1. Identification

1.1 Product Identifier

Description Ceramic shapes and parts manufactured from Alumina (96%, 99% and 99.5%).
Contains Aluminum oxide (CAS 1344-28-1)
Synonyms 99, AP99

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

Recommended use Consult the supplier
Uses advised against Users are recommended to seek further advice

1.3 Supplier's details

Xiamen Innovacera Advanced Materials Co., Ltd
A506-507,No.7 Yuhan Fourth Road,
Huli District, Xiamen, China 361006.

1.4 Emergency phone number

Innovacera +86 -592-5589730

2. Hazards identification

2.1 Classification of the substance or mixture

GHS Classification
Not classified as hazardous
REGULATION (EC) No 1272/2008
Not classified
Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

2.2 Label elements

Symbol(s)
Not applicable
Signal word
None
Hazard Statements
None
Precautionary statements
In circumstances where dust may be generated from machining or disposal:
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray
P280 – Wear eye protection/face protection
P285 – In case of inadequate ventilation wear respiratory protection
P305 + P351 + P338 – If in eyes, rinse cautiously with water for several minutes
P302 + P352 – If on skin, wash with plenty of soap and water

2.3 Other information

This product is an article, a monolithic material.

3. Composition/information on ingredients

3.1 Substances

This product is a monolithic material.

4. First aid measures

4.1 Description of first aid measures

In circumstances where dust may be generated from machining or disposal:

Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses if present, and easy to do. Continue rinsing.
Skin Contact	Wash skin with soap and water.
Ingestion	Rinse mouth.
Inhalation	Move to fresh air.
General Advise	If symptoms persist, call a physician. Show this safety data sheet to doctor in attendance.

4.2 Most important symptoms and effects, both acute and delayed

No information available

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Treat symptomatically

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons

None known

5.2 Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

Not applicable

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Wear personal protective equipment when machining.

6.2 Environmental precautions

No special environmental precautions required.

6.3 Methods and material for containment and cleaning up

Recover product. Place into appropriate container for disposal.

7. Handling and storage

7.1 Precautions for Safe Handling

In circumstances where dust may be generated from machining or disposal:

Handling

Provide appropriate exhaust ventilation at places where dust is formed.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

Exposure scenario

No information available

7.2 Conditions for safe storage, including any incompatibilities

Keep in a dry place.

7.3 Specific end use(s)

No information available

8. Exposure controls/personal protection

8.1 Control parameters

Exposure limits

Applies to circumstances where dust may be generated from machining or disposal.

Country/Region	**Occupational exposure limit** (mg/m^3)*	
	TWA – 8 hour	**STEL – 15 min**
United States (PEL)	5^R, 15^T	-
United States (ACGIH)	1^T	-
United Kingdom	10^I, 4^R	-
Switzerland	3^R	-
Sweden	5^I, 2^R	-
Spain	10^I, 5^R	-
Russia	6	-
Portugal	10	-
Poland	2	16
Norway	2	-
New Zealand	10^R	-
Netherlands	10	-
Mexico	10	-
Malaysia	10	-
Korea	10	-

* Milligrams of substance per cubic meter of air

Country/Region	Occupational exposure limit (mg/m^3)*	
	TWA – 8 hour	**STEL – 15 min**
Japan	0.5^R	-
Italy	1	-
Iceland	10	-
Hungary	6^R	-
Greece	10	-
Germany	4^I, 1.5^R	-
France	10^R	-
Estonia	4	-
Denmark	5^I, 2^R	10^I, 4^R
Czech Republic	0.1	-
China	4	-
Belgium	-	2
Austria	5	15

I: Inhalable dust, R: Respirable dust, T: Total dust

TWA (Time Weighted Average): The average level of exposure over a specified time period.
STEL (Short Term Exposure Level): The maximum exposure level permitted during a short period of time.

8.2 Exposure controls

Engineering controls
Ensure adequate ventilation in circumstances where dust may be generated from machining or disposal, especially in confined areas.

Personal protective equipment
In circumstances where dust may be generated from machining or disposal:

Eye Protection	Safety glasses with side-shields.
Skin Protection	No special protective equipment required.
Hand Protection	No special protective equipment required.
Respiratory Protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Environmental exposure controls
Avoid dust formation

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Solid
Color	Ivory or white
Odor	Not applicable
Odor threshold	Not applicable
pH	Not applicable
Melting point	2000°C

Freezing point	Not applicable
Initial boiling point	Not applicable
Boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability	Not applicable
Upper explosive limit	Not applicable
Lower explosive limit	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	3.60 to 3.950 g/cm^3
Solubility	Not applicable
Partition coefficient	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable

