ALUMINIUM FINE POWDER EXTRA PURE

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
SDS Reference Number: 00880
Issue date: 4/9/2014 Revision date: 1/9/2025 Supersedes version of: 4/19/2016 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Substance
Trade name	:	ALUMINIUM FINE POWDER EXTRA PURE
EC Index-No.	:	013-002-00-1
EC-No.	:	231-072-3
CAS-No.	:	7429-90-5
Product code	:	00880
Type of product	:	Metallic powders
Formula	:	Al
Chemical structure	:	

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

Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai
INDIA
T +91 22 6663 6663, F +91 22 6663 6699
info@lobachemie.com, www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable solids, Category 1	H228
Substances and Mixtures which, in contact with water, emit flammable gases, Category 2	H261

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Flammable solid. In contact with water releases flammable gases.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02

Signal word (CLP)	:	Danger
Hazard statements (CLP)	:	H228 - Flammable solid. H261 - In contact with water releases flammable gases.
Precautionary statements (CLP)	:	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P223 - Do not allow contact with water. P231+P232 - Handle and store contents under inert gas. Protect from moisture. P402+P404 - Store in a dry place. Store in a closed container.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
ALUMINIUM FINE POWDER	CAS-No.: 7429-90-5 EC-No.: 231-072-3 EC Index-No.: 013-002-00-1	100

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	:	If you feel unwell, seek medical advice.
First-aid measures after inhalation	:	Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	:	Get medical advice/attention. Wash with plenty of water/…. Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Wash skin with plenty of water.
First-aid measures after eye contact	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	:	Rinse mouth. Do not induce vomiting. Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	:	First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	:	None under normal conditions. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.
Symptoms/effects after skin contact	:	None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact	:	None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion	:	None under normal conditions.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media	:	Do not use extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	Catches fire spontaneously if exposed to air. Flammable solid.
Explosion hazard	:	May form flammable/explosive vapour-air mixture.
Hazardous decomposition products in case of fire	:	Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	:	Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

For non-emergency personnel

Protective equipment	:	Wear recommended personal protective equipment.
Emergency procedures	:	Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking.

For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Ventilate area. Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	:	Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up	:	Mechanically recover the product. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. On land, sweep or shovel into suitable containers. Notify authorities if product enters sewers or public waters.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	:	Handle empty containers with care because residual vapours are flammable. Do not allow contact with water.
Precautions for safe handling	:	Ensure good ventilation of the work station. Avoid contact with skin and eyes. Use only non-sparking tools. Protect from moisture. Handle under inert gas. Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Do not allow contact with water. Wear personal protective equipment.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
Storage conditions	:	Keep in fireproof place. Keep container tightly closed. Store in a dry place. Protect from moisture. Keep cool. Protect from sunlight. Keep away from ignition sources. Store in a closed container.
Incompatible materials	:	Heat sources. Do not allow contact with water.
Packaging materials	:	Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:
Wear recommended personal protective equipment.
Personal protective equipment symbol(s):

Eye and face protection

Eye protection:
Chemical goggles or safety glasses

Skin protection

Skin and body protection:
Wear a mask

Hand protection:
Protective gloves

Respiratory protection

Respiratory protection:
Wear appropriate mask

Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	Grey.
Appearance	:	Fine powder.
Molecular mass	:	26.98 g/mol

Odour	:	Odourless.
Odour threshold	:	Not available
Melting point	:	660.37 °C
Freezing point	:	Not applicable
Boiling point	:	2743 °C
Flammability	:	Highly flammable liquid and vapour,In contact with water releases flammable gases which may ignite spontaneously,Flammable solid,In contact with water releases flammable gases.
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	760 °C
Decomposition temperature	:	Not available
pH	:	Not available
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable
Solubility	:	Water: Insoluble in water
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	2.7 g/cm³ at 25 °C
Relative density	:	Not available
Relative vapour density at 20°C	:	Not applicable
Particle size	:	Not available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Explosive; fire, blast or projection hazard. Flammable solid.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

In contact with water releases flammable gases which may ignite spontaneously. In contact with water releases flammable gases.

10.4. Conditions to avoid

Open flame. Heat. Sparks. Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition. Water, humidity.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified
Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitisation	:	Not classified

Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified

ALUMINIUM FINE POWDER EXTRA PURE (7429-90-5)	
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	:	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute)	:	Not classified
Hazardous to the aquatic environment, long–term (chronic)	:	Not classified

12.2. Persistence and degradability

ALUMINIUM FINE POWDER EXTRA PURE (7429-90-5)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	:	Disposal must be done according to official regulations.
Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	:	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	:	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Disposal must be done according to official regulations.
Additional information	:	Handle empty containers with care because residual vapours are flammable. Do not re-use empty containers.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR)	:	UN 1396
UN-No. (IMDG)	:	UN 1396
UN-No. (IATA)	:	UN 1396
UN-No. (ADN)	:	UN 1396
UN-No. (RID)	:	UN 1396

