ÓXIDO DE ZINCO

1. Produto

Óxido de Zinco BO

2. Tabela de Especificação

2.1 Características Químicas

Características Químicas		
Elemento (%)	**Min**	**Max**
ZnO	99,0	-
Pb	-	0,2
Cd	-	0,05
Cu	-	0,01
Fe	-	0,1
Mn	-	0,00006
Cl	-	0,05
S	-	0,02

2.2 Características Físicas

Características Físicas		
Características	**Min**	**Max**
Área Superficial (m2/g)	4,0	7,0
Retido na malha de 325 # (%)	-	0,6
Umidade (%)	-	0,3
Perda de Calor (%)	-	0,5
Ácidos acéticos insolúveis (%)	-	0,5
Peso Específico (g/cm³)	5,65	
Aspecto	Pó Branco Fino	
Embalagem	Sacaria, bag e pallet	

3. Embalagem e Transporte

- Sacaria 25kg: Informações do produto impressas na embalagem.
- Bag 1100kg/1200kg: Etiqueta com informações no bolsão.
- Produto Perigoso
- Classe de risco: 9 – Substâncias e artigos perigosos diversos, incluindo substâncias que apresentam risco para o meio ambiente
- **Nº ONU: 3077**

4. Informações Complementares

- Estocar o produto em local seco protegido da chuva.
- O transporte deverá ser feito em caminhões lonados.
- Validade: 3 anos a partir da data de fabricação.
- Unidade de Produção: Três Marias

Material Safety Data Sheet

1. CHEMICAL PRODUCTAND COMPANYIDENTIFICATION

· **Product Name: Silica for all grades**

· **Chemical Name: Precipitated Hydrated Silicon Dioxide / Silica (ZQ356/ZQ356K).**

· **Manufacturer: Zhuzhou Xinglong New Material co.,ltd.**

· **Supplier: Zhuzhou Fengzhan Trade co., Ltd**

·**Place of Origin: China**

· **Tel: +86-731-28823391 Fax:+86-731-28823365**

· **Address: B-2512, BAOLI BUILDING, NORTH OF CHANGJIANG ROAD, ZHUZHOU CITY, HUNAN PROVINCE, CHINA**

2. INFORMATIONONINGREDIENTS

· **Chemical characterization: Pure Substance**

· **Appearance: White Solid**

· **Ingredients:**

Chemical Name	CAS No.	Percent (%)
SiO2	7631-86-9	95-98
Na2SO4	7757-82-6	≤1.6
AL2O3	11092-32-3	≤0.3
CaO	1305-78-8	≤0.045
Fe	7439-89-6	≤0.05
Cu	7440-50-8	≤0.001
Mn	7439-96-5	≤0.004

3. HAZARDS IDENTIFICATION

· **Hazard Category:** According to Hazardous Products Catalogue (2002), silica belongs to non-hazardous chemicals [3]

·**Caution!** DUSTS IN HIGH CONCENTRATIONS MAY CAUSE SKIN, EYE AND RESPIRATORY TRACT IRRITATION, INGESTIONAND INHALATION.

· **Potential Health Effects**

Ingestion: No hazard expected in normal industrial use.

Eye: Dust may cause mechanical irritation.

Skin: Prolonged or repeated contact may dry skin and cause irritation.

Inhalation: May cause bodily discomfort: coughing, sneezing

- **Environmental hazards:** According to National Hazardous Wastes Catalogue (1998) : silica belongs to non- hazardous wastes.
- **Explosion Hazard:** None.

4. FIRST-AID MEASURES

- **Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
- **Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.
- **Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
- **Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

5. FIRE- FIGHTING MEASURES

- **Hazard characteristics:** Not easy to burn under the conditions of use
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Protective equipment:**

Mount respiratory protective device.

Wear self- contained respiratory protective device.

6. ACCIDENTAL RELEASE MEASURES

- **6 . 1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

Ensure adequate ventilation

· **6.2 Environmental precautions:** Isolate leakage contaminated area, set warning signs around, suggest emergency handlers wear masks, goggles, wear overalls. and abide by the relevant environmental laws and regulations, not to pollute lakes, streams, ponds, groundwater and soil; .

