.6Mpa | 0.6Mpa | 0.7Mpa | 0.7Mpa |
| 烘干强度 200 度 | 2.6Mpa | 2.4Mpa | 3.3Mpa | 3.0Mpa |
| 流速(比重 1.70) | 43″ | 56″ | 45″ | 59″ |
| 吸水率(1200℃) | 0.1% | 0.2% | 0.09% | 0.2% |

## 抗弯强度测试资料：

BENDING STRENGTH TEST DATA:

| Sample Reference | 厚度 (mm) | 宽度 (mm) | 跨距 (mm) | 抗弯强度 (MPa) |
|---|---|---|---|---|
| 未添加坯体增强剂 | | | | |
| 未添加-250 度烘干 | 5.84 | 8.81 | 35.6 | 1.8943 |
| 未添加-250 度烘干 | 4.36 | 5.37 | 35.6 | 1.4585 |
| 未添加-250 度烘干 | 3.81 | 8.69 | 35.6 | 1.2868 |
| 标准偏差 | 1.05 | 1.95 | | 0.3132 |
| 添加 0.3%坯体增强剂 | | | | |
| 0.3%-250 度烘干 | 3.77 | 6.16 | 35.6 | 2.5837 |
| 0.3%-250 度烘干 | 3.81 | 6.24 | 35.6 | 2.4469 |
| 0.3%-250 度烘干 | 4.1 | 5.33 | 35.6 | 2.2145 |
| 标准偏差 | 0.18 | 0.50 | | 0.1866 |
| 添加 0.5%坯体增强剂 | | | | |
| 0.5%-250 度烘干 | 6.26 | 8.84 | 35.6 | 3.5533 |
| 0.5%-250 度烘干 | 4.06 | 5.46 | 35.6 | 3.1624 |
| 0.5%-250 度烘干 | 3.29 | 6.26 | 35.6 | 3.3491 |
| 标准偏差 | 1.54 | 1.77 | | 0.1955 |

## 白度测试资料：

WHITENESS TEST DATA:

| 产品断面比较 | |
|---|---|
| CSP-001 添加量 0.3%(上) | |
| 未添加(下) | |

| 产品白度比较 | |
|---|---|
| CSP-001 添加量 0.3% | 36.8 |
| 未添加 | 30.5 |

## 化学成分：

CHEMICAL COMPOSITION

佛山市優博陶瓷分析測試有限公司

檢測報告

表號：RA01　　報告編號：H2018111773

| | | | |
|---|---|---|---|
| 樣品名稱 | CSP-001(旭) | 樣品編號 | H2018111773 |
| 送樣單位 | 日玉盛複合材料股份有限公司 | | |
| 樣品特征 | 正常 | 樣品數量 | 約 200g |
| 實驗環境溫度 | 25℃ | 實驗環境濕度 | 68%RH |
| 檢測項目 | 見下表 | 收樣日期 | 2018 年 11 月 17 日 |
| 檢測類別 | 委託檢測 | 完成日期 | 2018 年 11 月 22 日 |
| 檢測依據 | GB/T 14506.28-2010 GB/T 4734-1996 | | |

檢測結果：

| 序號 | 項目 | 結果（%） | 序號 | 項目 | 結果（%） |
|---|---|---|---|---|---|
| 1 | IL（灼減） | 21.12 | 13 | $Li_2O$（氧化鋰） | <0.01 |
| 2 | $Al_2O_3$（三氧化二鋁） | 0.04 | 14 | PbO（氧化鉛） | <0.01 |
| 3 | $SiO_2$（二氧化矽） | 2.14 | 15 | ZnO（氧化鋅） | <0.01 |
| 4 | $Fe_2O_3$（三氧化二鐵） | <0.01 | 16 | $MnO_2$（氧化錳） | <0.01 |
| 5 | CaO（氧化鈣） | 0.21 | 17 | CoO（氧化鈷） | <0.01 |
| 6 | MgO（氧化鎂） | 0.034 | 18 | NiO（氧化鎳） | <0.01 |
| 7 | $K_2O$（氧化鉀） | 0.038 | 19 | CuO（氧化銅） | <0.01 |
| 8 | $Na_2O$（氧化鈉） | 44.46 | 20 | $Cr_2O_3$（三氧化二鉻） | <0.01 |
| 9 | $TiO_2$（二氧化鈦） | <0.01 | 21 | $SO_3$（氧化硫） | 0.04 |
| 10 | SrO（氧化鍶） | <0.01 | 22 | $B_2O_3$（氧化硼） | 31.77 |
| 11 | BaO（氧化鋇） | <0.01 | | 以下空白 | |
| 12 | $CeO_2$（二氧化鈰） | <0.01 | | | |

聲明：1. 檢測結果僅對來樣負責，樣品保留至出報告後 20 天。
2. 檢測報告部分複印無效。
3. 如對結果有異議，請在收到報告之日起 15 天內向本單位提出。

編制：　審核：　批准：　單位蓋章：

地址：廣東省佛山市禪城區霧崗路湾頭陶瓷城二座二層　網址：www.

電話：0757-82664221　傳真：0757-82664093　品質監督：13702931883

# 山东淄博XX陶瓷(烧后增强剂)

| | 加0.2增强剂 | 没加 |
|---|---|---|
| 强度 (STRENGTH) | 25 | 21 |
| 吸水率 (WATER ABSORPTION) | 1.8 | 2.7 |
| 破损 (BE DAMAGED ) | 25-40片 | 300片以上 |

## 改善效果说明
(DESCRIPTION OF IMPROVEMENT EFFECT)

1、 山东淄博 XX 陶瓷每日生产陶瓷原料约800吨原料，每日结省约300立方天燃气(烧成温度由1185度降为1170度)

2、配方中节省黏土料 (因为黏土越来越难取得)

3、成品破损率降低 (因为烧后强度增加)，废品减少 (废弃物处理要费用)

4、成品吸水率降低

5、烧成周期由40分钟调为35分钟(近期更往30分钟调整)

6、成品厚度下降 (强度够) 省土料减少运输成本

(以下客戶成品断面&化学分析)

淄博博泰斯特陶瓷技术服务有限公司

武汉理工大学淄博先进陶瓷研究院建筑陶瓷技术工程中心

检测报告

塔下料粉 4.22

| | | | |
|---|---|---|---|
| 样品编号 | [illegible] | 收样日期 | 20210422 |
| 客户信息 | 扫描件 | 试验条件 | 25℃ |
| 委托单位 | | 样品描述 | 粉末 |
| 检测项目 | 化学成分分析 | 样品数量 | 1 袋 |
| 检测标准 | GB/T4734-1996 等 | 报告日期 | 20210423 |

检测结果

| 序号 | 成分名称 | 含量 (%) | 序号 | 成分名称 | 含量 (%) |
|---|---|---|---|---|---|
| 1 | 二氧化硅 $SiO_2$ (%) | 65.06 | 10 | 氧化锰 MnO (%) | |
| 2 | 三氧化铝 $Al_2O_3$ (%) | 22.44 | 11 | 三氧化二铬 Cr2O3 (%) | |
| 3 | 三氧化铁 $Fe_2O_3$ (%) | 1.37 | 12 | 氧化锌 ZnO(%) | |
| 4 | 氧化钙 CaO (%) | 1.01 | 13 | 氧化铅 PbO (%) | |
| 5 | 氧化镁 MgO (%) | 0.55 | 14 | 氧化锆 ZrO (Zr+Hf)(%) | |
| 6 | 氧化钾 $K_2O$ (%) | 2.94 | 15 | 氧化钡 BaO (%) | |
| 7 | 氧化钠 $Na_2O$(%) | 1.62 | 16 | 氧化锶 SrO (%) | |
| 8 | 二氧化钛 $TiO_2$ (%) | 0.55 | 17 | 烧失量 I.L(%) | 4.24 |
| 9 | 五氧化二磷 $P_2O_5$ (%) | | 18 | 合计 | |

声明：1 检测结果对来样负责,样品保留 15 天，样品的代表性和均匀性有委托方负责；
2 若对结果有异议,请于收到结果 15 天内向本公司提出.
3 本结果不能作为商检依据，仅供质量控制参考和内部管理使用，本公司不承担联带商业责任

单位: BOTEST 批准: DQ 审核: MAL 测试: SDX

地址：山东省淄博市淄川区附郭陶瓷城对面(中国(淄博)陶瓷总部内陶创中心三楼 307
联系方式: 0533-8175103 联系人: 邓先生 微信号: zbbotest



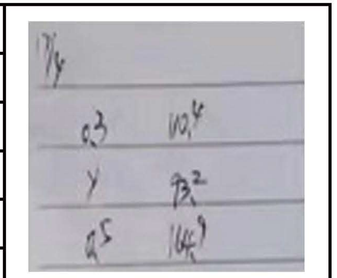
# 山西XX陶瓷厂

| | 未添加 (NOT ADDED) | 0.3 | 0.5 |
|---|---|---|---|
| 烘干强度 (DRYING STRENGTH) | 93.2 | 110.4 | 164.9 |
| 烧成强度 (FIRING STRENGTH) | 33 | 37 | 42 |
| 吸水率 (WATER ABSORPTION) | 1.3 | 0.18 | 0.16 |
| 白度 (WHITENESS) | 30 | 31.9 | 32.1 |

