SAFETY DATA SHEET

Creation Date 27-Aug-2014 **Revision Date** 27-Aug-2014 **Revision Number** 1

1. Identification

Product Name **Aluminium, powder**

Cat No. : **AC349040000; AC349040100; AC349040500**

Synonyms None.

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Substances/mixtures which, in contact with water, emit flammable gases	Category 2
Pyrophoric solids	Category 1

Label Elements

Signal Word
Danger

Hazard Statements
In contact with water releases flammable gas
Catches fire spontaneously if exposed to air

Precautionary Statements

Prevention
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Do not allow contact with air
Wear protective gloves/protective clothing/eye protection/face protection
Keep away from any possible contact with water, because of violent reaction and possible flash fire
Handle under inert gas. Protect from moisture
Skin
Brush off loose particles from skin. Immerse in cool water/wrap with wet bandages
Fire
In case of fire: Use CO2, dry chemical, or foam for extinction
Storage
Store under an inert atmosphere
Store in a dry place. Store in a closed container
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
May form combustible dust concentrations in air

3. Composition / information on ingredients

Component	CAS-No	Weight %
Aluminium powder	7429-90-5	>95

4. First-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.

Ingestion Do not induce vomiting. Obtain medical attention.

Most important symptoms/effects No information available.
Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Dry sand; dry clay; Limestone powder; approved class D extinguishers.

Unsuitable Extinguishing Media DO NOT USE WATER, Carbon dioxide (CO2), Dry chemical, Do not use halogenated extinguishing agents or foam

Flash Point No information available
Method - No information available

Autoignition Temperature 400 °C / 752 °F

Explosion Limits
Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Water reactive. Contact with water liberates extremely flammable gases. Spontaneously flammable in air. Fine dust dispersed in air may ignite. Dust can form an explosive mixture in air. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Hydrogen Fumes of aluminum or aluminum oxide.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
0	3	1	W

6. Accidental release measures

Personal Precautions Use personal protective equipment. Remove all sources of ignition. Avoid dust formation. Avoid contact with skin, eyes and clothing.

Environmental Precautions Avoid release to the environment.

Methods for Containment and Clean Up Remove all sources of ignition. Do not expose spill to water. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Use spark-proof tools and explosion-proof equipment.

7. Handling and storage

Handling Handle under inert gas, protect from moisture. Wear personal protective equipment. Avoid dust formation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Do not allow contact with water.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Flammables area. Store under an inert atmosphere. Keep away from water.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Aluminium powder	TWA: 1 mg/m³	(Vacated) TWA: 15 mg/m³ (Vacated) TWA: 5 mg/m³ TWA: 15 mg/m³ TWA: 5 mg/m³	TWA: 10 mg/m³ TWA: 5 mg/m³

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Aluminium powder	TWA: 10 mg/m³ TWA: 5 mg/m³	TWA: 10 mg/m³ TWA: 5 mg/m³	TWA: 1 mg/m³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Powder Solid
Appearance	Grey
Odor	Odorless
Odor Threshold	No information available

pH	No information available
Melting Point/Range	660 °C / 1220 °F
Boiling Point/Range	2327 °C / 4220.6 °F @ 760 mmHg
Flash Point	No information available
Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Relative Density	2.7020
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	400 °C / 752 °F
Decomposition temperature	No information available
Viscosity	No information available
Molecular Formula	Al
Molecular Weight	26.98

10. Stability and reactivity

Reactive Hazard Yes

Stability Water reactive. Moisture sensitive. Air sensitive. Pyrophoric: Spontaneously flammable in air.

Conditions to Avoid Avoid dust formation. Incompatible products. Exposure to air. Exposure to moist air or water. Excess heat.

Incompatible Materials Water, Strong acids, Strong bases, Alcohols, Halogens, Halogenated compounds, Carbon dioxide (CO2)

Hazardous Decomposition Products Hydrogen, Fumes of aluminum or aluminum oxide

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions Contact with water liberates extremely flammable gases.

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Aluminium powder	7429-90-5	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known
STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity
Do not empty into drains.

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT
- **UN-No** UN1396
- **Proper Shipping Name** ALUMINUM POWDER, UNCOATED
- **Hazard Class** 4.3
- **Packing Group** II

TDG
- **UN-No** UN1396
- **Proper Shipping Name** ALUMINUM POWDER, UNCOATED
- **Hazard Class** 4.3
- **Packing Group** II

IATA
- **UN-No** UN1396
- **Proper Shipping Name** ALUMINIUM POWDER, UNCOATED
- **Hazard Class** 4.3
- **Packing Group** II

IMDG/IMO
- **UN-No** UN1396
- **Proper Shipping Name** ALUMINIUM POWDER, UNCOATED
- **Hazard Class** 4.3
- **Packing Group** II

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Aluminium powder	X	X	-	231-072-3	-		X	-	X	X	X

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Aluminium powder	7429-90-5	>95	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	Yes

Clean Water Act Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Aluminium powder	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class B6 Reactive flammable material

16. Other information

Prepared By	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
Creation Date	27-Aug-2014
Revision Date	27-Aug-2014
Print Date	27-Aug-2014
Revision Summary	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS