MATERIAL SAFETY DATA SHEET

1 Product and Company Identification

Product Name: **Liquid CO_2 Purifier**

Company Name:

VICI Mat/Sen
A division of VICI Metronics, Inc.
26272 Twelve Trees Ln NW
Poulsbo, WA 98370

Emergency Contact Number
1-800-MATSEN-1 or 1-800-628-7361

2 Composition

Ingredient	CAS No.	Wt%	ACGIH TLB-TWA	OSHA PEL-TWA
Silicon oxide (synthetic)	7631-86-9	< 50	10 mg/m³ Inhalable 3 mg/m³ Respirable	15 mg/m³ Total dust 5 mg/m³ Respirable fraction
Carbon	7440-44-0	< 30	None listed	None listed
Alumina	1344-28-1	< 25	10 mg/m³ Inhalable 3 mg/m³ Respirable	15 mg/m³ Total dust 5 mg/m³ Respirable fraction
Aluminum Phosphate	7784-30-7	< 10	2 mg/m³ Inhalable	None listed

Abbreviations:

N/E - None established
CAS - Chemical Abstracts Service
ACGIH - American Conference of Governmental Industrial Hygienists
TLV - Threshold Limit Value
OSHA - Occupational Safety and Health Administration - USA
TWA - Time Weighted Average
PEL - Permissible Exposure Limit
STEL - Short-Term Exposure Limit

3 Hazard Identification

Emergency Overview

This product is in a sealed container. Exposure can only take place if the integrity of the container is compromised. In case the container is opened, the contained product can cause irritation to the eyes, skin, or upper respiratory system.

Potential Health Effects

Target Organ: Prolonged or repeated exposure may cause lung injury or cancer.

Primary Routes of Exposure: The product is in a sealed container. As long as the container is not opened, exposure should not take place.

Skin Contact: May cause skin irritation with repeated or prolonged exposure.

Eye Contact: Dust may cause tearing, blurred vision, and photophobia. May cause chemical conjunctivitis and corneal damage.

Ingestion: May cause nausea, vomiting, abdominal pain, and increased salivation.

Inhalation: May cause lung damage. Olfactory fatigue may occur. Can produce delayed pulmonary edema. Inhalation of dust causes severe irritation of the upper respiratory trace, gastrointestinal disturbances, albuminuria, gradual loss of weight, and increasing weakness.

Chronic: Chronic inhalation may lead to decreased pulmonary function.

Carcinogenicity Classification

International Agency for Research on Cancer (LARC)

?.

U.S. National Toxicology Program (NTP)

?

U.S. Occupational Safety and Health Administration (OSHA)

?

4 First Aid Measures

Skin Contact: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Obtain medical attention if irritation develops or persists. Wash clothing before reuse.

Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Obtain medical attention.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2 - 4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Obtain medical attention.

Inhalation: Remove affected person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.

Notes to Physician: Treat symptomatically and supportively.

5 Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire.

Extinguishing Media: For a large fire, use water spray, fog, or regular foam. For small fires, use dry chemical, carbon dioxide, sand, earth, water spray, or regular foam. Cool containers with flooding quantities of water until well after fire is out.

Flash Point: Not applicable.

Autoignition Temperature: 452°C (845.60°C)

5 *(con't)* Fire Fighting Measures

Explosion Limits: Upper: Not available
Lower: Not available

NFPA Rating (estimated) Health: 1; Flammability: 1; Instability: 0

6 Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Remove all sources of ignition. Vacuum or sweep up material and place into a suitable disposal container. Scoop up with a nonsparking tool, then place into a suitable container for disposal. Avoid generating dusty conditions.

7 Handling and Storage

The product is in sealed containers. In the event the seal on the container is breached, store the product in tightly closed, properly labeled containers. Store out of direct sunlight. Store in dry area.

8 Exposure Controls and Personal Protection

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Respiratory Protection: Product is in a sealed container. As long as the seal on the container is not breached, respiratory protection is not needed. If the container seal is breached, follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. When a respirator is necessary, use one approved by NIOSH or European Standard EN 149.

Skin Protection: Use gloves to avoid prolonged or repeated skin contact.