# 山西XX陶瓷（配方调整测试）

## 烧后增强剂测试数据
POST BURN ENHANCER TEST DATA

| 配方 (FORMULA) | 没加 (NOT ADDED) | 0.3% | 0.5% |
|---|---|---|---|
| 干燥强度 (DRYING STRENGTH) | 93.2 | 110.04 | 164.9 |
| 烧后强度 (STRENGTH AFTER BURNING) | 33 | 37 | 42 |
| 吸水率 (WATER ABSORPTION) | 1.3 | 0.18 | 0.16 |
| 白度 (WHITENESS) | 30 | 31.9 | 32.1 |
| 现场中试 (FIELD PILOT TEST) | 2.6/2.11/2.97 | 1.49/0.79/1.57 | |



物料200克加100水磨一分钟，打40克圆饼30压力，烘40分钟
GRIND 200 GRAMS OF MATERIAL WITH 100 WATER FOR ONE MINUTE, BEAT 40 GRAMS OF ROUND CAKE UNDER 30 PRESSURE AND BAKE FOR 40 MINUTES

建议用量:千分之3

使用烧后增强剂效果分析说明。

1、可以改善烧前烘干后生坯强度，可以减烧生坯断裂情形。

2、可以改善烧后成品强度，在成输送加工搬运减少破损提高良率，增加成品强度亦可提高加工成品率。

3、可以降低成品吸水率(如不须降吸水率)可以降低烧成温度,或提高生产量。

4、如工厂只需增加生坯强度可使用(烧前专用增强剂)。

5、烧成监温度可通尝降温阏整烧成曲象（可箭约燃氟)

6、我司可提供阕整参考建曦方案

RECOMMENDED DOSAGE: 3 ‰

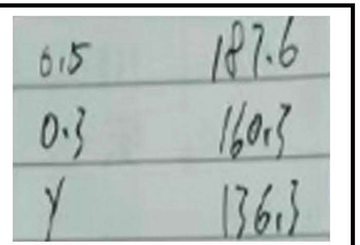
ANALYSIS AND DESCRIPTION OF THE EFFECT OF USING POST BURNING ENHANCER.

1. IT CAN IMPROVE THE STRENGTH OF GREEN BODY AFTER DRYING BEFORE FIRING AND REDUCE THE FRACTURE OF GREEN BODY.
2. IT CAN IMPROVE THE STRENGTH OF FINISHED PRODUCTS AFTER BURNING, REDUCE DAMAGE DURING TRANSPORTATION, PROCESSING AND HANDLING, AND IMPROVE THE YIELD. INCREASING THE STRENGTH OF FINISHED PRODUCTS CAN ALSO IMPROVE THE YIELD OF PROCESSED PRODUCTS.
3. IT CAN REDUCE THE WATER ABSORPTION OF THE FINISHED PRODUCT (IF IT IS NOT NECESSARY TO REDUCE THE WATER ABSORPTION), REDUCE THE FIRING TEMPERATURE, OR INCREASE THE PRODUCTION.
4. IF THE FACTORY ONLY NEEDS TO INCREASE THE GREEN STRENGTH, IT CAN BE USED (SPECIAL REINFORCING AGENT BEFORE BURNING).
5. THE FIRING MONITORING TEMPERATURE CAN BE REDUCED THROUGH TASTING, AND THE WHOLE FIRING IMAGE CAN BE MADE (THE ARROW CAN BURN FLUORINE)
6. OUR COMPANY CAN PROVIDE A REFERENCE JIANXI SCHEME

## 烧前增强剂测试数据

POST BURN ENHANCER TEST DATA

| 配方 (FORMULA) | 没加 (NOT ADDED) | 千分之3 (3/1000) | 千分之5 (5/1000) |
|---|---|---|---|
| 干燥强度 (DRYING STRENGTH) | 136.3 | 160.3 | 187.6 |
| 烧后强度 (STRENGTH AFTER BURNING) | | | |
| 吸水率 (WATER ABSORPTION) | | | |
| 白度 (WHITENESS) | | | |




泥浆200克(烧前增强剂加水搅拌加入搅拌烘干)，打40克圆饼30压力，烘40分钟

200 GRAMS OF SLURRY (ADD WATER TO STIR THE INTENSIFIER BEFORE BURNING, STIR AND DRY), BEAT 40 GRAMS OF ROUND CAKE WITH 30 PRESSURE AND BAKE FOR 40 MINUTES MINUTE

建议用量：千分之3

1、调整配方减少泥土用量有利于泄浆料（目前泥浆黏度太大不利研磨&卸料)

2、土料减少可以增加排水及有机质（减少烧失)&燃气可以减少有利节能

3、生坯强度提高有助于在线减少断坯

4、烧前可以提高生坯抗热震能力（入窑前可提高温度)(高温区可降低温度)

5、成品吸水率可以降低（降温或提高残渣省电)

6、依厂家决定追求参数决定最有利方向

RECOMMENDED DOSAGE: 3 ‰

1. ADJUSTING THE FORMULA TO REDUCE THE AMOUNT OF SOIL IS CONDUCIVE TO SLURRY DISCHARGE (AT PRESENT, THE SLURRY VISCOSITY IS TOO HIGH, WHICH IS UNFAVORABLE FOR GRINDING & UNLOADING)
2. THE REDUCTION OF SOIL MATERIALS CAN INCREASE DRAINAGE AND ORGANIC MATTER (REDUCE BURNING LOSS) & GAS CAN BE REDUCED, WHICH IS BENEFICIAL TO ENERGY CONSERVATION
3. THE INCREASE OF GREEN BODY STRENGTH IS HELPFUL TO REDUCE THE BREAKING OF GREEN BODY ON LINE
4. THE THERMAL SHOCK RESISTANCE OF GREEN BILLET CAN BE IMPROVED BEFORE FIRING (THE TEMPERATURE CAN BE INCREASED BEFORE ENTERING THE KILN) (THE TEMPERATURE CAN BE REDUCED IN THE HIGH TEMPERATURE ZONE)
5. THE WATER ABSORPTION OF THE FINISHED PRODUCT CAN BE REDUCED (COOLING OR IMPROVING THE RESIDUE TO SAVE ELECTRICITY)
6. THE MOST FAVORABLE DIRECTION IS DETERMINED BY THE MANUFACTURER

厂里用大量皂土类泥土温度高吸水率降不下来，加入增强剂0.3，0.5.降吸水率效果明显并增加砖体的强度，使其成品率大幅度提高.

THE FACTORY USES A LARGE AMOUNT OF BENTONITE SOIL. THE TEMPERATURE IS HIGH AND THE WATER ABSORPTION CANNOT BE REDUCED. ADD 0.3 AND 0.5 REINFORCEMENTS THE EFFECT OF REDUCING WATER ABSORPTION IS OBVIOUS, THE STRENGTH OF BRICK IS INCREASED, AND THE YIELD IS GREATLY IMPROVED



## 威海XX陶瓷厂

| | 未添加 (NOT ADDED) | 0.2 | 0.3 |
|---|---|---|---|
| 干坯强度 (DRYING STRENGTH) | 3.73 | 3.91 | 4.0 |
| 吸水率 (WATER ABSORPTION) | 2.95 | 1.94 | 1.66 |
| 收缩 (SHRINK) | 7.77 | 8.13 | 8.13 |
| 烧蚀 (ABLATION) | 4.82 | 5.0 | 4.77 |

厂里主要要求降土节能，增加干坯强度可以降低粘土的用量，降低吸水率可以降低窑炉的烧成温度，拉高产能.

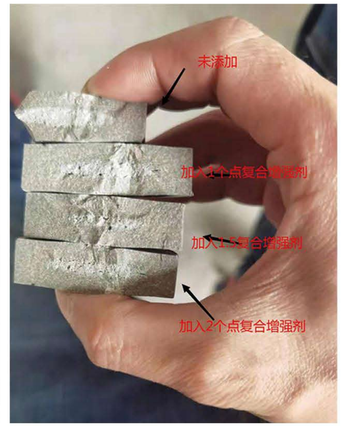
THE MAIN REQUIREMENTS OF THE PLANT ARE TO REDUCE SOIL AND SAVE ENERGY. INCREASING THE DRY STRENGTH CAN REDUCE THE AMOUNT OF CLAY, REDUCE THE WATER ABSORPTION, REDUCE THE FIRING TEMPERATURE OF THE KILN AND INCREASE THE PRODUCTION CAPACITY

## 诸城XX陶瓷

## 諸城XX陶瓷溫度曲綫調整建議

SUGGESTIONS ON TEMPERATURE CURVE ADJUSTMENT OF ZHUCHENG XX CERAMICS

| | | | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 982 | 1006 | 1080 | 1103 | 1121 | 1155 | 1151 | 1151 | 1151 | 1140 | 1084 | 1019 | 560 |
| | | | | | 1000 | 1020 | 1090 | 1110 | 1120 | 1152 | 1152 | 1152 | 1152 | 1142 | 1088 | 1020 | 900 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 1033 | 995 | 1023 | 1082 | 1065 | 1094 | 1095 | 1115 | 1109 | 1124 | 1155 | 1155 | 1154 | 1154 | 1142 | 1093 | 981 | |
| 1045 | 1049 | 1065 | 1085 | 1095 | 1105 | 1107 | 1115 | 1120 | 1125 | 1154 | 1154 | 1154 | 1154 | 1142 | 1092 | 982 | 900 |
| 1000 | 1010 | 1020 | 1040 | 1050 | 1070 | 1080 | 1090 | 1120 | 1130 | | | | | | | | |