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	ALUMINIUM POWDER, UNCOATED
Proper Shipping Name (IMDG)	:	ALUMINIUM POWDER, UNCOATED
Proper Shipping Name (IATA)	:	Aluminium powder, uncoated
Proper Shipping Name (ADN)	:	ALUMINIUM POWDER, UNCOATED
Proper Shipping Name (RID)	:	ALUMINIUM POWDER, UNCOATED
Transport document description (ADR) (ADR)	:	UN 1396 ALUMINIUM POWDER, UNCOATED, 4.3, II, (D/E)
Transport document description (IMDG)	:	UN 1396 ALUMINIUM POWDER, UNCOATED, 4.3, II
Transport document description (IATA)	:	UN 1396 Aluminium powder, uncoated, 4.3, II
Transport document description (ADN)	:	UN 1396 ALUMINIUM POWDER, UNCOATED, 4.3, II
Transport document description (RID)	:	UN 1396 ALUMINIUM POWDER, UNCOATED, 4.3, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 4.3

Danger labels (ADR) : 4.3

:

IMDG

Transport hazard class(es) (IMDG) : 4.3

Danger labels (IMDG) : 4.3

:

IATA

Transport hazard class(es) (IATA) : 4.3

Danger labels (IATA) : 4.3

:

ADN

Transport hazard class(es) (ADN) : 4.3

Danger labels (ADN) : 4.3

:

RID

Transport hazard class(es) (RID) : 4.3

Danger labels (RID) : 4.3

:

14.4. Packing group

Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
EmS-No. (Fire) : F-G
EmS-No. (Spillage) : S-O
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : W2
Limited quantities (ADR) : 500g
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P410, IBC07
Special packing provisions (ADR) : PP40
Mixed packing provisions (ADR) : MP14
Portable tank and bulk container instructions (ADR) : T3
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAN
Vehicle for tank carriage : AT
Transport category (ADR) : 2
Special provisions for carriage - Packages (ADR) : V1
Special provisions for carriage - Loading, unloading and handling (ADR) : CV23
Hazard identification number (Kemler No.) : 423
Orange plates :

Tunnel restriction code (ADR) : D/E
EAC code : 4W

Transport by sea

Limited quantities (IMDG) : 500 g
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P410
Special packing provisions (IMDG) : PP31, PP40
IBC packing instructions (IMDG) : IBC07
IBC special provisions (IMDG) : B4, B21
Tank instructions (IMDG) : T3
Tank special provisions (IMDG) : TP33
Stowage category (IMDG) : A
Stowage and handling (IMDG) : H1
Segregation (IMDG) : SGG15, SG26, SG32, SG35, SG36

Properties and observations (IMDG)	:	In contact with water, caustic alkalis or acids, evolves hydrogen, a flammable gas. When finely divided aluminium dust is scattered, it is easily ignited by naked lights, causing explosion. May explode when in contact with oxidizing substances. Reacts with liquid halogenated hydrocarbons.
MFAG-No	:	138

Air transport

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y475
PCA limited quantity max net quantity (IATA)	:	5kg
PCA packing instructions (IATA)	:	484
PCA max net quantity (IATA)	:	15kg
CAO packing instructions (IATA)	:	490
CAO max net quantity (IATA)	:	50kg
Special provisions (IATA)	:	A3, A803
ERG code (IATA)	:	4W

Inland waterway transport

Classification code (ADN)	:	W2
Limited quantities (ADN)	:	500 g
Excepted quantities (ADN)	:	E2
Equipment required (ADN)	:	PP, EX, A
Ventilation (ADN)	:	VE01
Provisions for handling and stowage of the cargo (ADN)	:	HA08
Number of blue cones/lights (ADN)	:	0

Rail transport

Classification code (RID)	:	W2
Limited quantities (RID)	:	500g
Excepted quantities (RID)	:	E2
Packing instructions (RID)	:	P410, IBC07
Special packing provisions (RID)	:	PP40
Mixed packing provisions (RID)	:	MP14
Portable tank and bulk container instructions (RID)	:	T3
Portable tank and bulk container special provisions (RID)	:	TP33
Tank codes for RID tanks (RID)	:	SGAN
Transport category (RID)	:	2
Special provisions for carriage – Packages (RID)	:	W1
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW23
Colis express (express parcels) (RID)	:	CE10
Hazard identification number (RID)	:	423

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	**Applicable on**
40.	ALUMINIUM FINE POWDER EXTRA PURE

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Dual-Use Regulation (428/2009)

Contains substance(s) listed on the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items: Aluminium powder (7429-90-5)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Germany

VOC ordinance (ChemVOCFarbV)	:	
Water hazard class (WGK)	:	WGK 3, Highly hazardous to water (Classification according to AwSV).
Hazardous Incident Ordinance (12. BImSchV)	:	Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	The substance is not listed
SZW-lijst van mutagene stoffen	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	:	The substance is not listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ACGIH	American Conference of Governement Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

Abbreviations and acronyms:	
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety & Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

Full text of H- and EUH-statements:	
Flam. Sol. 1	Flammable solids, Category 1
Water-react. 2	Substances and Mixtures which, in contact with water, emit flammable gases, Category 2
H228	Flammable solid.
H261	In contact with water releases flammable gases.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.