

**Section 1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY**

**1.1 Product identifier**

**Product name:** Chamber Brite  
**Trade name:** Chamber Brite  
**Product type:** Powder

**1.2 Relevant identified uses of the substance or mixture and uses advised against:**

Autoclave Cleaner Powder

**1.3 Details of the supplier of the safety data sheet**

**Company identification:** LIMAT Chemicals Ltd, Givat Chaim Meuchad, 38930, Israel  
**Tel:** +972-4-6167730  
**Fax:** +972-4-6301304  
**E-mail address:** limat@limat.co.il

**1.4 Emergency telephone number:** Chief Technologist - Raviv Brown 050-7559731

**Section 2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

Product name	GHS Classification
Chamber Brite	Eye Irrit 2; H319 STOT SE 3; H335 Skin Irrit 2; H315

**2.2 Label elements**

**Hazard pictograms:**



**Signal word:** Warning

**Hazard statements:**

H315 Causes skin irritation.  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation

**Precautionary Statements:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray  
P264 Wash ... thoroughly after handling  
P280 Wear protective gloves/protective clothing/eye protection/face protection  
P302+P352 IF ON SKIN: Wash with soap and water  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing  
P312 Call a POISON CENTER or doctor/..... if you feel unwell  
P321 Specific treatment (see ... on this label)  
P332+P313 If skin irritation occurs: Get medical advice/attention  
P337+P313 If eye irritation persists get medical advice/attention  
P362 Take off contaminated clothing  
P364 And wash it before reuse.  
P501 Dispose of contents/container in accordance with relevant legislation

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**2.3 Other hazard:**

**HMIS (U.S.A):**

Health	2
Fire	1
Reactivity	0
Personal Protection	E

**National Fire Protection Association NFPA (U.S.A.)**



**Section 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredient name	Identifiers	%	GHS Classification
Citric Acid	CAS number: 77-92-9 EC number: 201-069-1	90 - 100	Eye Irrit 2; H319 STOT SE 3; H335 Skin Irrit 2; H315

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret is required.

Occupational exposure limits, if available, are listed in section 8.  
See section 16 for the full text of the H-statements.

**Section 4. FIRST AID MEASURES**

**4.1 Description of 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 use. 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 use. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
- Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion:** If large quantities of this material are swallowed, call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If victim is conscious give water to drink.



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### **4.2 Most important symptoms and effects, both acute and delayed**

Causes irritation to skin, eyes and respiratory tract. May cause vomiting, diarrhoea, damage to tooth enamel, dermatitis.

### **4.3 Indication of any immediate medical attention and special treatment needed**

Notes to physician: No specific antidote, medical staff contacts Poisons Information Center. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

**Special treatments:** No specific treatment

## **Section 5: FIRE-FIGHTING MEASURES**

### **5.1 Extinguishing media**

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

**Not suitable:** Do not use straight steams of water.

### **5.2 Special hazards arising from the substance or mixture**

May be combustible at high temperature. Slightly flammable to flammable in presence of heat. Non-explosive in presence of shocks. Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

**Hazardous thermal decomposition products:** Carbon monoxide and carbon dioxide

### **5.3 Advice for firefighters**

Special protective equipment for fire fighters: Fire fighters should wear full protective clothing and self-contained breathing apparatus in positive pressure mode. Use water spray to cool unopened containers.

## **Section 6: ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Evacuate personnel to safe areas. Wear protective clothing. Avoid contact with skin eyes and inhalation of vapors. Ventilate area of spill.

### **6.2 Environmental precautions**

Keep pure product away from drains, surface and ground water.

### **6.3 Methods and materials for containment and cleaning up**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Stop leak if without risk. Do not get water inside container.

### **6.4 Reference to other sections**

See Sections 1 for emergency contact information.

## **Section 7: HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

**Handling:** Use with adequate ventilation. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

**Hygiene Measures:** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information measures.

### **7.2 Conditions for safe storage, including any incompatibilities**

**Storage:** Store in cool, dry well-ventilated area. Keep away from incompatible materials (see section 10). Keep product in a dry and well-ventilated place. Packets which are opened must be carefully resealed and kept upright to prevent leakage.

### **7.3 Specific end use(s):** N/A

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**Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION**
**8.1 Control parameters** Occupational exposure limit values:

Ingredient name	Occupational exposure limits
<b>Citric Acid</b>	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: TWA: 10 (mg/m <sup>3</sup> ) from ACGIH (Total Inhalable fraction) TWA: 3 mg/m <sup>3</sup> (Respirable fraction) TWA: 15 (mg/m <sup>3</sup> ) from OSHA (PEL) (Total Dust) TWA: 5mg/m <sup>3</sup> (Respirable fraction)

**8.2 Exposure controls**
**Engineering Measures**

Use process enclosures, local exhaust ventilation, or others engineering controls to keep airborne levels below recommend exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Person Protective measures**

Respiratory protection: Wear appropriate respirator when ventilation is inadequate.

Hand protection: Wear protective disposable gloves to prevent skin exposure.