## 诸城XX陶瓷中心黑心调整建议

1、试料，要试压力（2种）各压6片，厚一点，试干燥强度，烧后吸水率，和现场对比，主要要找出降低压机压力，有利排气

2、使用增强剂涂料建议调整（减量）不降低生坯强度下

3.坯体含铝量提高一点（瓷化度由增强剂替代）

4、可以提高残渣（有利排期及有机质）

5、烧成曲线修正一下

6、生坯强度增加下压力可修正下降

7、土料用料调整配比

8、钾长石用量多一些（钾始熔点较高）

SUGGESTIONS ON BLACK HEART ADJUSTMENT OF ZHUCHENG XX CERAMIC CENTER

1. FOR THE TEST MATERIAL, TEST THE PRESSURE (2 KINDS) AND PRESS 6 PIECES EACH, THICKER, TEST THE DRYING STRENGTH AND WATER ABSORPTION AFTER BURNING. COMPARED WITH THE FIELD, IT IS MAINLY TO FIND OUT HOW TO REDUCE THE PRESSURE OF THE PRESS AND FACILITATE EXHAUST
2. IT IS RECOMMENDED TO ADJUST (REDUCE) THE STRENGTH OF THE GREEN BODY WITHOUT REDUCING THE STRENGTH OF THE GREEN BODY
3. INCREASE THE ALUMINUM CONTENT OF THE GREEN BODY A LITTLE (THE PORCELAIN DEGREE IS REPLACED BY THE REINFORCING AGENT)
4. IT CAN IMPROVE THE RESIDUE (FAVORABLE DISCHARGE PERIOD AND ORGANIC MATTER)
5. CORRECT THE FIRING CURVE
6. WITH THE INCREASE OF GREEN STRENGTH, THE DOWNWARD PRESSURE CAN BE CORRECTED
7. ADJUST THE PROPORTION OF SOIL MATERIALS
8. THE AMOUNT OF POTASSIUM FELDSPAR IS MORE (THE INITIAL MELTING POINT OF POTASSIUM IS HIGHER)

厂里主要砖体黑心窑速提不上来.加入增强剂起到降低黏土用量，不降低坯体强度，增加铝含量由增强剂提高瓷化度.

THE MAIN BRICK BLACK CORE KILN IN THE FACTORY CAN'T BE PUT UP QUICKLY THE ADDITION OF REINFORCING AGENT CAN REDUCE THE AMOUNT OF CLAY, NOT REDUCE THE STRENGTH OF GREEN BODY, INCREASE THE ALUMINUM CONTENT, AND IMPROVE THE DEGREE OF PORCELAIN BY REINFORCING AGENT



## 山东XX陶瓷厂

| | 成品强度 (FINISHED PRODUCT STRENGTH) | 泡水12小时后 (AFTER SOAKING IN WATER FOR 12 HOURS) |
|---|---|---|
| 加0.3增强剂 (ADD 0.3 ENHANCER) | 54.09 | 36 |
| 未添加 (NOT ADDED) | 45.25 | 30.6 |

厂里主要用在厚板快烧要求成品强度韧性降低产品后期的强度衰减.增加氧化降低吸水率达到提高窑速的目的.

IT IS MAINLY USED IN THE FAST BURNING OF THICK PLATE IN THE FACTORY, WHICH REQUIRES THE STRENGTH AND TOUGHNESS OF THE FINISHED PRODUCT TO BE REDUCED, AND THE STRENGTH ATTENUATION OF THE PRODUCT IN THE LATER STAGE INCREASE OXIDATION AND REDUCE WATER ABSORPTION TO IMPROVE KILN SPEED

# ○ 煅烧α－氧化铝微粉:

CALCINATION α－ALUMINA POWDER

## 产品描述（PRODUCT DESCRIPTION）

分子式:AL2O3，分子量101.96，属三方晶系，单位晶胞是一个尖的菱面体，密度3.96~4.01G/㎤，莫氏硬度9，熔点2050℃。由于α-AL2O3 具有熔点高、硬度大、耐化学腐蚀、优良的介电性能，是氧化铝各种晶型中最稳定的，所以α-AL2O3为原料制造的陶瓷材料，其力学性能、高温性能、介电性能及耐化学腐蚀性能都是非常优越的。

规格：200目、325目、1000目等。

产地：山东淄博，中铝山东有限公司

包装：吨包、50公斤装或根据客户要求定制。

MOLECULAR FORMULA: AL2O3, WITH A MOLECULAR WEIGHT OF 101.96, BELONGS TO THE TRILATERAL SYSTEM. THE UNIT CELL IS A SHARP RHOMBOHEDRON, WITH A DENSITY OF 3.96 ~ 4.01G / ㎤, MOHS HARDNESS OF 9 AND A MELTING POINT OF 2050 ℃. BECAUSE A- AL2O3 HAS HIGH MELTING POINT, HIGH HARDNESS, CHEMICAL CORROSION RESISTANCE AND EXCELLENT DIELECTRIC PROPERTIES. IT IS THE MOST STABLE AMONG VARIOUS CRYSTAL FORMS OF ALUMINA A- CERAMIC MATERIALS MADE OF AL2O3 HAVE EXCELLENT MECHANICAL PROPERTIES, HIGH TEMPERATURE PROPERTIES, DIELECTRIC PROPERTIES AND CHEMICAL CORROSION RESISTANCE.

SPECIFICATION: 200 MESH, 325 MESH, 1000 MESH, ETC.

ORIGIN: SHANDONG ZIBO, CHINALCO SHANDONG CO., LTD

PACKAGING: TON PACKAGE, 50KG PACKAGE OR CUSTOMIZED ACCORDING TO CUSTOMER REQUIREMENTS.



## 产品应用（PRODUCT APPLICATION）

1、密封环、摩擦片、真空管、电子基片。

2、建筑陶瓷，结构陶瓷，电子陶瓷，生物陶瓷，高级耐火材料。

3、球磨机内衬，陶瓷轴承，陶瓷刀具。

1. SEALING RING, FRICTION PLATE, VACUUM TUBE, ELECTRONIC SUBSTRATE.

2. ARCHITECTURAL CERAMICS, STRUCTURAL CERAMICS, ELECTRONIC CERAMICS, BIOCERAMICS, ADVANCED REFRACTORY MATERIALS.

3. BALL MILL LINING, CERAMIC BEARING, CERAMIC CUTTING TOOL.

## 样品图片（SAMPLE PICTURE）

## 性能介绍（PERFORMANCE INTRODUCTION）

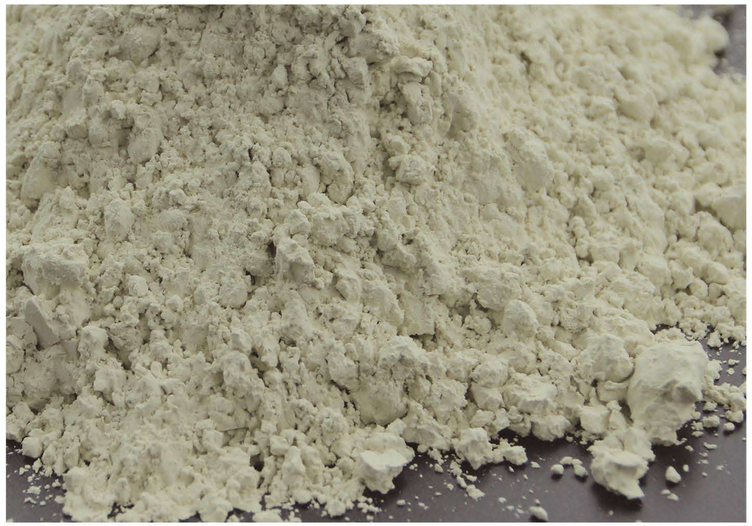
1、在釉料和熔块中的作用：氧化铝是瓷砖釉水和熔块上的必备原料，具有高温、耐磨的特效，增加釉面硬度，调节配方烧成温度；改善配方的膨胀系数，能有效的改善瓷砖后期衰减下弯的效果；提高釉面耐酸碱。

2、在手模上的作用：调节模具的收缩，起到支撑骨架的作用，调节烧成范围，有效的增加手模的使用寿命，所制坯体强度高，脱模性能优良；制品表面光滑，结构致密。可满足手模快速干压成型的工艺需求。（手模用量：5~15%）

1. ROLE IN GLAZE AND FRIT: ALUMINA IS AN ESSENTIAL RAW MATERIAL FOR CERAMIC TILE GLAZE WATER AND FRIT. IT HAS THE SPECIAL EFFECTS OF HIGH TEMPERATURE AND WEAR RESISTANCE, INCREASES THE HARDNESS OF GLAZE AND ADJUSTS THE FIRING TEMPERATURE OF FORMULA; IMPROVING THE EXPANSION COEFFICIENT OF THE FORMULA CAN EFFECTIVELY IMPROVE THE EFFECT OF ATTENUATION AND DOWNWARD BENDING OF CERAMIC TILES IN THE LATER STAGE; IMPROVE THE ACID AND ALKALI RESISTANCE OF GLAZE.

