

ZHENGZHOU VIDAR WATER INDUSTRIAL CO.,LTD

No.32, Agri-Tech Road, Zhengzhou City, P.R. China
TEL:+0086-371-66722268 FAX:+0086-371-66722255

Certificate of Analysis

Product Name: Citric Acid Monohydrate

Report No.: 2022-0109

Packing: In 25kg Bag

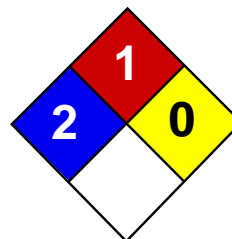
Quantity: 25T

Item	Unit	Quality Standards	Analysis Results
Characters	---	White or almost white, crystalline powder, colourless crystals or granules. Odorless, has a strongly acid taste. effloresces in dry air. Very soluble in water, freely soluble in ethanol.	Pass
Identification	---	Pass Test	Pass
Appearance of solution	---	Pass Test	Pass
Assay	%	99.5~ 100.5	99.8
Water	%	7.5~ 8.8	8.60
Readily Carbonisable Substances	---	Pass Test	Pass
Sulphated Ash (Residue on Ignition)	%	≤0.05	0.02
Sulfate	mg/kg	≤150	<150
Oxalate	mg/kg	≤100	<100
Lead	mg/kg	≤0.5	<0.05
Arsenic	mg/kg	≤1.0	<0.3
Mercury	mg/kg	≤1.0	<0.5
Aluminium	mg/kg	≤0.2	<0.2
Heavy Metals	mg/kg	≤5.0	<5.0
Bacterial endotoxins	IU/mg	≤0.5	<0.5
Conclusion: The product is in conformity with BP/USP/FCC/E330			

Signature&Stamp:

For and on behalf of
ZHENGZHOU VIDAR WATER INDUSTRIAL CO.,LTD
Authorized Signature(s)

Analysis Date: 08.05.2022



Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet Citric acid MSDS

Section 1: Chemical Product and Company Identification

Product Name: Citric acid

Catalog Codes: SLC5449, SLC2665, SLC4453, SLC1660, SLC3451

CAS#: 77-92-9

RTECS: GE7350000

TSCA: TSCA 8(b) inventory: Citric acid

CI#: Not available.

Synonym: 2-Hydroxy-1,2,3-propanetricarboxylic acid

Chemical Name: Citric Acid

Chemical Formula: C₆H₈O₇

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Citric acid	77-92-9	100

Toxicological Data on Ingredients: Citric acid: ORAL (LD50): Acute: 5040 mg/kg [Mouse]. 3000 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of eye contact (irritant), of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant, sensitizer), of ingestion. The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Severe over-exposure can produce lung damage, choking, unconsciousness or death.

Potential Chronic Health Effects:

Slightly hazardous in case of skin contact (sensitizer). CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 1010°C (1850°F)

Flash Points: Not available.

Flammable Limits: LOWER: 0.28 Kg/M3 (Dust) UPPER: 2.29 Kg/M3 (Dust)

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances:

Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: As with most organic solids, fire is possible at elevated temperatures

Special Remarks on Explosion Hazards:

Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, reducing agents, metals, alkalis.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Safety glasses. Lab coat. Gloves (impervious). Dust respirator. Be sure to use an approved/certified respirator or equivalent. The dust respirator should be used for conditions where exposure has exceeded recommended exposure limits, dust is apparent, and engineering controls (adequate ventilation) are not feasible.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

No exposure guidelines have been established. ACGIH, NIOSH and OSHA have not developed exposure limits for this product. The exposure limits given below are for particulates not otherwise classified: ACGIH: 10 mg/m³ TWA (Total Inhalable fraction); 3 mg/m³ TWA (Respirable fraction) OSHA: 15 mg/m³ TWA (Total dust); 5 mg/m³ TWA (Respirable Fraction)

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystalline powder)

Odor: Odorless.

Taste: Acid. (Strong.)

Molecular Weight: 192.13 g/mole

Color: Not available.

pH (1% soln/water): Not available.

Boiling Point: Decomposes.

Melting Point: 153°C (307.4°F)

Critical Temperature: Not available.

Specific Gravity: 1.665 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: The product is more soluble in water; log(oil/water) = -1.7

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether.

Solubility:

Soluble in cold water, hot water, diethyl ether. Insoluble in benzene.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, reducing agents, metals, alkalis.