Eye protection: Wear protective safety glasses.

Skin protection: Wear Lab coat, Dust respirator, Gloves.

**Environmental exposure controls:** Not available

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES**
**9.1 Information on basic physical and chemical properties**

Appearance:	Solid (Crystalline Powder)
Odour:	Odourless
Odour threshold:	N/A
Taste:	Acid (Strong)
pH:	N/A
Melting point/Freezing point:	150°C
Initial boiling point/boiling range:	Decomposes
Flash point:	N/A
Evaporation rate:	N/A
Flammability:	N/A
Upper/lower flammability or explosive limits: UEL: V); LEL: V);	N/A
Vapor pressure:	N/A
Vapor density (air=1):	N/A
Relative Density;	N/A
Solubility(ies):	Soluble in cold water, hot water.
Partition coefficient Octanol/Water:	-1.7
Auto-ignition temperature: C	1010°C (1850°F)
Decomposition temperature:	N/A
Viscosity	N/A

**9.2 Other information:** No data available

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**Section 10: STABILITY AND REACTIVITY**

**10.1 Reactivity**

No specific test data related to reactivity available for this product or its ingredients

**10.2 Chemical stability**

The product is stable under normal handling and storage conditions described in section 7.

**10.3 Possibility of hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid**

Extremes of temperature and direct sunlight.

**10.5 Incompatible materials**

Oxidizing agents, Bases, Reducing agents, Nitrates. Heavy metals. Non-corrosive in presence of glass

**10.6 Hazardous Decomposition products:**

Carbon oxides

**Section 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects - Acute toxicity:**

Product/ingredient name	Test	Species	Dose
Citric Acid	LD <sub>50</sub> Oral	Rat	5400 mg/kg
	LD <sub>50</sub> Dermal	Rabbit	>2000 mg/kg
PRODUCT – Chamber Brite	LD <sub>50</sub> Oral	Rat	3000 mg/kg

**Skin corrosion/irritation:** May cause skin irritation.

**Serious eye damage/irritation:** Causes eye irritation and tissue damage on mucous membranes

**Respiratory or skin sensitization:** Lung sensitizer

**Germ cell mutagenicity:** N/A

**Carcinogenicity:** N/A.

**Reproductive toxicity:** N/A

**Specific target organ toxicity (single exposure):** N/A.

**Specific target organ toxicity (repeated exposure):** N/A

**Aspiration hazard:** N/A

**Other effects:** Delayed effects: May cause damage to the following organs: teeth

Listed in the National Toxicology Program (NTP) Report on Carcinogens: No

Is product a potential carcinogen in the International Agency for Research on Cancer (IARC): No

**Section 12: ECOLOGICAL INFORMATION**

**12.1 Toxicity:** Toxicity to fish;

**Citric Acid;** Ecotoxicity in water (LC50): 440 mg/l 48 hours [Leuciscus idus melanotus]. 1.535 mg/l 24 hours [Daphnia].

**Product – Chamber Brite:** NA

**12.2 Persistence and Degradability:** N/A

**12.3 Bioaccumulative potential:** N/A

**12.4 Mobility in soil:** N/A

**12.5 Results of PBT and vPvB assessment:** N/A

**12.6 Other adverse effects:** N/A

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**Section 13: DISPOSAL CONSIDERATIONS**

**Product**

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

**Packing**

Empty containers should be taken for local recycling, recovery or waste disposal.

**Section 14: TRANSPORT INFORMATION**

**14.1 UN number:**

ADR/RID: not dangerous goods    IMDG: not dangerous goods    IATA: not dangerous goods

**14.2 Proper shipping name:**

ADR/RID: -

IMDG: -

IATA: -

**14.3 Transport hazard class(es)**

ADR/RID: -    IMDG: -    IATA: -

**14.4 Packing group**

ADR/RID: -    IMDG: -    IATA: -

**14.5 Environmental hazard; No**

**14.6 Special precautions for user; Not available**

**14.7 Transport to bulk according to Annex II of MARPOL 79/78 and the IBC Code Not available**

**Section 15: REGULATORY INFORMATION**

**Citric Acid:**

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

**HMIS (U.S.A.);** Health Hazard: 2, Fire Hazard: 1, Reactivity: 0, Personal Protection:

**National Fire Protection Association (U.S.A.);** Health: 2, Flammability: 1, Reactivity: 0, Specific hazard: na

**Section 16: OTHER INFORMATION**

Full text of Hazard Statements referred to in section 2 and 3:

Eye Irrit.	Eye Irritation
Skin Irrit.	Skin Irritation
STOT SE	Specific target organ toxicity - single exposure
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

**Training advice:** Before using/handling the product one must read carefully present MSDS.

**Recommended restriction:** N/A

Key Legend Information:

ACGIH- American Conference of Governmental Industrial Hygienists

OSHA- Occupational Safety and Health Administration

NTP- National Toxicology program

IARC- International Agency for Research on Cancer

ND- Not Determined

N/A- Not available



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To the best of our knowledge the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.