2. FUNCTION ON THE HAND MOLD: ADJUST THE SHRINKAGE OF THE MOLD, PLAY THE ROLE OF SUPPORTING THE SKELETON, ADJUST THE FIRING RANGE, EFFECTIVELY INCREASE THE SERVICE LIFE OF THE HAND MOLD, THE GREEN BODY HAS HIGH STRENGTH AND EXCELLENT DEMOULDING PERFORMANCE; THE PRODUCT HAS SMOOTH SURFACE AND DENSE STRUCTURE. IT CAN MEET THE PROCESS REQUIREMENTS OF HAND MOLD RAPID DRY PRESSING. (DOSAGE OF HAND MOLD: 5 ~ 15%)

| 成分名称 | 氧化铝 ($Al_2O_3$) | 硅 ($SiO_2$) | 铁 ($Fe_2O_3$) | 钠 ($NaO_2$) | 灼减量 (L.O.I) | 转化率 | 中位粒径 ($D_{50}$, 2-3 μm) |
|---|---|---|---|---|---|---|---|
| 含量 | ≥99% | ≤0.2% | ≤0.04% | ≤0.35% | ≤0.25% | ≥93% | ≤3 |



## ○ 煅烧氧化锌：
Calcined zinc oxide：

## 产品描述（PRODUCT DESCRIPTION）

氧化锌是一种无机物，化学式为ZNO，分子量：81.38，白色粉末或六角晶系结晶体。无嗅无味，无砂性，受热变为黄色，冷却后重又变为白色加热至1800℃时升华，遮盖力是二氧化钛和硫化锌的一半，着色力是碱式碳酸铅的2倍。溶于酸、浓氢氧化碱、氨水和铵盐溶液，不溶于水、乙醇。

煅烧氧化锌是一种重要的陶瓷化工熔剂原料，特别在建筑陶瓷墙地砖釉料与低温瓷釉料及陶瓷色料用量较多，在艺术陶瓷釉料中也广泛使用。

Zinc oxide is an inorganic substance with chemical formula of ZnO, molecular weight: 81.38, white powder or hexagonal crystal. Odorless, tasteless, non sandy, turns yellow after heating, turns white again after cooling, sublimates when heated to 1800 ℃, the covering power is half that of titanium dioxide and zinc sulfide, and the coloring power is twice that of basic lead carbonate. Soluble in acid, concentrated hydroxide alkali, ammonia and ammonium salt solution, insoluble in water and ethanol.

Calcined zinc oxide is an important ceramic chemical flux raw material, especially in building ceramic wall and floor tile glaze, low-temperature ceramic glaze and ceramic pigment. It is also widely used in art ceramic glaze.

## 产品应用（PRODUCT APPLICATION）

1、用作陶瓷颜料：由于具有较强的助熔作用，ZNO可以作为陶瓷颜料的助熔剂，矿化剂及釉料发色载体。在棕色陶瓷色料系列中作为主原料。

2、用作玻璃添加剂：添加铝、镓和氮的氧化锌的透明度达90%，可用作玻璃涂料，让可见光通过的同时反射红外线。涂料可涂在窗户玻璃的内或外，以达到保温或隔热的效果。

1. AS CERAMIC PIGMENT: DUE TO ITS STRONG MELTING AID, ZNO CAN BE USED AS FLUX, MINERALIZER AND GLAZE COLOR CARRIER OF CERAMIC PIGMENT. IT IS USED AS THE MAIN RAW MATERIAL IN THE SERIES OF BROWN CERAMIC PIGMENTS.

2. USED AS GLASS ADDITIVE: THE TRANSPARENCY OF ZINC OXIDE ADDED WITH ALUMINUM, GALLIUM AND NITROGEN IS UP TO 90%. IT CAN BE USED AS GLASS COATING TO ALLOW VISIBLE LIGHT TO PASS THROUGH AND REFLECT INFRARED RAY AT THE SAME TIME. THE PAINT CAN BE APPLIED INSIDE OR OUTSIDE THE WINDOW GLASS TO ACHIEVE THE EFFECT OF THERMAL INSULATION OR HEAT INSULATION.

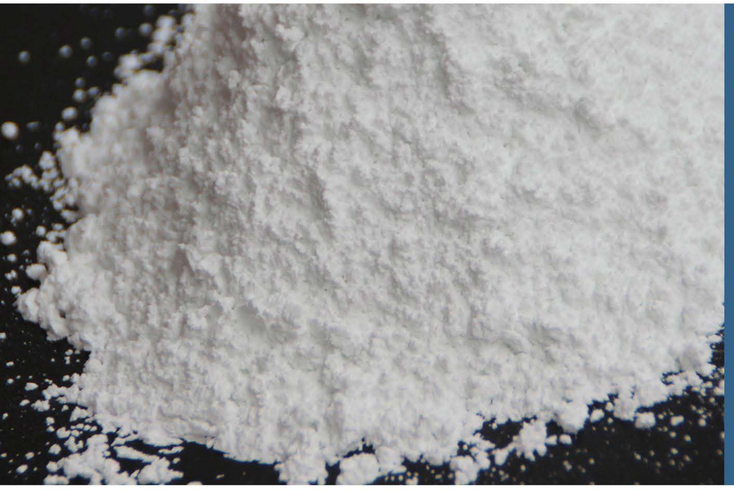
## 性能介绍（PERFORMANCE INTRODUCTION）

在釉中的作用与用途：ZNO在釉中有较强的助熔作用，用其生产的釉料收缩性小，釉面不易出现针孔和裂纹，能够降低釉的膨胀系数，提高产品的热稳定性，同时能增加釉面的光泽与白度，提高釉的弹性。在扩大熔融范围的同时能够增加釉色的光彩。不过在含有铬的黑釉中慎用。

FUNCTION AND APPLICATION IN GLAZE: ZNO HAS STRONG MELTING AID IN GLAZE. THE GLAZE PRODUCED WITH ZNO HAS SMALL SHRINKAGE AND IS NOT EASY TO HAVE PINHOLES AND CRACKS ON THE GLAZE. IT CAN REDUCE THE EXPANSION COEFFICIENT OF GLAZE, IMPROVE THE THERMAL STABILITY OF PRODUCTS, INCREASE THE LUSTER AND WHITENESS OF GLAZE AND IMPROVE THE ELASTICITY OF GLAZE. IT CAN INCREASE THE LUSTER OF GLAZE WHILE EXPANDING THE MELTING RANGE. HOWEVER, IT SHOULD BE USED WITH CAUTION IN BLACK GLAZE CONTAINING CHROMIUM.

## 产品参数（PRODUCT PARAMETERS）

| 序号 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 成分名称 | 二氧化硅（$SiO_2$） | 三氧化铝（$Al_2O_3$） | 二氧化碳（$CO_2$） | 三氧化二铁（$Fe_2O_3$） | 五氧化二磷（$P_2O_5$） | 三氧化硫（$SO_3$） |
| 含量 | 0.01% | 0.01% | 0.02% | 0.05% | 0.08% | 0.2% |
| 序号 | 7 | 8 | 9 | 10 | 11 | 12 |
| 成分名称 | 氧化钙（CaO） | 氧化钾（$K_2O$） | 氯（Cl） | 氧化锌（ZnO） | 灼减 | |
| 含量 | 0.08% | 0.04% | 0.01% | 99.31% | 0.01% | |



# ◯ 碳酸钡:
BARIUM CARBONATE

## 产品描述（PRODUCT DESCRIPTION）

碳酸钡，化学式BACO3，分子量197.35，六角形微细晶体或白色粉末，难溶于水，密度4.43G/㎤，熔点1740℃（8820千帕-90大气压）。

产地：贵州

包装：每袋净重50公斤。

Barium carbonate, chemical formula BaCO3, molecular weight 197.35, hexagonal micro crystal or white powder, insoluble in water, density 4.43g / ㎤ and melting point 1740 ℃ (8820 kPa - 90 atmospheric pressure).

Origin: Guizhou

Packing: each bag weighs 50kg net.

## 产品应用（PRODUCT APPLICATION）

1、于陶瓷涂料和光学玻璃的辅料用于电子陶瓷、PTC热敏电阻、电容器等多种电子元器件的制造。

2、用于制钡盐、颜料、焰火、杀鼠药陶器，并用作填料和水澄清剂等。

3、生产电子陶瓷及净化水，生产颜料、涂料或其它钡盐用于制光学玻璃、钡磁性材料等是生产显像管玻壳、磁性材料和高级光学玻璃的重要化工原料。

1. As an auxiliary material for ceramic coatings and optical glass, it is used in the manufacture of electronic ceramics, PTC Thermistors, capacitors and other electronic components.
2. It is used for making barium salt, pigment, fireworks, rodenticide pottery, filler and water clarifier.
3. It produces electronic ceramics and purified water, pigments, coatings or other barium salts for optical glass and barium magnetic materials. It is an important chemical raw material for the production of kinescope glass shell, magnetic materials and advanced optical glass.

## 性能介绍（PERFORMANCE INTRODUCTION）

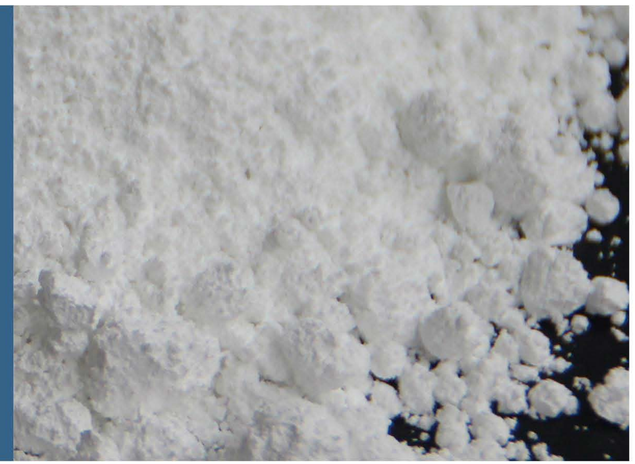
在釉水配方里的作用：当一种低温助熔的原料，具有发色好、温度低、烧成范围较宽的特点。

Function in glaze water formula: as a low-temperature melting aid raw material, it has the characteristics of good hair color, low temperature and wide firing range.

