

SAFETY DATA SHEET

[Product Group] Isolite CG

1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND OF THE COMPANY

[Trade Names] CG1, CG1-C, CG2, CGR, CGL, CG2-U, CG2-SD

[Generic Terms] Porous Ceramics

[Manufacturer/Supplier]

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2. HAZARDS IDENTIFICATION

GHS Classification

	Item	Evaluation by the Association*	Remarks
Physical Hazards	Explosives	Not applicable	
	Flammable gases	Not applicable	
	Flammable aerosol	Not applicable	
	Oxidizing gases	Not applicable	
	Gases under pressure	Not applicable	
	Flammable liquids	Not applicable	
	Flammable solids	Not classified	Noncombustible
	Self-reactive substance and mixtures	Not applicable	
	Pyrophoric liquids	Not applicable	
	Pyrophoric solids	Not classified	Noncombustible
	Self-heating substance and mixtures	Not classified	Noncombustible
	Substance and mixtures ,witch in contact with water ,emit flammable gases	Not classified	Noncombustible
	Oxidizing liquids	Not Applicable	
	Oxidizing solids	Not Applicable	
	Organic peroxides	Not Applicable	
Corrosive to metals	Not Applicable	No data available	

Health Hazards	Acute toxicity (oral, dermal, inhalation)	Not classified	
	Skin corrosion/irritation	Category2	
	Serious eye damage/eye irritation	Category1	
	Respiratory /skin sensitizer	Not Applicable	
	Germ cell mutagenicity	Not classified	
	Carcinogenicity	Category1A	
	Toxic to reproduction	Not Applicable	No data available
	Specific target organ/systemic toxicity (Single Exposure)	Category1	Respiratory system, respiratory tract irritation
	Specific target organ/systemic toxicity (Repeated Exposure)	Category1	Respiratory system, kidney, lung
	Aspiration hazard	Classification not possible	No data available
Environmental Hazards	Hazard to Aquatic Environment (Acute)	Classification not possible	No data available
	Hazard to Aquatic Environment (Chronicity)	Classification not possible	No data available
	Hazard to Ozone layer	Classification not possible	No data available

* Evaluation by Refractory Ceramic Fiber Association (JAPAN) on general RCF products

Pictogram or Symbol :



Signal word : “Danger”

Hazard Statement :

- . (Respiratory tract irritation) May cause respiratory irritation. Causes mild skin irritation
- . Causes damage to organs (respiratory system).
- . Causes damage to organs through prolonged or repeated exposure (respiratory system, kidney and lung)
- . May cause cancer

Precautionary statements

Prevention :

- . Do not eat, drink or smoke when using this product.
- . Store indoors, way especially from water.
- . The product is suitable for processing at an appropriate government waste disposal facility.
Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture

	CAS No.	Chemical Material Management and Control Law (Japan)	Content (%)	Industrial Safety and Health Act (Japan)	PRTR (Pollutant Release and Transfer Register) (Japan)	
					The first kind	The 2nd kind
Diatomaceous silica	91053-39-3	-	45-75	312	Not Applicable	Not Applicable
Quartz	14808-60-7	(1)-548	2-10	312	Not Applicable	Not Applicable
Cristobalite	14464-46-1	(1)-548	0-4	312	Not Applicable	Not Applicable
Aluminium oxide	1344-28-1	(1)-23	8-15	189	Not Applicable	Not Applicable
Iron oxide	1309-37-1	(1)-357	2-8	192	Not Applicable	Not Applicable
Calcium oxide	1305-78-8	(1)-189	0-2	190	Not Applicable	Not Applicable

4. FIRST AID MEASURES

If inhaled : If inhaled plenty of dust, immediately remove victim to fresh air. If the victim shows breathing abnormality, immediately get medical advice/attention.

If on skin : Wash with soap and water.

If in eyes : If dust contact with eyes, immediately rinse with clean water or eyewash. If abnormality persists, get medical advice/attention.

If swallowed: Rinse mouth with water. Immediately get medical advice/attention.

5. FIRE FIGHTING MEASURES

Material is unflammable. Therefore, no particular measures are established.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures :

Avoid raising dust during a process and recover it. Wear proper protective equipment and avoid contacting dust with eyes and skin and inhaling dust.

Environmental precautions :

Nothing particular.

7. HANDLING & STORAGE

[Handling Instructions]

. Wear a dust respirator, safety glasses and so one, as appropriate. Avoid collapse and dropping of the goods.

[Storage instructions]

. Keep in a sealed package, indoors, at room temperature.