· **6.3 Methods and material for containment and cleaning up:** Ensure adequate ventilation. Use a broom to clean up carefully, avoid dust, or collect leaks with a vacuum cleaner, as far as possible to return to the revenue sealed appliances (such as plastic bags, etc.) for waste treatment.

7. HANDLINGAND STORAGE

· **7.1 Handling:**

·The production process is sealed to prevent dust from releasing into the air. Advise operators to wear personal protective equipment to avoid dust generation. The need to prevent electrostatic discharge when handling, prevent fires and explosions.

· **7.2 Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Store in a cool, ventilated storehouse, far away from the fire, heat, and prevent direct sunlight. Keep container tightly sealed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTIONS

· **8.1 Introductory Remarks:**

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

· 8.2 Exposure Limits

Chemical Name	ACGIH
Silica	5 mg/m3 [8,9] , TWA
	10 mg/m3 [8,9], MAC

· 8.3 Engineering Control: Airtight operation; set up local dust-absorbing device or whole ventilation device.

· 8.4 Personal Protective Equipment:

· Respiratory: Workers should wear dust masks;

·Eyes: Wear appropriate protective eyeglasses or chemical safety goggles, set up eye washing device;

· Body: Wear work clothes and shoes; set up shower room;

· Hands: Wear impervious gloves;

· Other protection: The operation process conforms to good industrial hygiene and safety habits; after working, wash hand and face with soap thoroughly, and protect the skin with skin cream; Ex the contaminated clothing as soon as possible and wash before dressing again; the workplace is forbidden to smoke or eat; maintain workplace cleanliness

Material Safety Data Sheet

9. PHYSICALAND CHEMICAL PROPERTIES

Appearance:	White Odourless Granule/ Powder/ Micro- pearl		
pH-value (50g/l) at 20°C	6.0—8.0	**Critical Temperature (℃):**	Not applicable
Melting Point (C) s	About 1700℃	**Critical Pressure (MPa)s**	Not applicable
Boiling Point (C):	Not applicable	**Numerical value of octanol/ water distribution coefficient:**	Not applicable
Density at 20°C (water=1):	2.0	**Flash Point (℃):**	Not applicable
Steam Density (steam= 1)s	Not applicable	**Combustion Temperature (℃):**	Not applicable
Saturated Vapor Pressure (kPa):	1. 33 / 1732℃	**UEL% (V/V)S**	Not applicable
Heat of combustion (kJ/ mol):	Not applicable	**LEL% (V/V)S**	Not applicable
Solubility	Insoluble in water and acid, soluble in hydrofluoric acid	**Main Application:**	Rubber products
Molecular Formula:	SiO2	**Molecular Weight:**	60.09

10. STABILITYAND REACTIVITY

- **Stability:** Stable under normal temperature and pressure, thermal decomposition temperature > 2000 ℃, hydroscopic.
- **Conditions to avoid:** Avoid contacting with damp condition
- **Ban of distribution:** Chlorine Trifluoride
- **Aggregation Hazard:** None
- **Decomposition product:** The natural decomposition product is unknown

11. TOXICOLOGICAL INFORMATIN

- **11.1 Acute toxicity:** Acute inhalation toxicity: LC0 (max Lethal concentration): 0. 139mg/L (4 hours); no death

Test Methods: Literature Review

· **11.2 Subacute and Chronic toxicity:**

Meridian: no adverse effects;

Inhalation: all reversible changes without causing silicosis;

· **11.3 Primary irritant effect:**

Skin irritation: None – rabbit (literature review)

Eye irritation: None – rabbit (literature review)

Sensitization: Prolonged exposure to silica dust may cause allergic reactions in the respiratory tract. But study found that silicosis and other respiratory tract diseases were unrelated to this product.

· **11.4 Mutagenicity:** In vivo and in vitro experimental results showed no obvious mutagenic effect (literature review)

· **11.5 Teratogenic:** No apparent teratogenic effect (literature review);

· **11.6 Carcinogenicity:** No negative effect

12. ECOLOGICAL INFORMATION

· **12.1Toxicity:** Acute toxicity to fish: LC50 - 96 h: > 10,000 mg/l - Danio rerio (zebra fish)

Test Method: OECD 203

Acute toxicity to daphnia and other aquatic invertebrates:

EC50 - 24 h: > 1,000 mg/l - Daphnia magna (Water flea)

· **12.2 Persistence and degradability:** No further relevant information available.