## 产品参数（PRODUCT PARAMETERS）

| 成分名称 | 钡（$BaCO_3$） | 水分 | 盐酸不溶物灼烧残渣 | 硫化物（以 $S^{2-}$ 计） | 总硫（以 $SO_4^{2-}$ 计） | 铁（$Fe_2O_3$） |
|---|---|---|---|---|---|---|
| 含量 | ≥99% | ≤0.30% | ≤0.10% | ≤0.10% | ≤0.25% | ≤0.0030% |

# 碳酸锶:
STRONTIUM CARBONATE



## 产品描述（PRODUCT DESCRIPTION）

碳酸锶，化学式SrCO3，分子量147.63。无色棱形晶体或白色粉末,926℃转变为六方晶系,熔点1497℃(6.08×106Pa)，相对密度3.70。微溶于水，稍溶于二氧化碳的饱和溶液，溶于氯化铵、硝酸铵和碳酸溶液,与稀盐酸、硝酸和醋酸作用放出二氧化碳。

**Strontium carbonate, chemical formula SrCO3, molecular weight 147.63. Colorless prismatic crystal or white powder, transformed into hexagonal crystal system at 926 ℃, melting point 1497 ℃ (6.08 ℃) × 106pa), relative density 3.70. It is slightly soluble in water, slightly soluble in saturated solution of carbon dioxide, soluble in ammonium chloride, ammonium nitrate and carbonic acid solution, and reacts with dilute hydrochloric acid, nitric acid and acetic acid to release carbon dioxide.**

## 产品应用（PRODUCT APPLICATION）

1、用于生产其他锶盐产品和作磁性材料使用。

2、用于电子陶瓷、荧光材料、发光材料和荧光玻璃。

3、专用PTC热敏电阻元件生产的基础材料。

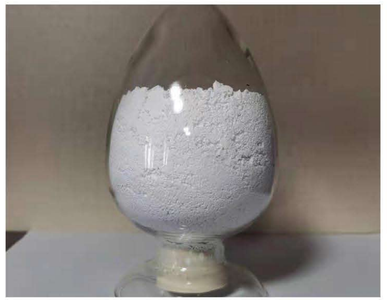
1. It is used in the production of other strontium salt products and as magnetic materials.

2. Used for electronic ceramics, fluorescent materials, luminescent materials and fluorescent glass.

3. It is the basic material for the production of special PTC thermistor elements.

## 性能介绍（PERFORMANCE INTRODUCTION）

碳酸锶在釉料中的作用：可从釉原料中排除大部分气体，因而可减少陶瓷釉面的气泡、小孔的生成，有助于釉面发色。这对日用陶瓷、卫生陶瓷等烧成温度较高、烧成周期较短的陶瓷制品意义尤其重大。



## PERFORMANCE INTRODUCTION:

Role of strontium carbonate in glaze: it can remove most of the gas from the glaze raw materials, so it can reduce the generation of bubbles and small holes on the ceramic glaze and help the glaze color. This is especially significant for ceramics with high firing temperature and short firing cycle, such as daily ceramics and sanitary ceramics.

## 产品参数（PRODUCT PARAMETERS）

| 成分名称 | 碳酸锶（$SrCO_3$） | 碳酸钙（$CaCO_3$） | 碳酸钡（$BaCO_3$） | 钠（$Na_2O$） | 铁（$Fe_2O_3$） | 氯化物（Cl） | 硫（$SO_2$） | 水分 | 氧化铬（$Cr_2O_3$） |
|---|---|---|---|---|---|---|---|---|---|
| 含量 | ≥98% | ≤0.5% | ≤2.0% | ≤0.3% | ≤0.01% | ≤0.12% | ≤0.35% | ≤0.3% | ≤0.0005% |

# ◯硅酸锆：
ZIRCONIUM SILICATE

## 产品描述（PRODUCT DESCRIPTION）

分子式ZRSIO4，分子量为：183.3，是一种无毒、无味的白色粉末，由自然高纯度锆英砂精矿经超细粉碎、除铁、钛加工、外表改性处置等工艺加工而成。

产地：福建

包装：纸袋包装，每袋净重50公斤。

MOLECULAR FORMULA ZRSIO4, MOLECULAR WEIGHT: 183.3, IS A NON-TOXIC AND TASTELESS WHITE POWDER, WHICH IS PROCESSED FROM NATURAL HIGH-PURITY ZIRCON SAND CONCENTRATE THROUGH ULTRA-FINE GRINDING, IRON REMOVAL, TITANIUM PROCESSING, SURFACE MODIFICATION AND OTHER PROCESSES.

ORIGIN: FUJIAN

PACKING: IN PAPER BAGS, WITH A NET WEIGHT OF 50KG EACH.

## 产品应用（PRODUCT APPLICATION）

1、硅酸锆作为陶瓷釉面添加剂，在一定粒径范围内随粒径减小白度、强度、耐磨性、抗水解性、耐腐蚀性均提高，自洁能力增强，用量减少。

2、由于纳米级硅酸锆强度高、耐磨性好，因此纳米级硅酸锆粉体是优质磨介和工程陶瓷原料。

3、由于纳米级硅酸锆抗氧化性强，可以作为功能性粉体的表面包覆剂。

4、由于纳米级硅酸锆粉体抗水解能力强，因此可以在水环境下作为纳米功能粉的载体。

· AS A CERAMIC GLAZE ADDITIVE, ZIRCONIUM SILICATE IMPROVES WHITENESS, STRENGTH, WEAR RESISTANCE, HYDROLYSIS RESISTANCE AND CORROSION RESISTANCE WITH THE DECREASE OF PARTICLE SIZE IN A CERTAIN RANGE, ENHANCES SELF-CLEANING ABILITY AND REDUCES DOSAGE.

· DUE TO THE HIGH STRENGTH AND GOOD WEAR RESISTANCE OF NANO ZIRCONIUM SILICATE, NANO ZIRCONIUM SILICATE POWDER IS A HIGH-QUALITY GRINDING MEDIUM AND ENGINEERING CERAMIC RAW MATERIAL.

· DUE TO ITS STRONG OXIDATION RESISTANCE, NANO ZIRCONIUM SILICATE CAN BE USED AS A SURFACE COATING AGENT FOR FUNCTIONAL POWDERS.

4. BECAUSE NANO ZIRCONIUM SILICATE POWDER HAS STRONG HYDROLYSIS RESISTANCE, IT CAN BE USED AS THE CARRIER OF NANO FUNCTIONAL POWDER IN AQUEOUS ENVIRONMENT.

## 产品参数（PRODUCT PARAMETERS）

| 序号 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 成分名称 | 二氧化硅（$SiO_2$） | 三氧化铝（$Al_2O_3$） | 二氧化钛（$TiO_2$） | 三氧化二铁（$Fe_2O_3$） | 五氧化二磷（$P_2O_5$） | 三氧化硫（$SO_3$） |
| 含量 | 32.67% | 1.12% | 0.15% | 0.07% | 0.15% | <0.05% |
| 序号 | 7 | 8 | 9 | 10 | 11 | 12 |
| 成分名称 | 氧化钙（CaO） | 五氧化二锆（铪）（Zr（Hf）$O_2$） | 三氧化二钇（$Y_2O_3$） | 灼减 | | |
| 含量 | 0.03% | 64.69% | 0.20% | 0.82% | | |

# ○ 煅烧滑石：
CALCINED TALC：

## 产品描述（PRODUCT DESCRIPTION）

滑石由天然的含水层状硅酸镁矿物组成，其化学式为3MGO·4SIO2·H2O，晶体结构MG3[SI4O10](OH)2。

滑石属于2：1型层状结构硅酸盐矿物，其晶体结构和叶腊石十分相似。它是有两个四面体层加着一个八面体层而构成结构单元。层内各离子电价已中和，故连续牢固。但层间仅以微弱的键力吸引，联系很不牢固，在层间极易列成薄片，这就是极完全{001}解离，因有滑腻感得名。滑石属单斜晶系，晶体成六方或菱形板状，常呈两种状态产出，一种粗鳞片状，另一种为细鳞片致密块状集合体（称块滑石）。纯净的滑石为白色，含杂质时一般为淡绿、浅黄、浅灰、淡褐等。具有脂肪光泽，密度2.7~2.8G/㎤，莫氏硬度为1。

TALC IS COMPOSED OF NATURAL AQUIFER LIKE MAGNESIUM SILICATE MINERALS WITH CHEMICAL FORMULA OF 3MGO · 4SIO2 · H2O AND CRYSTAL STRUCTURE OF MG3 [SI4O10] (OH) 2.

TALC IS A 2:1 LAYERED SILICATE MINERAL, AND ITS CRYSTAL STRUCTURE IS VERY SIMILAR TO PYROPHYLLITE. IT HAS TWO TETRAHEDRAL LAYERS AND AN OCTAHEDRAL LAYER TO FORM A STRUCTURAL UNIT. EACH ION IN THE LAYER HAS BEEN NEUTRALIZED, SO IT IS CONTINUOUS AND FIRM. HOWEVER, THE INTERLAYER IS ONLY ATTRACTED BY WEAK BOND FORCE, AND THE CONNECTION IS VERY WEAK. IT IS VERY EASY TO FORM THIN SHEETS BETWEEN LAYERS, WHICH IS VERY COMPLETE {001} DISSOCIATION, WHICH IS NAMED FOR ITS GREASY FEELING. TALC BELONGS TO MONOCLINIC CRYSTAL SYSTEM. THE CRYSTAL IS HEXAGONAL OR RHOMBIC PLATE-SHAPED, WHICH IS OFTEN PRODUCED IN TWO STATES, ONE IS COARSE SCALE, AND THE OTHER IS FINE SCALE DENSE MASSIVE AGGREGATE (CALLED BLOCK TALC). PURE TALC IS WHITE, AND IT IS GENERALLY LIGHT GREEN, LIGHT YELLOW, LIGHT GRAY, LIGHT BROWN, ETC. WHEN CONTAINING IMPURITIES. IT HAS FAT LUSTER, DENSITY OF 2.7 ~ 2.8G / ㎤ AND MOHS HARDNESS OF 1.