Corrosivity:

Corrosive in presence of aluminum, of zinc, of copper. Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Incompatible with oxidizing agents, potassium tartrate, alkali, alkaline earth carbonates and bicarbonates, acetates, and sulfides, metal nitrates

Special Remarks on Corrosivity: Will corrode copper, zinc, aluminum and their alloys.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 3000 mg/kg [Rat].

Chronic Effects on Humans: May cause damage to the following organs: teeth.

Other Toxic Effects on Humans:

Hazardous in case of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant, sensitizer), of ingestion.

Special Remarks on Toxicity to Animals: LDL[Rabbit] - Route: oral; Dose: 7000mg/kg

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes mild to moderate skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Eyes: Causes moderate to severe eye irritation and possible injury. Ingestion: May cause gastrointestinal (digestive) tract irritation with nausea, vomiting, diarrhea. Excessive intake may cause erosion of teeth and hypocalcemia (calcium deficiency in blood). May affect behavior/central nervous system (tremor, convulsions, muscle contraction or spasticity). Inhalation: Causes moderate respiratory tract and mucous membrane irritation. Chronic Potential Health Effects: Frequent intake of citrated beverages may cause erosion of dental enamel and irritation of mucous membranes.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Citric acid

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS E: Corrosive solid.

DSCL (EEC):

R36/37/38- Irritating to eyes, respiratory system and skin. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37/39- Wear suitable gloves and eye/face protection.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: e

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

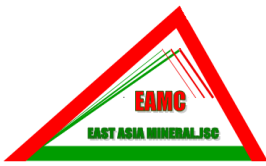
Gloves (impervious). Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.



EAST ASIA MINERAL JOINT STOCK COMPANY

Tel: +84-238-3986 888

Fax: +84-238-3987 888

Web: www.eamcvina.com

E: sales@eamcvina.com

Villa 106, Phu Tho Villa Area, Vinh City, Nghe An, Vietnam



EAMC – FIRM BELIEF

TECHNICAL DATA SHEET

**UNCOATED CALCIUM CARBONATE POWDER
GRADE: EAMC - 11**

BRIEF DESCRIPTION

Natural Superfine Calcium Carbonate powder uncoated. The raw material is mined from the white limestone mines of our company with the best quality, high purity and processed on the most advanced technology production lines in the world.

PRODUCT SPECIFICATION

Particle size:
Top cut: D97 $60 \pm 5 \mu\text{m}$
Mean size: D50 $10 \pm 3 \mu\text{m}$
Pass through 325 mesh $\geq 99.85\%$
Residue on 325 mesh $\leq 0.15\%$
Specific Surface area $\geq 7.2\text{m}^2/\text{g}$
Whiteness L*: $\geq 98.00\%$
Brightness: $\geq 94.00\%$
Moisture (Ex-work): $\leq 0.20\%$
Specific gravity (Raw Material): $2.7\text{g}/\text{cm}^3$
Oil Absorption: $18\text{g}/100\text{g}$

**CHEMICAL ANALYSIS
OF RAW MATERIAL**

CaCO₃ content: $\geq 98.00\%$
MgCO₃ content: $\leq 0.21\%$
Fe₂O₃ content: $\leq 0.02\%$
Al₂O₃ content: $\leq 0.03\%$
SiO₂ content: $\leq 0.12\%$

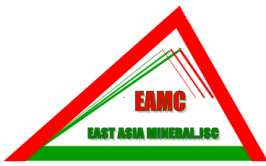
PACKING

25kg, 50kg PP/PE bags, jumbo bags, kraft bags or as per customer's requirement.

MAIN APPLICATIONS

Widely used as an extender in paint, in particular matte emulsion paint or a filler in plastics, a mixture in plastics, paint, paper, rubber, glass and porcelain of high quality and high-grade products; and other applications in industry.

*Factory 1: Nghia Xuan, Quy Hop, Nghe An
Factory 2: Nghia My, Nghia Dan, Nghe An*



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Fax: +84-238-3987 888

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EAMC – FIRM BELIEF

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GRADE: EAMC - 14**

BRIEF DESCRIPTION

Natural Superfine Calcium Carbonate powder uncoated. The raw material is mined from the white limestone mines of our company with the best quality, high purity and processed on the most advanced technology production lines in the world.