Other information: The product is difficultly biodegradable.

Behaviour in environmental systems:

· **12.3 Bioaccumulative potential:** No further relevant information available.

· **12.4 Mobility in soil:** No further relevant information available.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects:** No further relevant information available.

13. DISPOSAL CONSIDERATIONS

- **13.1 Waste Property:** ☐ Hazardous waste ☑ Industrial solid wastes
- **13.2 Waste treatment methods:**
  - **Recommendation:** Wastes should be treated according to environmental laws, regulations and recycling as far as possible and dispose with safely buried method. Must not be disposed together with household garbage. Do not allow product to reach sewage system;
  - **Uncleaned packaging:**

  Recommendation: The product packaging should be cleaned up by recycling companies.

14. TRANSPORTINFORMATION

- **Domestic (GB12268-2005):** No provision (non-hazardous goods) [10]
- **IMDG/ IMO**: Not regulated (non-hazardous goods) .
- **Air Transport IATA/ ICAO**: Not regulated (non- hazardous goods) .
- **Transport Note:** Stored in a cool, ventilated warehouse, separate with chlorine trifluoride; sealed packaging; light loading and unloading, keep the packaging intact, to prevent spill; packing and handling operations should pay attention to personal protection.

15. REGULATORYINFORMATION

Domestic Chemical Safety regulation: All ingredients in this product conform to:

Relevant laws and regulations in China	Listed in or not
State Environmental Protection Administration: China's Current Chemicals Catalogue:	Yes
National Security Bureau, etc.: Toxic Chemicals Catalogue (2002):	No
National Security Bureau: Hazardous Products Catalogue (2002):	No
Identification of Major Hazard Sources (GB18218-2000):	No
State Environmental Protection Administration: National Hazardous Wastes Catalogue (1998)	No
Ministry of Health: Catalogue of high toxic substances (2003):	No
Regulations on the management of precursor chemicals (the Sate Council: 2005):	No

16. OTHER INFORMATION

Issue Date: 2021-01-01

Issue Department: Quality Management Department.

Modify Description: The latest.

References:

[1] China' s Current Chemicals Catalogue:

[2] Toxic Chemicals Catalogue (2002) :

[3] Hazardous Products Catalogue (2002) :

[4] Identification of Major Hazard Sources (GB18218-2000) :

[5] National Hazardous Wastes Catalogue

[6] High Toxic Substances Catalogue (2003)

[7] Regulations on the management of precursor chemicals (the Sate Council: 2005)

[8] Occupational exposure limit for harmful factors in workplaces (GBZ 2- 20 0 2)

[9] Occupational exposure limit for silica fume in the air of workplace (GB18558-2001)

[10] Hazardous Products List (GB12268-2005)

" The information provided in these documents is based on our present state ofknowledge of the product and is given in good faith and to the best of our experience. However, it should not be construed as a technical specification or as guaranteering specific properties. In no event we will be responsible for damages or effects of any nature whatsoever either express or implied, resulting from the use of this information. It is the own responsibility of the consignee and the user of the product to comply with all prevailing and applicable laws, regulations and directives. They should also make their own determination as to the suitability of the product for a particular use or application. "

Óleos Vegetais	ESPECIFICAÇÃO TÉCNICA AZECID 1855 C3		
	ET – 122	**REV.: 03** Vigente desde 23/09/2020	**PÁG.: 1/1**