## 性能介绍（PERFORMANCE INTRODUCTION）

滑石在普通日用陶瓷生产中一般作为溶剂使用，在细瓷柸体中加入少量滑石，可降低烧成温度，在较低的温度下形成液相，加速莫来石晶体的生成，同时扩大烧结温度范围，提高白度、透明度、力学强度和热稳定性。在精陶坯体中如用滑石代替长石（及镁质精陶），则精陶制品的湿膨胀倾向将大为减少，釉的后期龟裂也相应降低。釉料中加入滑石可改善釉层的弹性，提高热稳定性、白度、透明度，降低烧成温度，是釉的流动性增加。

## 产品应用（PRODUCT APPLICATION）

1、用于橡胶、塑料、油漆、等化工行业作为强化改质填充剂。:增加产品形状的稳定，增加张力强度，剪切强度，绕曲强度，压力强度，降低变形，伸张率，热膨胀系数，白度高、粒度均匀分散性强等特点。

2、　用于制造高频瓷、无线电瓷、各种工业陶瓷、建筑陶瓷、日用陶瓷和陶釉等。高温不变色，锻烧后白度增强，密度均匀，光泽好、表面平滑。

3、用于各种高低档次造纸行业的产品。造纸粉具有白度高、粒度稳定、磨耗度低等特点。使用此粉造出的纸能达到纸张平滑、细腻、节约原材料、提高脂网的使用寿命。

4、用于医药、食品行业的添加剂。具有无毒、无味、白色度高，可容性好、光泽度强、口味柔软、光滑度强特点。PH值为7-9，不会降解原有产品的特性。

1. IT IS USED IN RUBBER, PLASTIC, PAINT, CHEMICAL INDUSTRY AND OTHER INDUSTRIES AS A STRENGTHENING AND MODIFYING FILLER INCREASE THE STABILITY OF PRODUCT SHAPE, INCREASE TENSION STRENGTH, SHEAR STRENGTH, BENDING STRENGTH, PRESSURE STRENGTH, REDUCE DEFORMATION, ELONGATION RATE, COEFFICIENT OF THERMAL EXPANSION, HIGH WHITENESS, UNIFORM PARTICLE SIZE AND STRONG DISPERSION.
2. IT IS USED FOR MANUFACTURING HIGH-FREQUENCY PORCELAIN, WIRELESS ELECTRIC PORCELAIN, VARIOUS INDUSTRIAL CERAMICS, ARCHITECTURAL CERAMICS, DAILY CERAMICS AND CERAMIC GLAZE. NO DISCOLORATION AT HIGH TEMPERATURE, ENHANCED WHITENESS AFTER CALCINATION, UNIFORM DENSITY, GOOD LUSTER AND SMOOTH SURFACE.
3. IT IS USED FOR PRODUCTS OF VARIOUS HIGH AND LOW-GRADE PAPERMAKING INDUSTRIES. PAPERMAKING POWDER HAS THE CHARACTERISTICS OF HIGH WHITENESS, STABLE PARTICLE SIZE AND LOW ABRASION. THE PAPER MADE WITH THIS POWDER CAN ACHIEVE SMOOTH AND DELICATE PAPER, SAVE RAW MATERIALS AND IMPROVE THE SERVICE LIFE OF GREASE NET.
4. ADDITIVES FOR PHARMACEUTICAL AND FOOD INDUSTRIES. IT HAS THE CHARACTERISTICS OF NON-TOXIC, TASTELESS, HIGH WHITENESS, GOOD COMPATIBILITY, STRONG GLOSS, SOFT TASTE AND STRONG SMOOTHNESS. THE PH VALUE IS 7-9, WHICH WILL NOT DEGRADE THE CHARACTERISTICS OF THE ORIGINAL PRODUCT.

## 产品参数
（PRODUCT PARAMETERS）

| 成分名称 | 硅（$SiO_2$） | 氧化铝（$Al_2O_3$） | 钛（$TiO_2$） | 钙（CaO） | 镁（MgO） | 钾（$K_2O$） | 钠（$Na_2O$） | 烧失量 |
|---|---|---|---|---|---|---|---|---|
| 含量 | 65.16% | 1.89% | 0.04% | 0.96% | 30.93% | 0.03% | 0.05% | 0.37% |

# ○ 煅烧高岭土
CALCINED KAOLIN

## 产品描述（PRODUCT DESCRIPTION）

高岭土是一种无机非金属的混合物，煅烧高岭土是将高岭土在煅烧炉中烧结到一定的温度和时间，使其的物理化学性能产生一定的变化，以满足一定的要求。

煅烧高岭土与未煅烧高岭土相比，白度高、晶型好、孔隙率大、容重小、化学稳定性和电绝缘性好、散射力和遮盖率强、热稳定性好。

主要集中分布在广东,陕西,福建,江西,湖南和江苏六省占全国总储量的84.55%；含煤建造高岭土(高岭岩)储量占世界首位， 探明储量为14.42亿吨，主要分布在山西大同,怀仁,朔州,内蒙古准格尔,乌达,安徽淮北,陕西韩城等地，其中以内蒙古准格尔煤田的资源最多。

KAOLIN IS AN INORGANIC NON-METALLIC MIXTURE. CALCINED KAOLIN IS TO SINTER KAOLIN IN THE CALCINER TO A CERTAIN TEMPERATURE AND TIME, SO AS TO CHANGE ITS PHYSICAL AND CHEMICAL PROPERTIES TO MEET CERTAIN REQUIREMENTS.

COMPARED WITH NON CALCINED KAOLIN, CALCINED KAOLIN HAS HIGH WHITENESS, GOOD CRYSTAL FORM, LARGE POROSITY, SMALL BULK DENSITY, GOOD CHEMICAL STABILITY AND ELECTRICAL INSULATION, STRONG SCATTERING FORCE AND COVERAGE, AND GOOD THERMAL STABILITY.

IT IS MAINLY DISTRIBUTED IN GUANGDONG, SHAANXI, FUJIAN, JIANGXI, HUNAN AND JIANGSU, ACCOUNTING FOR 84.55% OF THE COUNTRY'S TOTAL RESERVES; THE RESERVES OF COAL BEARING KAOLIN (KAOLINITE) ACCOUNT FOR THE FIRST IN THE WORLD, WITH THE PROVED RESERVES OF 1.442 BILLION TONS. IT IS MAINLY DISTRIBUTED IN DATONG, HUAIREN, SHUOZHOU, SHANXI, JUNGAR, WUDA, HUAIBEI, ANHUI, HANCHENG, SHAANXI AND OTHER PLACES, OF WHICH THE JUNGAR COALFIELD IN INNER MONGOLIA HAS THE MOST RESOURCES.

## 产品应用（PRODUCT APPLICATION）

1、耐火材料　2、造纸填料和涂料　3、PVC电缆料的填料　4、制造结晶氯化铝和聚合氯化铝

1. REFRACTORY 2. PAPER MAKING FILLER AND COATING 3. PVC CABLE FILLER 4. MANUFACTURING CRYSTALLINE ALUMINUM CHLORIDE AND POLYALUMINIUM CHLORIDE

## 性能介绍（PERFORMANCE INTRODUCTION）

1、用于涂料：起充填骨架作用，可替代部分钛白粉，用于内外墙涂料、高档油漆、油墨和标线漆等，降低成本。

2.用于塑料：能够提高棚膜、地膜、电缆、PVC管(板)等制品的强度、白度、电绝缘性，还具有在塑料膜中提高散射透光率作用，阻隔红外线，作为体积填料降低成本。

3.用于造纸：使用煅烧高岭土可增加涂层的空隙体积和松厚度、光滑度，提高纸张不透明度和弹性，改善油墨吸附性、光泽度和减少印刷斑点。

4.用于农药、石化：由于煅烧高岭土颗粒表面具有微细孔隙，具有极大的吸附性，可用于医药、农药中;因产品呈中性，硅含量高，可用于制硅肥，也可用于饲料添加剂;在炼油中可作为催化剂提高油品质量。

5.用于油漆：煅烧高岭土具有成本低、白度高、遮盖能力强化学惰性等特征，在油漆涂料的制作工程中可以充当填料和色料替代物。

6.用于材料与尖端科学：可用作汽车、飞机、火箭等耐高温燃烧室、喷嘴、气缸以及其它特种陶瓷材料和精强陶瓷材料。

1. FOR COATING: IT PLAYS THE ROLE OF FILLING FRAMEWORK AND CAN REPLACE PART OF TITANIUM DIOXIDE. IT CAN BE USED FOR INTERIOR AND EXTERIOR WALL COATING, HIGH-GRADE PAINT, INK AND MARKING PAINT TO REDUCE THE COST.

2. FOR PLASTICS: IT CAN IMPROVE THE STRENGTH, WHITENESS AND ELECTRICAL INSULATION OF GREENHOUSE FILM, GROUND FILM, CABLE, PVC PIPE (PLATE) AND OTHER PRODUCTS. IT CAN ALSO IMPROVE THE SCATTERING LIGHT TRANSMITTANCE IN PLASTIC FILM, BLOCK INFRARED RAYS, AND REDUCE THE COST AS VOLUME FILLER.

3. FOR PAPERMAKING: THE USE OF CALCINED KAOLIN CAN INCREASE THE VOID VOLUME, LOOSE THICKNESS AND SMOOTHNESS OF THE COATING, IMPROVE THE OPACITY AND ELASTICITY OF THE PAPER, IMPROVE THE INK ADSORPTION, GLOSS AND REDUCE PRINTING SPOTS.

