

SHANDONG TAIRAN IMPORT AND EXPORT CO.,LTD

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Plastic Refractory



Plastic refractory is an important variety of unshaped refractory materials. It is produced with 70-80% refractory aggregate and 10-20% plastic binder. The products have good plasticity, wear resistance and erosion resistance, anti stripping performance and high temperature resistance. It is applicable to the lining of various industrial kilns, boilers, petrochemical furnaces, wear resistance and erosion resistance parts, and parts with complex structures.

1. Description of plastic refractory

Plastic refractory can be divided into two types: air hardening and thermal hardening. The aggregates include calcined bauxite, corundum, silica, silicon carbide, magnesia, chrome sand, zircon, etc. The amount of addition is 70-80%. The binders include phosphoric acid, phosphate, sodium silicate, and organic binders. The commonly used binders are phosphoric acid or phosphate. In addition, plasticizers and micro powders are added and fully mixed to make them into sheets or blocks for packaging and shipping, However, the shelf life shall not exceed 3 months. It can also be made into dry materials and binders for separate packaging and delivery, with a shelf life of 6 months.

There are many types of Plastic refractory, which are applied to different parts of different industrial furnaces. However, the products have good plasticity, wear resistance, erosion resistance, anti stripping performance, high strength, and good overall structure under high temperature. Therefore, the products are widely used in the lining, roof, and parts with complex structure of various industrial furnaces, and have received good use results.

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2. Technical index of plastic refractory

Item		TRP-1	TRP-2	TRP-3	TRP-4	TRP-5	TRP-6	TRP-7
Al ₂ O ₃ %		50	60	72	80	90	-	-
Fe ₂ O ₃		≤1.5	≤1.5	≤1.5	≤1.2	≤0.5	≤1.0	≤1.0
SIC %		-	-	-	-	-	-	70
SiO ₂ %		35	24	15	11	4	65	13
Density g/cm ³		≥2.30	≥2.40	≥2.45	≥2.65	≥2.85	≥2.20	≥2.60
Refractoriness °C		1730	1750	1790	1800	>1800	>1650	1790
Compression strength Mpa	110°C*24h	≥15	≥20	≥40	≥50	≥65	≥17	≥80
	1300°C*3h	≥35	≥40	≥70	≥80	≥90	≥12	≥100
Flexural strength Mpa	110°C*24h	≥3	≥7	≥10	≥12	≥13	≥6	≥14
	1300°C*3h	≥7	≥9	≥18	≥19	≥21	≥6	≥18
Linear change rate %	1400°C*3h	±0.2	+1.5	±0.3	+1.3	±0.3	+5.0	±0.3
Plasticity index %		16-30	16-30	16-30	16-30	16-30	16-30	16-30
Thermal shock stability,1100°C, water cooling,times		>30	>30	>35	>35	>40	>50	>60
Normal temperature wear,cm ³		<13	<12	<12	<10	<8	<10	<6
Operating temperature		1350	1400	1500	1600	1700	1400	1550

3. Main features

- 1) Good plasticity and easy construction
- 2) High wear resistance and strong erosion resistance
- 3) Good peeling resistance and strong overall structure
- 4) High temperature volume stability, low shrinkage, not easy to crack

4. Application

1) There are two production and application methods. First, the products are produced in blocks in advance and delivered in good packaging, after the goods arrive at the site, they are used directly, but the shelf life is not more than 3 months. Second, the mixed dry materials and binders such as phosphoric acid are packaged and delivered separately, after the goods arrive at the site, they are mixed evenly according to the example, the trapped materials can be used after about 10 hours, and the shelf life is 6 months

2) It is applicable to the lining of various industrial kilns, boilers, petrochemical furnaces, and parts with complex structures

5. Good feedback of product use effect, the products have been exported to South Korea, Australia, Kenya,

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6.The manufacturer is a professional manufacturer and can provide complete product index test reports or third-party test reports.

Do you want to find a professional supplier of plastic refractory?

Do you want to find a stable and credible supplier?

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