10. Stability and reactivity

10.1 Reactivity
None under normal processing

10.2 Chemical Stability
Stable under normal conditions

10.3 Possibility of Hazardous Reactions
None under normal processing

10.4 Conditions to Avoid
No known conditions to avoid

10.5 Incompatible materials
No incompatible materials known

10.6 Hazardous Decomposition Products
None under normal processing

11. Toxicological information

11.1 Information on toxicological effects
Note: The information provided solely pertains to dust exposure.

Acute toxicity

Acute oral toxicity	Conclusive but not sufficient for classification
Acute dermal toxicity	Conclusive but not sufficient for classification
Acute inhalation toxicity	Conclusive but not sufficient for classification

Chronic toxicity

Irritation	Conclusive but not sufficient for classification
Corrosivity	Conclusive but not sufficient for classification
Sensitization	Conclusive but not sufficient for classification
Mutagenic effects	Conclusive but not sufficient for classification
Carcinogenic effects	This substance has no evidence of carcinogenic properties
Reproductive effects	Conclusive but not sufficient for classification
Developmental effects	Conclusive but not sufficient for classification
Aspiration hazard	Conclusive but not sufficient for classification

12. Ecological information

12.1 Toxicity
Not water endangering.

12.2 Persistence and degradability
The product is not readily biodegradable.

12.3 Bioaccumulative potential
The product is not bioaccumulating.

12.4 Mobility in soil
Not applicable, due to the form of the product.

12.5 Results of PBT and vPvB assessment
This product does not contain any PBT or vPvB substances.

12.6 Other adverse effects
None known

13. Disposal considerations

13.1 Waste treatment methods

Waste from residue/unused products
Disposal should be in accordance with applicable regional, national and local laws and regulations. Avoid dust formation.

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

Note: Not classified as dangerous according to transport regulations.

DOT (US)	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated
ADR	Not regulated
ICAO	Not regulated
IATA	Not regulated

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Note: Regulations apply to dust.

United States Federal Regulations

OSHA	Non-hazardous
TSCA	Listed
CERCLA Reportable Quantity	No
SARA Title III	Section 302 Extremely Hazardous Substances: None Section 304 Emergency Release Reporting: None Section 311/312 Hazardous Categories: Immediate (acute) Section 313 Toxic Categories: None
Clean Air Act of 1990 – Title VI	This material does not contain nor was it manufactured using ozone depleting chemicals.

United States - State Regulations

California Proposition 65	Not listed
Cal-OSHA Workplace Airborne Contaminant	Listed
Connecticut Carcinogen Substances	Not listed
Florida Essential Chemical List	Not listed
Idaho Air Contaminant	Listed
Illinois Toxic Substances Disclosure to Employees List	Listed
Maine Chemicals of High Concern	Not listed
Massachusetts Right To Know List	Listed
Massachusetts Hazardous Substance Code	F9
Michigan Critical Materials List	Not listed
Minnesota Hazardous Substances	Listed
New Jersey Right To Know Hazardous Substances List	Listed
New York List of Hazardous Substances	Not listed
Ohio Extremely Hazardous Substances List	Not listed
Pennsylvania Right To Know Hazardous Substance	Listed
Rhode Island Hazardous Substances List	Listed
Texas Air Contaminant with Health Effects Screening Level	Listed
Washington Air Contaminant	Listed
Washington Persistent Bioaccumulative Toxins	Not listed
Wyoming Process Safety Management – Highly Hazardous Chemicals	Not listed

International Regulations

TSCA	Listed
EINECS/ELINCS	Listed on EINECS
DSL/NDSL	Listed on DSL
PICCS	Listed

ENCS	Listed, 1-23
IECSC	Listed
AICS	Listed
KECL	Listed, KE-01012
MITI	Listed

16. Other information including information on preparation and revision of the MSDS

Prepared by: Mr. Wang
Revision date: 5/20/2021

Key

Occupational Exposure Limits

PEL	Permissible exposure limit
ACGIH	American Conference of Governmental industrial Hygienists

Transportation Regulations

IMDG	International Maritime Dangerous Goods (UN)
IMO	International Maritime Organization (UN)
RID	European Agreement Concerning the International Carriage of Dangerous Goods by Rail
ADR	European Agreement Concerning the International Carriage of Dangerous Goods by Road
ICAO	International Civil Aviation Organization
IATA	International Air Transport Association

Chemical Regulations

EINECS	European Inventory of Existing Chemical Substances
ELINCS	European List of Notified Chemical Substances
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
PICCS	Philippines Inventory of Chemicals and Chemical Substances
ENCS	Japan Existing and New Chemical Substances
IECSC	China Inventory of Existing Chemical Substances
AICS	Australian Inventory of Chemical Substances
KECL	Korean Existing and Evaluated Chemical Substances
TSCA	United States Toxic Substances Control Act Section 8(b) Inventory
MITI	Japanese Ministry of Trade and Industry

Updates

Pls contact Xiamen Innovacera Advanced Materials Co., Ltd.

Disclaimer

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