PROPRIEDADES	ESPECIFICAÇÃO	MÉTODO	MONITORAMENTO ANALÍTICO
Aspecto, 25°C	Escamas Brancas levemente amareladas	Visual	Lote a Lote
Cor Gardner	Máx. 3,0	MA – 16 AOCS Td 1a - 64 (2017)	Lote a Lote
Índice de Acidez	203 – 210 mg KOH/g	MA – 14 AOCS Te 1a – 64 (2017)	Lote a Lote
Índice de Iodo (Wijs)	Máx. 3,0 cgI2/g	MA – 01 AOCS Tg 1a – 64 (2017)	Lote a Lote
CARACTERÍSTICAS INFORMATIVAS			
Ponto de Fusão	56,0 – 60,0º C	MA – 13 AOCS Cc 1 – 25 (2017)	A cada 10 lotes fabricados
Índice de Saponificação	203 – 212 mgKOH/g	MA – 03 AOCS Tl 1ª – 64 (2017)	A cada 10 lotes fabricados
Composição Graxa (%)			
C 12 (ÁCIDO LAÚRICO)	MÁX. 2,00	MA - 35	A cada 10 lotes fabricados
C 14 (ÁCIDO MIRISTICO)	MÁX. 2,00		
C 16 (ÁCIDO PALMITICO)	38,00 - 48,00		
C 18 (ÁCIDO ESTEÁRICO)	50,00 - 60,00		
C 18.1 (ÁCIDO OLEICO	MÁX. 2,00		
C20 (ÁCIDO EICOSANÓICO)	MÁX.1,00		

VALIDADE DO PRODUTO: 01 ANO DA DATA DE FABRICAÇÃO.

- Produto pode ser fornecido na forma granel onde na temperatura de fusão apresentará aspecto líquido levemente amarelado.

QUADRO DE REVISÕES		
REVISÃO	**ADIÇÃO/ ALTERAÇÃO**	**DATA**
00	Emissão inicial.	22/02/2019
01	Análise crítica	20/04/2020
02	Alteração do Índice de Iodo	29/08/2020
03	Inclusão da Composição Graxa	23/09/2020

Elaborado por:	**Aprovado por:**	
Zenilde Pirogini Coordenadora de Controle de Qualidade	Andrés C. Morales Diretor	CÓPIA CONTROLADA

Óleos Vegetais	ESPECIFICAÇÃO TÉCNICA AZECID DP 10		
	ET – 119	**REV.: 04** Última atualização: 05/09/2022	**PÁG.: 1/1**

PROPRIEDADES	ESPECIFICAÇÃO	MÉTODO	MONITORAMENTO ANALÍTICO
Aspecto, 25°C	Escama de formato não uniforme, de coloração Branca à Amarelada	Visual	Lote a Lote
Aspecto, 60°C	Líquido amarelado	Visual	Lote a Lote
Cor Gardner	Máx. 6,0	MA – 16 AOCS Td 1a – 64 (2017)	Lote a Lote
Índice de Acidez	195,0 – 205,0 mg KOH/g	MA – 14 AOCS Te 1a – 64 (2017)	Lote a Lote
Índice de Iodo (Wijs)	Máx. 7,0 cgI2/g	MA – 01 AOCS Tg 1a – 64 (2017)	Lote a Lote
CARACTERÍSTICAS INFORMATIVAS			
Ponto de Fusão	53 – 63º C	MA – 13 AOCS Cc 1 – 25 (2017)	A cada cinco lotes fabricados
Índice de Saponificação	195,0 – 205,0 mg KOH/g	MA – 03 AOCS Tl 1a – 64 (2017)	A cada cinco lotes fabricados

COMPOSIÇÃO GRAXA (%)			
C 12 - ÁCIDO LAURICO	TÍPICO 2,0	MA - 35	ANALISE INFORMATIVA (MONITORADA A CADA 20 LOTES FABRICADOS)
C 14 - ÁCIDO MIRISTICO	TÍPICO 2,0		
C16 - ÁCIDO PALMITICO	TÍPICO 40,0		
C18 - ÁCIDO ESTEÁRICO	TÍPICO 53,0		
C18.1 - ÁCIDO OLEICO	TÍPICO 3,0		

VALIDADE DO PRODUTO: 01 ANO DA DATA DE FABRICAÇÃO.

QUADRO DE REVISÕES		
REVISÃO	**ADIÇÃO/ ALTERAÇÃO**	**DATA**
00	Emissão inicial.	14/12/2018
01	Inclusão da Composição graxa	06/09/2019
02	Análise critica	20/04/2020
03	Análise Crítica (Alteração dos ensaios: I. Acidez – I. Saponificação – Cor Gardner – Composição graxa).	20/05/2022
04	Revisão do Aspecto Visual	05/09/2022

Elaborado por:	**Aprovado por:**	
Zenilde Pirogini Coordenadora de Controle de Qualidade	Andrés C. Morales Diretor	CÓPIA CONTROLADA