Eye Protection: Wear safety glasses or goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

9 Physical and Chemical Properties

These data do not represent technical or sales specifications.

Physical state: Material is in a sealed container

Appearance:	Not applicable	*Boiling Point:*	Not applicable
Odor:	Not applicable	*Freezing/Melting Point:*	Not applicable
pH:	Not applicable	*Decomposition Temperature:*	Not applicable
Vapor Pressure	Not applicable	*Solubility:*	Not applicable
Vapor Density:	Not applicable	*Specific Gravity/Density:*	Not applicable
Evaporation Rate:	Not applicable	*Molecular Formula:*	Not applicable
Viscosity:	Not applicable	*Molecular Weight:*	Not applicable

10 Stability

Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Dust generation, moisture, excess heat.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide.
Hazardous Polymerization:	Has not been reported.
Incompatible Materials:	Oxidizing agents, alkali metals, iron oxide, lead oxide, liquid oxygen, manganese oxide, metallic salts, chlorinated paraffins, dibenzoyl peroxide, 1,4-diazabicyclo-{2,2,2}-octane, molybdenum(IV) oxide, nitrobenzaldehyde, potassium hydroxide, sodium hydrogen carbonate.

11 Toxicological Information

Acute Oral Toxicity:	An oral LD_{50} is not available for this product.
Acute Dermal Toxicity:	A dermal LD_{50} is not available for this product.
Acute Inhalation Toxicity:	An inhalation LC_{50} is not available for this product
Irritation:	No data available.
Carcinogenicity:	No data available.
Epidemiology:	No data available.
Teratogenicity:	No data available.
Reproductive effects:	No data available.
Neurotoxicity:	No data available.
Mutagenicity:	No data available.
Other studies:	No data available.

12 Ecological Information

No data is available for the product.

13 Disposal Information

Dispose of the product in accordance with all applicable government regulations. This product (in its fresh unused state) is not listed by generic name or trademark name in the U.S. EPA's Resource Conservation and Recovery Act (RCRA) Hazardous Waste Management Regulations and does not possess any of the four identifying characteristics of hazardous waste (ignitability, corrosivity, reactivity, or toxicity).

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. U.S. EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.
RCRA U-Series: None listed

14 Transportation Information

Product Label:	VICI Mat/Sen Liquid CO2 Purifier
U.S. Department of Transportation Shipping Name:	Not regulated.
International Maritime Organization (IMO):	Not regulated.

United States

TSCA *(Toxic Substances Control Act):*

All the ingredients of this mixture are listed on the TSCA Chemical Substance Inventory.

CERCLA *(Comprehensive Environmental Response, Compensation, and Liability Act) Reportable Quantity:*

The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

—None—

SARA *(Superfund Amendments and Reauthorization Act of 1986) Title III:*

Section 302 (Extremely Hazardous Substances):

The following component(s) of this product is/are subject to the emergency planning provisions of 40 CFR 355 when there are amounts equal or greater than the Threshold Planning Quantity (TPQ):

—None—

Section 313 (Toxic Chemicals):

The following component(s) have been specified as Toxic Chemicals under SARA Section 313 and may be subject to the Toxic Release Inventory (TRI) reporting requirements under 40 CFR 372:

Alumina: 1344-28-1

European Union (EU)

European Inventory of Existing Commercial Chemical Substances:

All components of this preparation are included in EINECS/ELINCS.

Silicon oxide (synthetic)	2315454
Aluminum Phosphate	??
Alumina	??
Carbon	??

Council of European Communities Directive on Classification, Packaging and Labelling of Dangerous Substances/Preparation (67/548/EEC & 88/379/EEC):

No Dangerous Goods Label Required.

Safety phrases: S24/25 Avoid contact with skin and eyes.

Canada

Canadian Hazard Products Act:

This product is not classified as a controlled product under regulations pursuant to the federal Hazardous Product Act (*e.g.* WHMIS).

Canadian Ingredient Disclosure List:

Carbon
Alumina
Silicon Oxide

16 Other Information

Summary of Changes: ??

I.D./Form: ??

Supersedes: ??

HMIS™ - Hazardous Materials Identification System