

# 电熔铝镁尖晶石 耐火材料尖晶石 天然尖晶石

|      |  |
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| 产品名称 | 电熔铝镁尖晶石 耐火材料尖晶石 天然尖晶石                          |
| 公司名称 | 巩义市红育耐火材料厂                                     |
| 价格   | 4400.00/吨                                      |
| 规格参数 | 耐火温度:2000 以上 ( )<br>规格:0--9按要求生产 (mm)<br>产地:河南 |
| 公司地址 | 巩义市市区货场路东                                      |
| 联系电话 | 15890660369                                    |

## 产品详情

|           |             |       |                 |
|-----------|-------------|-------|-----------------|
| 耐火温度      | 2000 以上 ( ) | 规格    | 0--9 按要求生产 (mm) |
| 产地        | 河南          | 品牌    | 红育 19           |
| 产品类别      | 窑炉工业窑炉用保温材料 | 材质    | EPS             |
| 导热系数 (常温) | 0.056       | 等级    | 1级              |
| 低温弯折      | 11          | 断裂伸长率 | 0.3             |
| 抗弯强度      | 12          | 抗压强度  | 12              |
| 拉伸强度      | 13          | 使用温度  | 600             |
| 撕裂强度      | 55          | 芯材    | hdf             |
| 形态        | 层状          | 形状    | 表面凹凸型           |

## 尖晶石

### 【概述】

尖晶石是镁铝氧化物组成的矿物，因为含有镁、铁、锌、锰等等元素，它们可分为很多种，如铝尖晶石、铁尖晶石、锌尖晶石、锰尖晶石、铬尖晶石等。由于含有不同的元素，不同的尖晶石可以有不同的颜色，如镁尖晶石在红、蓝、绿、褐或无色之间；锌尖晶石则为暗绿色；铁尖晶石为黑色等等。尖晶石呈坚硬的玻璃状八面体或颗粒和块体。它们出现在火成岩、花岗伟晶岩和变质石灰岩中。有些透明且颜色漂亮的尖晶石可作为宝石，有些作为含铁的磁性材料。用人工的方法已经可以造出200多个尖晶石品种。

尖晶石是一族矿物，在自然界中形成于熔融的岩浆侵入到不纯的灰岩或白云岩中经接触变质作用形成的。有些出现在富铝的基性岩浆岩中。宝石级尖晶石则主要是指镁铝尖晶石，是一种镁铝氧化物。晶体形态为八面体及八面体与菱形十二面体的聚形。颜色丰富多彩，有无色、粉红色、红色、紫红色、浅紫色、蓝紫色、蓝色、黄色、褐色等。尖晶石的品种是依据颜色而划分的，有红、橘红、蓝紫、蓝色尖晶石等。玻璃光泽，透明。贝壳状断口。淡红色和红色尖晶石在长、短波紫外光下发红色荧光。

### 【物理性质】

尖晶石 (spinel)

化学分子式为 $MgAl_2O_4$

晶系：属等轴晶系

结晶习性：常呈八面体晶形，有时八面体与菱形十二面体、立方体成聚形。

光泽：玻璃光泽至亚金刚光泽

透明度：透明至不透明

折光率：1.718，因含微量元素不同而改变最高可至2.000.无双折射

无多色性

特殊光学效应：星光效应（四射或六射），变色效应。比较稀少

硬度：8

密度：3.60 (+0.10, -0.03) 克/立方厘米

| 项目 | al <sub>2</sub> o <sub>3</sub> | mgo % | sio <sub>2</sub> % | 体密g/cm <sup>3</sup> | 气孔率% | 尖晶石%  | 硅酸盐% |
|----|--------------------------------|-------|--------------------|---------------------|------|-------|------|
| 指标 | 56-62                          | 28-32 | <4.0               | <3.0                | <9.0 | 85-90 | 10   |

### 【产状与组合】

常产于镁质灰岩与花岗岩类的接触变质带，与镁橄榄石、透辉石等共生。基性岩、超基性岩中的尖晶石，由岩浆直接结晶形成，与辉石、橄榄石、磁铁矿、铬铁矿及铂族矿物等伴生。在富铝贫硅的泥质岩石的热变质带亦可形成尖晶石，常与堇青石或斜方辉石共生。

### 【鉴定特征】

八面体形态、硬度大、尖晶石律双晶为特征。相似矿物锆石密度较大，一轴晶；刚玉硬度更大；石榴子石硬度小于尖晶石。

### 【工业应用】

镁尖晶石是镁质耐火材料的主要结合相，也是尖晶石质耐火材料的主要物相。透明无暇、色泽美观者可作宝石。

尖晶石耐高温、热膨胀系数小、热稳定性好、抗渣性强，广泛用于钢铁冶炼，水泥回转窑及玻璃工业窑炉上

### 【overview】

spinel is a mineral composed of mg-al oxides, as containing magnesium, iron, zinc, manganese, etc. elements, they can be divided into many forms, such as aluminum spinel, iron spinel, zinc spinel, manganese spinel, chrome spinel and so on. due to the different elements, different spinel can have different colors, for example, magnesium spinel is

between the red, blue, green, brown, and the colorless; zinc spinel is dark green and iron spinel is black, etc. spinel shows a hard glassy octahedral, granular and block. they can be founded in the igneous rock, granitic pegmatite and metamorphic limestone. some transparent and beautiful spinel can be used as precious stones and some used as an iron-containing magnetic material. now people have could produce more than 200 varieties of spinel.

spinel is a family mineral, formed by contact metamorphism in the molten magma when this magma intrusting into the impure limestone or dolomite. some appear in the al-rich basite magmatic rocks. gem-quality spinel mainly refers to mg-al spinel, an mg-al oxide. its form is the octahedron and the aggregation of octahedron and rhombic dodecahedron. they have varied colors, colorless, pink, red, purple, light purple, deep blue, blue, yellow, and brown and so on. spinel is divided by its color variety; there is red, orange, blue-violet, blue spinel and so on. pink and red spinel aglow red fluorescence when in the long and short-wave uv-wave.

**【physical properties】**

spinel

chemical formula:  $MgAl_2O_4$

crystal system: isometric system

crystal features: octahedral crystal form, the aggregation of octahedron and rhombic dodecahedron

luster: vitreous luster and sub-adamantine luster

transparency: transparent and opaque

refractive index: 1.718, it changes according to the content of trace elements; maximum is 2.000; no birefringence; no polychroism

special optical effects: star effect, aventurescence and rarity

hardness: 8

density: 3.60 (+0.10, -0.03) g / cm<sup>3</sup>

| item       | al2o3 | mgo%  | sio2% | bodydensity<br>g/cm3 | porosity% | spinel% | silicate% |
|------------|-------|-------|-------|----------------------|-----------|---------|-----------|
| indicators | 56-62 | 28-32 | <4.0  | <3.0                 | <9.0      | 85-90   | 10        |

**【product and combination】**

it usually originates in the metamorphic belt of magnesian limestone and granite and intergrowth with magnesium olivine and diopside. the spinel in the basite and ultrabasic rocks is directly crystallized by magma, associated with pyroxene, olivine, magnetite, chromite and platinum group minerals and so on.

**【features identification】**

octahedral shape; hardness; great corundum hardness; harder than garnet

**【industrial applications】**

widely used in iron and steel smelting, cement rotary kiln and glass industry furnaces