PRODUCT SPECIFICATION

Particle size:
Top cut: D97 $90 \pm 5 \mu\text{m}$
Mean size: D50 $25 \pm 5 \mu\text{m}$
Pass through 325 mesh $\geq 99.85\%$
Residue on 325 mesh $\leq 0.15\%$
Specific Surface area $\geq 7.2\text{m}^2/\text{g}$
Whiteness L*: $\geq 98.00\%$
Brightness: $\geq 94.00\%$
Moisture (Ex-work): $\leq 0.20\%$
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Factory 2: Nghia My, Nghia Dan, Nghe An



Yantai Responsible International

<https://www.bosourcing.com/>

Room 1005, 77 Changjiang Road, ETDZ, Yantai, Shangdong

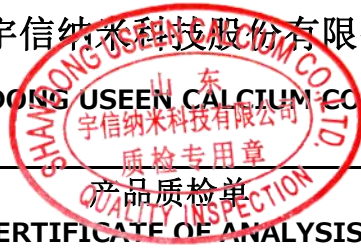
Whatapp/ Wechat/ Skype:0086-13287462530

检 验 报 告

Certificate of Analysis

产品名称	Product Name	重质碳酸钙 Calcium Carbonate Heavy	
批 号	Batch No.	TGF22078	
检验日期	Test Date	20231210	
生产日期	Manufacture Date	20231210	
保质日期	Expiry date	20251209	
检验依据	According	USP44	
外观形状	Description	白色粉末 White powder	
理化指标	Inspection		
项目 Items		指标 Specification	结果 Results
鉴别试验 Identification		Pass A	Pass A
碳酸钙(干基)CaCO ₃ (Dry base)	%	98.0~100.5	98.8
干燥失重(Loss on drying)	%	≤2.0	0.5
盐酸不溶物 Acid-insoluble substance	%	≤0.20	0.1
铁 Iron	%	≤0.1	<0.1
镁盐及碱金属 Magnesium and alkali salts	%	≤1.0	0.9
钡 Barium		Pass the test	Pass the test
氟限量(Limit of fluoride)	ppm	≤50	<50
重金属(以 Pb 计) Heavy metals	ppm	≤20	<20
铅 Lead	ppm	≤3	<3
砷 Arsenic	ppm	≤3	<3
汞 Mercury	ppm	≤0.5	<0.5
结论 Conclusion		合格 Qualified	
检验者 Checker		审核者 Inspector	

山东宇信纳米科技股份有限公司
SHANDONG USEEN CALCIUM CO.,LTD



CERTIFICATE OF ANALYSIS

产品名称	PRODUCT NAME:	超细碳酸钙SUPER FINE GCC 60um		
产品编号	PRODUCT NO:	/		
产品外观	PRODUCT APPEARANCE:	白色粉末	WHITE POWDER	
生产日期	PRODUCTION DATE:	/		
检测日期	INSPECTION DATE:	/		
生产批号	BATCH NO:	/		
检 测 结 果				
	指标项目 ITEM	单位 UNIT	指标值 INDEX	实测值 RESULT
	含量CaCO ₃	%	≥96	98
	粒径D97	μm	≤65	64.53
	250目通过率250mesh pass rate	%	≥99	99.2
	白 度 Brightness	%	≥90	92.8
	105°C 挥发物Volatile matter	W/%	≤0.5	0.13
	重金属 Heavy metal (as bp)	W/%	≤0.005	0.001
检验结论Conclusions: 合格 Pass				
分析Analysis: SUNYUNXIA 审核Checked: YAOLIXIU 核准Approved: LIUYAXIONG				



Date: 04/10/2020

CERTIFICATE OF ANALYSIS

Product Name Calcium Carbonate

BATCH NO. LAT1004/2020

Mfg. Date. 04/10/2020

Exp. Date. 03/10/2025

[A] Chemical Properties: -

Sr. No	Tests	Unit	Spec. Test Value
1	Appearance	-	White
2	Calcium Carbonate (CaCO ₃)	96% Min	96.47
3	Magnesium Carbonate (MgCO ₃)	%	1.3
4	CaO	%	54.43
5	MgO	%	0.28
6	Iron (Fe ₂ O ₃)	%	0.009
7	pH(Of 10% Solution)	%	8
8	Brightness	%	96
9	Bulk Density (g/100g)	0.800 to 0.900	0.84

[B] Physical Properties: -

Sr. No	Tests	Unit	Spec. Test Value
1	Particle Size		20 micron
2	Top Cut		Round

For LABH AGRO TRADECOM

HEAD QA