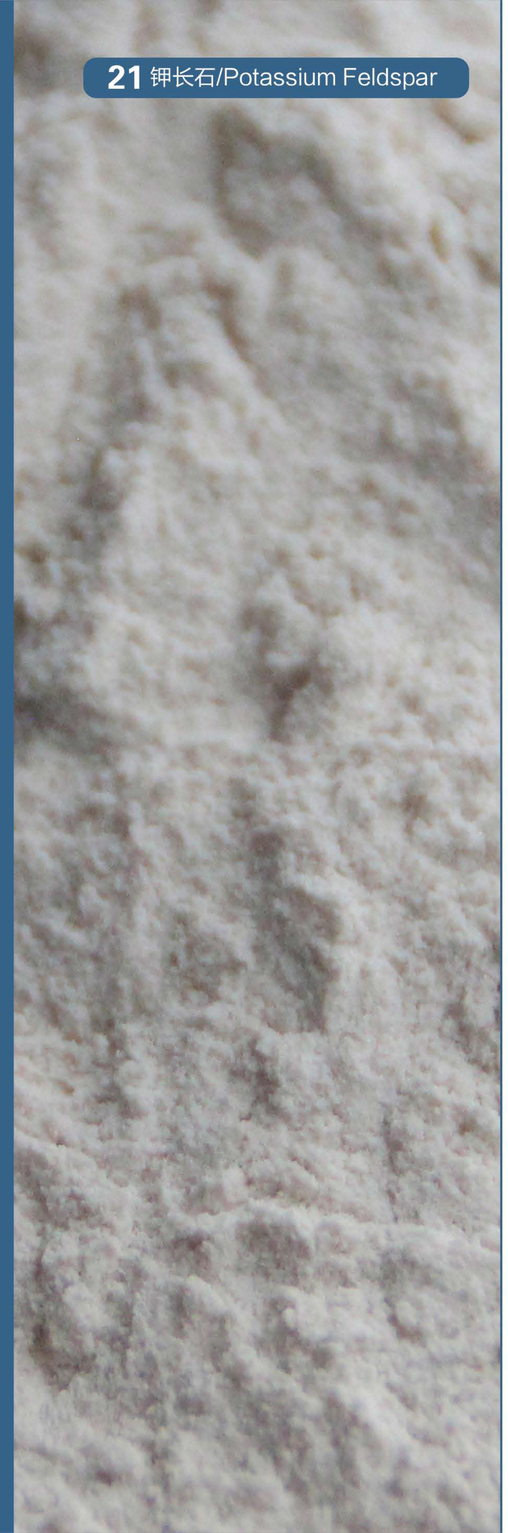
4. FOR PESTICIDES AND PETROCHEMICALS: BECAUSE THE SURFACE OF CALCINED KAOLIN PARTICLES HAS MICRO PORES AND GREAT ADSORPTION, IT CAN BE USED IN MEDICINE AND PESTICIDES; BECAUSE THE PRODUCT IS NEUTRAL AND HAS HIGH SILICON CONTENT, IT CAN BE USED TO MAKE SILICON FERTILIZER AND FEED ADDITIVES; IT CAN BE USED AS A CATALYST IN OIL REFINING TO IMPROVE THE QUALITY OF OIL PRODUCTS.

5. FOR PAINT: CALCINED KAOLIN HAS THE CHARACTERISTICS OF LOW COST, HIGH WHITENESS, COVERING ABILITY, STRENGTHENING AND INERTIA. IT CAN BE USED AS FILLER AND PIGMENT SUBSTITUTE IN THE PRODUCTION ENGINEERING OF PAINT AND COATING.

6. FOR MATERIALS AND CUTTING-EDGE SCIENCE: IT CAN BE USED AS HIGH TEMPERATURE RESISTANT COMBUSTION CHAMBERS, NOZZLES, CYLINDERS, OTHER SPECIAL CERAMIC MATERIALS AND FINE AND STRONG CERAMIC MATERIALS SUCH AS AUTOMOBILES, AIRCRAFT AND ROCKETS.

## 产品参数（PRODUCT PARAMETERS）

| 成分名称 | 硅 ($SiO_2$) | 氧化铝 ($Al_2O_3$) | 铁 ($Fe_2O_3$) | 钛 ($TiO_2$) | 钙 (CaO) | 镁 (MgO) | 钾 ($K_2O$) | 钠 ($Na_2O$) | 白度 | 烧失量 | 水份 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 含量 | 52±2% | 45±2% | ≤0.50% | ≤0.10% | <0.20% | <0.20% | <0.05% | <0.15% | ≥88 | ≤0.2% | ≤0.5% |



# ○钾长石
## POTASSIUM FELDSPAR:

钾长石属单斜晶系，密度2.56～2.59G/CM3，硬度6，其理论成分为SIO2 64.7%、AL2O3 18.4%、K2O 16.9%。钾长石的熔融温度不是太高（1150℃），且其熔融温度范围宽。这与钾长石的熔融反应有关。钾长石从1130℃开始软化熔融，在1220℃时分解，生成白榴子石与SIO2共熔体，成为玻璃态粘稠物，温度再升高，逐渐全部液相。

钾长石矿是含钾量较高、分布最广、储量最大的非水溶性钾资源。钾长石矿源达 60 个，其平均氧化钾含量约为 11.63%，其储量约达 79.14 亿吨，按平均含量折算成氧化钾储量约为 9.20 亿吨。安徽、内蒙古、新疆、四川、山西等省的钾长石分布相对集中，储量丰富，成为当地的优势非金属矿产资源。

POTASSIUM FELDSPAR BELONGS TO MONOCLINIC SYSTEM, WITH DENSITY OF 2.56 ~ 2.59G/CM3 AND HARDNESS OF 6. ITS THEORETICAL COMPOSITION IS 64.7% SIO2, 18.4% AL2O3 AND 16.9% K2O. THE MELTING TEMPERATURE OF POTASSIUM FELDSPAR IS NOT TOO HIGH (1150 ℃), AND ITS MELTING TEMPERATURE RANGE IS WIDE. THIS IS RELATED TO THE MELTING REACTION OF POTASSIUM FELDSPAR. POTASSIUM FELDSPAR SOFTENS AND MELTS FROM 1130 ℃ AND DECOMPOSES AT 1220 ℃ TO FORM A CO MELT OF LEUCITE AND SIO2, WHICH BECOMES A GLASSY VISCOUS SUBSTANCE. THE TEMPERATURE RISES AGAIN AND GRADUALLY ALL THE LIQUID PHASE.

POTASH FELDSPAR ORE IS A WATER-INSOLUBLE POTASSIUM RESOURCE WITH HIGH POTASSIUM CONTENT, THE WIDEST DISTRIBUTION AND THE LARGEST RESERVES. THERE ARE 60 POTASH FELDSPAR ORE SOURCES, WITH AN AVERAGE POTASSIUM OXIDE CONTENT OF ABOUT 11.63%, AND ITS RESERVES OF ABOUT 7.914 BILLION TONS. ACCORDING TO THE AVERAGE CONTENT, THE RESERVES OF POTASSIUM OXIDE ARE ABOUT 920 MILLION TONS. THE DISTRIBUTION OF POTASSIUM FELDSPAR IN ANHUI, INNER MONGOLIA, XINJIANG, SICHUAN, SHANXI AND OTHER PROVINCES IS RELATIVELY CONCENTRATED AND THE RESERVES ARE RICH, WHICH HAS BECOME THE LOCAL DOMINANT NON-METALLIC MINERAL RESOURCES.



## 产品应用（PRODUCT APPLICATION）

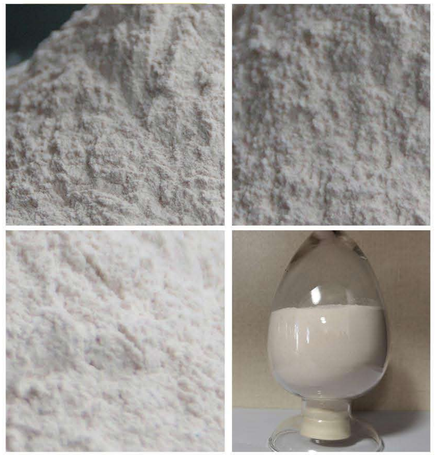
1、陶瓷坯体配料:在烧成前长石能起瘠性原料的作用，减少坯体的干燥收缩和变形，改善干燥性能，缩短干燥时间。

2、玻璃熔剂:长石是玻璃混合料的主要成份之一。

3、陶瓷釉料:陶瓷釉料主要由长石、石英和粘土原料配成，其中长石含量可达10-35%。

4、搪瓷原料:主要用长石和其它矿物原料掺配成法琅。长石的掺入量通常为20-30%。

5、钾长石可作为提取钾肥的原料。



1. CERAMIC BODY INGREDIENTS: BEFORE FIRING, FELDSPAR CAN PLAY THE ROLE OF BARREN RAW MATERIALS, REDUCE THE DRYING SHRINKAGE AND DEFORMATION OF THE BODY, IMPROVE THE DRYING PERFORMANCE AND SHORTEN THE DRYING TIME.
2. GLASS FLUX: FELDSPAR IS ONE OF THE MAIN COMPONENTS OF GLASS MIXTURE.
3. CERAMIC GLAZE: CERAMIC GLAZE IS MAINLY COMPOSED OF FELDSPAR, QUARTZ AND CLAY RAW MATERIALS, IN WHICH THE CONTENT OF FELDSPAR CAN REACH 10-35%.
4. ENAMEL RAW MATERIALS: IT IS MAINLY MIXED WITH FELDSPAR AND OTHER MINERAL RAW MATERIALS TO FORM FALANG. THE AMOUNT OF FELDSPAR IS USUALLY 20-30%.
5. POTASSIUM FELDSPAR CAN BE USED AS RAW MATERIAL FOR EXTRACTING POTASSIUM FERTILIZER.