. Avoid exposure to water.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

	Control parameters (inhalant dust) (Free silicic acid must be zero)	Exposure Limits	
		Japan Society for Occupational Health's recommendation (2015) (inhalant dust)(Free silicic acid must be zero)	ACGIH's (American Conference of Governmental Industrial Hygienists) ecommendation(2015)
Alumina	3.0mg/m ³	0.5 mg/m ³	10mg/m ³
inhalant crystalline silica	3.0mg/m ³	0.03mg/m ³	TWA 0.025 mg/m ³ total dust 0.05 mg/m ³ (quartz) 0.025 mg/m ³ total dust 0.05 mg/m ³ (Cristobalite)
Iron oxide	-	-	5mg/m ³

Protective Equipment : Close up the area where dust originates and install local ventilation or arrester. If not equitable, wear protective gear described below.

Protective Gear : If the concentration exceeds the criteria mentioned above, wear protective mask. Filter replacement type mask is the most appropriate.

Eye protection : Wear proper eye protection to suit the work and environment such as chemical goggles, safety glasses with side shields.

Skin protection : Wear gloves and long-sleeve work clothes not to expose skin.

9 .PHYSICAL & CHEMICAL PROPERTIES

Physical form	: compact
Color	: Heizeru
pH	: No date
Melting point	: 1300°C over
Boiling point, Flash point, Burning point	: incombustibility
Bulk density	: 0.4~0.7g/cm ³
Solubility for the solvent	: Indissolubility to water and an organic solvent

1 0 . STABILITY & REACTIVITY

Stability	: Stable under normal conditions.
Possibility of hazardous reactions	: React with strong acids and hydrogen fluoride.
Conditions to avoid	: Diffusion of dust
Material to avoid	: Strong acids and hydrogen fluoride.
Hazardous decomposition products	: Nothing

1 1. TOXICOLOGICAL INFORMATION

When there is only data for a mixture available for a substance, GHS classification of the substance as a pure substance is performed.

As reference, data of each ingredient are shown below.

Skin Corrosion/Irritation : Redness and Pain (Category 2) (Silicic acid) Redness and moderate irritation on humans. (Category 2) (Iron oxide)

Serious eye damage/eye irritation : Corrosive to the eye, GHS classification Category 1C Skin corrosion/ irritation. (Category 1) (Iron oxide) (Calcium oxide)

Carcinogenicity : May cause cancer. IARC68: 1, NTP RoC: K, Japan Society for Occupational Health: 1. (Category 1A) (crystalline quartz)

Specific Target Organ / Systemic Toxicity (Single Exposure):

Upper respiratory irritation (Category 3, respiratory tract irritation) (Aluminum oxide)

Short-term exposure affects the respiratory system in humans in case of high inhalation concentration. (Category 1, respiratory system) (crystalline quartz)

Upper respiratory irritation (Category 3, respiratory tract irritation) (aluminum oxide)

Short-term exposure affects the respiratory system in humans in case of high inhalation concentration. (Category 1, respiratory system) (crystalline quartz)

Specific Target Organ / Systemic Toxicity (Repeated Exposure):

By occupational exposure of aluminas, pulmonary fibrosis was occurred. (Category 3, lung) (aluminum oxide)

Respiratory system and kidney are affected in humans. (Category1, respiratory system and kidney) (crystalline quartz)

By occupational exposure of aluminas, pulmonary fibrosis was occurred. (Category 1, lung) (Iron oxide)

1 2. ECOLOGICAL INFORMATION

No data available.

1 3. DISPOSAL CONSIDERATIONS

Waste of this product falls under the category of glass waste, concrete waste, pottery waste in the classification of the waste disposal and cleaning regulation and can be treated as an

industrial waste.

1 4. TRANSPORT INFORMATION

No hazard but avoid generations of dust by breakage of package during transportation.

United Nations (UN) Classification : Not Applicable

United Nations (UN) Number : Not Applicable

1 5. REGULATORY INFORMATION

Industrial Safety and Health Act (JAPAN) This product contains hazardous substance to inform its name etc.

1 6. OTHER INFORMATION

The free silicic acid has a strong possibility to cause pneumoconiosis. Therefore, special attention should be paid in order not to inhale the dust when maintenance work or dismantling of furnaces are carried out.

Calculation formula to get the concentration standard is:

$$\text{Concentration Standard} = 3.0/1.19Q+1 \quad Q = \text{Rate of free silicic acid content (\%)}$$

[Revision information]

Date of Revision	Description
Jan 1, 1996	NEW
June.01,2016	Changed Manufacturer/Supplier: Person in charge Added COMPOSITION / INFORMATION ON INGREDIENTS. Added Reference

[References]

1. IARC : Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans
Vol. 81 (2002) ,“Man-made Vitreous fibers”
 2. ACGIH : Recommendation on the Acceptable Concentration (2015)
 3. Japan Society for Occupational Health : Recommendation on the Acceptable Concentration (2015)
 4. CEN : prEN1094-1
 5. National Institute of Technology and Evaluation (NITE) : Data base of “Total Information Service System on Chemical Substances”
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Information given above will be revised whenever additional information becomes available. The information concerning content and physical and chemical properties described above doesn't mean to indicate the guaranteed value of those. Evaluation of risk and hazard was made basing upon information and data available at present but not basing upon all of them.