



# Shanghai King Chemical Co.,Ltd

Tel: +86-21-67817854 Fax: +86-21-67817855

Address: ROOM CDEF , 9th Floor, Building D, Weijing Center Tower  
NO.2337 GuDai Road, Minhang District, Shanghai, China

Name: Zinc oxide for chemical use

Project	Indicators		
	I type	II type	III type
Appearance	White powder		
Zinc oxide content, % $\geq$	99.70	99.70	99.50
Content of metal, % $\leq$	There is no	There is no	0.008
Hydrochloric acid insoluble, % $\leq$	0.006	0.008	0.03
Burn loss, % $\leq$	0.20	0.20	0.25
Sieve residue, % $\leq$	0.10	0.15	0.20
Water soluble, % $\leq$	0.10	0.10	0.15
105°C volatile, % $\leq$	0.3	0.4	0.5
Lead (Pb) content, % $\leq$	0.0080	0.05	0.10
Copper (Cu) content, % $\leq$	0.0002	0.0004	0.0007
Manganese (Mn) content, % $\leq$	0.0001	0.0001	0.0003
Cadmium (Cd) content, % $\leq$	0.0020	0.0050	0.010
Iron (Fe) content, % $\leq$	0.0050	0.010	-
Specific surface area /(m <sup>2</sup> /g)	agreed		-
Oil absorption/(g / 100 g)	agreed		
Color	agreed		
Decolorization force	agreed		
Note: zinc oxide (indirect method) products only			

Chemical zinc oxide is a multifunctional new inorganic material, in the phosphating liquid, stable performance, clear and transparent after dissolution, so that the phosphating liquid better in the metal surface to play the role of corrosion prevention, anti-aging, metal protection, etc..

## I、 the use of zinc oxide in chemical industry:

Used as white pigment for lightning arrester, printing and dyeing, rubber, coating, medicine, printing ink, cable, electronics, coin, enamel, match, chemical industry, replacement products, phosphating liquid, electronic laser materials, phosphor, catalyst, magnetic material manufacturing, etc.

## II、 Characteristics of chemical zinc oxide:

1. Zinc oxide has small particle size, uniform particle size, strong dispersion ability, fast and thorough chemical reaction speed, and consistent reaction speed.



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2, high purity, can make the product high purity, strong stability. Less impurities, greatly reducing the impact of other products on the main product.

3, the single particle density is small, small specific gravity, the reaction process is not easy to precipitate.

4, pure white color, no effect on the color of the product after the reaction.

### III、Preparation of zinc oxide for chemical industry

There are three preparation methods for zinc oxide used in chemical industry: direct method (also known as American method), indirect method (also known as French method) and wet chemical method. At present, many zinc oxides on the market are direct or indirect products with micron particle size and small specific surface area, which greatly restrict their application fields and properties in products. Nano-sized zinc oxide was prepared by wet chemical method (NPP- method). Various zinc-containing materials could be used as raw materials. Zinc was extracted by acid leaching, impurities in raw materials were removed after purification for several times, and then basic zinc carbonate was precipitated. Compared with the previous preparation technology of nano-sized ultrafine zinc oxide, the new process has the following technological innovations:

1. The principle of reaction kinetics under equilibrium conditions is combined with enhanced heat transfer technology to quickly complete the baking of basic zinc carbonate.
2. Various types of nano zinc oxide products with different purity, particle size and color can be prepared by adjusting the process parameters.
3. This process can use a variety of zinc-containing materials as raw materials to transform them into high value-added products.
4. Typical green chemical process belongs to environmental friendly process.