## 性能介绍（PERFORMANCE INTRODUCTION）

在釉水中的作用：低温助熔。

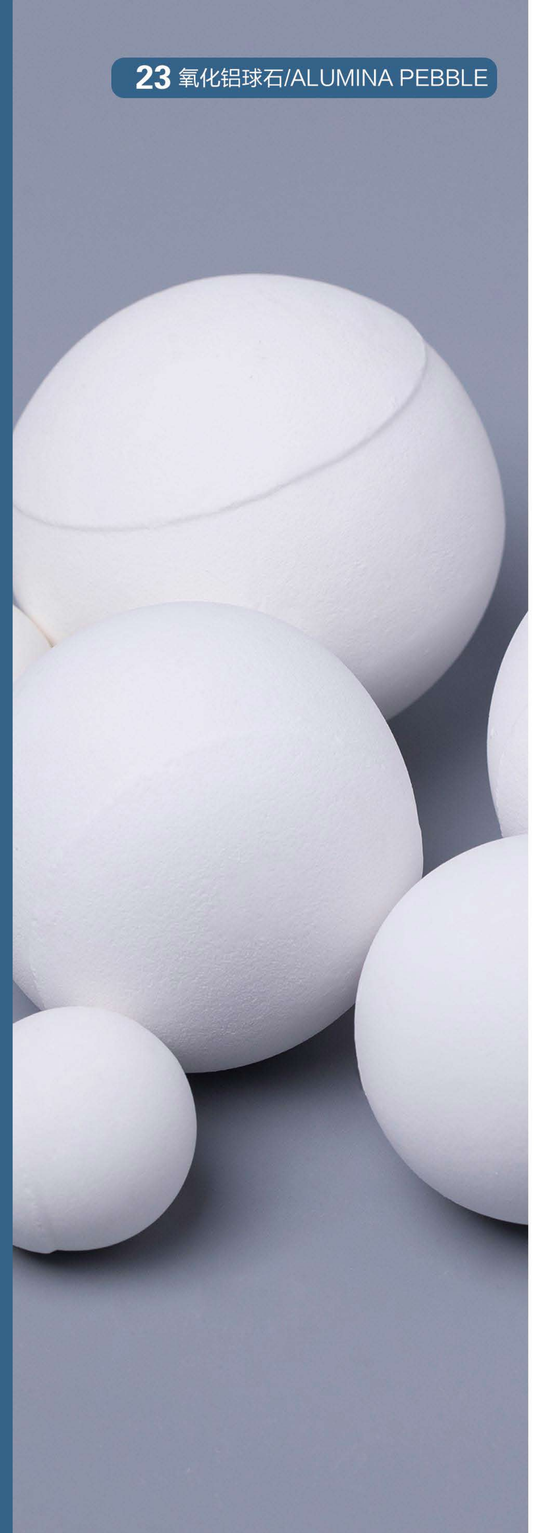
在坯体上的作用：能赋予坯体机械强度和化学稳定性，起到充当骨架的作用。

FUNCTION IN GLAZE WATER: LOW TEMPERATURE MELTING AID.

FUNCTION ON THE GREEN BODY: IT CAN ENDOW THE GREEN BODY WITH MECHANICAL STRENGTH AND CHEMICAL STABILITY AND ACT AS A SKELETON.

## 产品参数（PRODUCT PARAMETERS）

| 成分名称 | 钾（$K_2O$） | 钠（$Na_2O$） | 硅（$SiO_2$） | 氧化铝（$Al_2O_3$） | 铁（$Fe_2O_3$） | 钛（$TiO_2$） | 钙（CaO） | 镁（MgO） |
|---|---|---|---|---|---|---|---|---|
| 含量 | 11.72% | 2.39% | 66.48% | 17.91% | 0.18% | 0.01% | 0.30% | 0.01% |



# ○氧化铝球石:
## Alumina pebble:

氧化铝球石是采用精选优质原料，先进的冷等静压成型技术，经过高温煅烧而成的高品质研磨介质。

Alumina pebble is a high-quality grinding medium made of selected high-quality raw materials, advanced cold isostatic pressing molding technology and high-temperature calcination.

用途:

- 氧化铝陶瓷球主要应用于不同类型的陶瓷、瓷釉、玻璃、化工厂的厚硬材质精加工和深加工。是球磨机、罐形磨机、振动磨机等细粉碎设备的研磨介质， 其粉碎研磨效率和耐磨损大大优于普通球石或天然鹅卵石。
- 非金属矿产品粉料(如硅酸锆、高岭土、重质碳酸钙等)及涂料、油漆等行业的物料研磨与分散以及金属件的抛光使用,适用于各种研磨和抛光设备。

PURPOSE:

The alumina ceramic ball is mainly used in the finishing and deep processing of different types of ceramics, glaze, glass and thick and hard materials in chemical plants. It is the grinding medium of ball mill, pot mill, vibration mill and other fine grinding equipment. Its grinding efficiency and wear resistance are much better than ordinary pebbles or natural pebbles.
Grinding and dispersion of non-metallic mineral powder (such as zirconium silicate, kaolin, heavy calcium carbonate, etc.) and coating, paint and other industries, as well as the polishing of metal parts. It is suitable for all kinds of grinding and polishing equipment.



Isostatic pressure dry grinding body has spherical (grinding ball) and cylindrical (grinding section). Compared with metal abrasives, the products have the characteristics of high temperature resistance, high hardness, high strength, low wear, corrosion resistance, low expansion coefficient, high thermal conductivity and light weight. It solves the problems of using non-metallic abrasives to reduce production, wear and tear, etc., and achieves the purpose of saving energy and reducing consumption, prolonging equipment maintenance cycle, reducing maintenance cost and environmental protection production, so as to create economic benefits of enterprises and improve competitiveness of enterprises in the industry.

## 参数指标:
PERFORMANCE INDEX:

| 名称 Name | Index | Index |
|---|---|---|
| 等静压研磨球<br>Isostatic grinding balls | 92 | 95 |
| 尺寸 size | 10mm–90mm | 10mm–90mm |
| 密度 Density（g/cm³） | 3.65 | 3.68 |
| 当量磨耗<br>Equivalent wear（‰） | ＜0.1 | ＜0.08 |
| 用途 Application | 干磨、水磨<br>Dry and Wet grinding | 干磨、水磨<br>Dry and Wet grinding |
| 吸水率 Water absorption（%） | ＜0.01 | ＜0.01 |
| 硬度 Hardness （Mohs） | 9 | 9 |
| 颜色 Color | 白色 white | 白色 white |

# 衬砖:
# BRICKS:

氧化铝衬砖是采用精选优质原料，先进的冷静压成型技术，经过高温煅烧而成的高品质防磨磨介。

Alumina lining brick is a kind of high-quality anti-wear medium made of selected high-quality raw materials, advanced cold pressing technology and high-temperature calcination.

## 用途:

耐磨氧化铝衬砖,可用于釉料、陶瓷砖坯体研磨。产品具有高硬度、密度大、磨耗低、规整度好、耐腐蚀等特点，用于球磨机耐磨内衬，广泛应用于陶瓷、水泥、油漆、颜料、化工、医药、涂料、无机矿物粉料等行业。能有效提高研磨效率，降低研磨成本，减小产品污染。

## APPLICATION:

Wear resistant alumina lining brick can be used for grinding glaze and ceramic brick body. The products have the characteristics of high hardness, high density, low wear, good regularity and corrosion resistance. They are widely used in ceramic, cement, paint, pigment, chemical industry, medicine, coating, inorganic mineral powder and other industries. It can effectively improve grinding efficiency, reduce grinding cost and reduce product pollution.

## 特点:

- 氧化铝衬砖主要成分为优质氧化铝,纯度高,大大减小对研磨物料造成的污染。
- 耐磨性好, 耐磨性能是锰钢的266倍, 有效延长设备使用寿命长。
- 与高铝球搭配磨出浆料细腻。
- 耐腐蚀、高密度、高机械强度等特点。

## Feature:

The main component of alumina lining brick is high-quality alumina with high purity, which greatly reduces the pollution of grinding materials. The wear resistance is good, the wear resistance is 266 times of that of manganese steel, effectively prolonging the service life of the equipment.
With high alumina ball grinding slurry fine.
It has the characteristics of corrosion resistance, high density and high mechanical strength.

### 微晶耐磨氧化铝衬砖常用规格

SIZE OF ALUMINA BRICKS:

（单位:mm）

| | 长度(L) | 厚度(H) | 宽度（W） | | | |
|---|---|---|---|---|---|---|
| | | | 斜（W1/ W2） | 直（W1=W2） | 薄（W1=W2） | 斜薄（W1/W2） |
| H40 | 150 | 40 | 45/50 | 50 | 25 | 22.5/25 |
| H50 | 150 | 50 | 45/50 | 50 | 25 | 22.5/25 |
| H60 | 150 | 60 | 45/50 | 50 | 25 | 22.5/25 |
| H70 | 150 | 70 | 45/50 | 50 | 25 | 22.5/25 |
| H80 | 150 | 80 | 45/50 | 50 | 25 | 22.5/25 |
| H90 | 150 | 90 | 45/50 | 50 | 25 | 22.5/25 |