

SAFETY DATA SHEET

ALUMINIUM ALLOY POWDER SCALMA 40B5

Date of issue March 4, 2019

Date of revision

1. Identification

Product Name : ALUMINIUM ALLOY POWDER SCALMA40B5

Name of manufacture : TOYO ALUMINIUM K.K

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 Telephone Number
 : 81-66271-3154

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Emergency : TOYO ALUMINIUM K.K HINO WORKS

"[Address] : 341-14,HIGASHIYAMA, OHTANI, HINO-CHO, GAMO-GUN, SHIGA, JAPAN. 529-1608

"[Telephone Number] : 81-748-53-1151 "[FAX Number] : 81-748-53-0316

Name of section : HINO Quality Assurance Section

Recommended use : Additive Manufacturing

2. Hazard identification

GHS Classification

Physical Hazards : Not Classification Standard

Health Hazards : Acute toxicity – Oral Category 5

Reproductive toxicity Category 2
 Specific target organ systemic toxicity (single) Not classified

Specific target organ systemic toxicity (repeated)
 Hazardous to the aquatic environment (chronic)
 Category 4

 $\ensuremath{\not{\times}} Hazards\ that\ aren't\ written\ as\ the\ above\ are\ "Not\ classified"\ or\ "Not\ applicable".$

GHS Label elements

Environmental Hazards

Pictogram :



Signal word : Danger

Hazard statement : H303 May be harmful if swallowed

: H361 Suspected of damage fertility or the unborn child

: H372 Causes damage to organs through prolonged or repeated exposure

: H413 May cause long lasting harmful effects to aquatic life

Precautionary statement : Refer to \(\bar{7}\). Handling and storage \(\bar{J} \), \(\bar{13}\). Disposal considerations \(\bar{J} \).



3. Composition / information on ingredients

Classification of the substance or mixture: Mixture

Chemical Name	Composition (%)	CAS No.	REACH Registration No.
Aluminium	Balance	7429-90-5	01-2119529243-45-XXXX
Manganese	0.2-0.7	7439-96-5	_
Magnesium	4.5-4.9	7439-95-4	_
Scandium	0.68-0.78	7440-20-2	_
Zirconium	0.2-0.4	7440-67-7	_

4. First-aid measures

IF INHALED : In case of inhalation of small amount of powder, wash nostrils and throat with clear water.

In case of inhalation of large amount of powder, call a physician immediately.

IF ON SKIN : Remove contaminated clothing and wash skin with soap and water.

IF IN EYES : Flush eyes with clear water for a few minutes or until irritation subsides.

Call a physician if irritation persists.

IF SWALLOWED : Do not induce vomiting. Call a physician immediately.

5. Fire-fighting measures

Extinguishing Media : Powder, Dry sand, Soda-ash, Lime

Prohibited extinguishing media : Water, Foam

Unusual fire : Fear that ignites by heat, spark, and flame. & explosion hazards : Fear that ignites again after extinguishing fir

sion hazards : Fear that ignites again after extinguishing fire : Fear to generate gas of stimulation, toxicity or causticity due to a fire.

Special fire fighting procedures : Never extinguish fire by pouring water.

: Do not stir the powder or generate dust as agitation of the powder may accelerate combustion.

Move the aluminium powder after fire extinction after confirming the

internal temperature has fallen to the normal level, and there is no rise in heat for at least 24 hours.

Extinguish fire by oxygen suffocation. Cover the burning area with fire-proof cloth so as to

cut off flying dust.

Then apply dry sand or mica powder over the source of burning to cut off air supply.

Do not use water so that foam and Halogen extinguishing might react with

the aluminium powder.

Worker's protection : Wear complete protective wear (heatproof) including an appropriate compressed

air open-circuit SCBA when you work for extinguishing fire.

6. Accidental release measures

Personal precautions,

Protect equipment and Emergency procedures

Environmental precautions

Methods and materials for Containment and cleaning up

Preventive measures of second disaster

: In an indoor case, fully ventilate until leakage has stopped,

and wear protective equipment during the work. Follow "8. Exposure controls/personal protection"

In an indoor case, fully ventilate until processing finishes.

Avoiding raising dust, sweep it up, and keep it in an airtight container

Follow "13. Disposal considerations"

Remove all sources of ignition promptly.

Do not apply water on leakage and the container.



7. Handling and storage

[Handling]

Technical measure : Do not let it contact with damp air, water, or liquid containing water.

: During handling, avoid skin contact, and wear a dustproof mask, protective gloves, etc.

: Use up promptly after opening.

Local-ventilation / Whole-ventilation

: Install local-ventilation in handling workplace.

Notes : The workplace floor must be of the structure free from water seepage or infiltration.

Sanitary requirement

[Storage]

: Do not eat, drink, or smoke when using this product.

Appropriate condition : Do not keep under an environment saturated with moisture, water or liquid containing water.

 $: \ Seal\ up\ container\ storage\ indoors\ that\ kept\ suitable\ temperature\ and\ humidity,\ shading,\ and\ ventilated.$

: The workplace floor must be of the structure free from water seepage or infiltration.

: Keep it out of reach from children.

8. Exposure controls / personal protection

[Protective equipment]









Respiratory protection : Use dustproof mask.
Hand protection : Use protective gloves.

Eye protection : Use safety goggles or glasses.

Skin and body protection : Use antistatic working clothes.

Facility and equipment measures : Fully ventilate the workplace, and install local ventilation.

Chemical Name	Unit	ACGIH		OSHA
		TWA	STEL	
Aluminium	mg/m³	10		
Magnesium	mg∕ m ³			

(%) TWA: Load average of time STEL: Short-term exposure limit (15 minutes)

9. Physical and chemical properties

Appearance	:	Gray powaer	Explosive limits (Upper)	: No Data
Odour	:	No Data	" (Lower)	: No Data
Threshold odour	:	No Data	Vapor pressure	; No Data
pH	:	No Data	Vapor density (air=1)	; No Data
Melting point (\mathcal{C})	:	No Data	Specific gravity	: 2.67
Boiling point (C)	:	No Data	Solubility	: Not soluble
Flash point (\mathcal{C})	:	No Data	Octanol/water partition coefficient	: Not applicable
Evaporation rate	:	Not applicable	Ignition point (\mathcal{C})	: No Data
Burning quality (Solid)	:	No Data	Decomposition temperature	: Not applicable
" (gas)	:	No Data	Viscosity	: Not applicable



10. Stability and reactivity

Stability : Stable under normal use.

However, there is possibility of dust explosion under certain conditions.

Possibility of May react with water, acid, alcohol, etc. to generate hydrogen gas and heat.

Hazardous reactions

Conditions to avoid : Contact with Water, Moisture, Acid, Alkali Oxidant, Hydrochloric acid, Alcohol · · · etc Incompatible materials

11. Toxicological information

Based on classification criterion of mixtures. \(\sum ATE = 3,890 \text{mg/kg} = Category 5 Acute toxicity - Oral

Acute toxicity - Skin No Data No Data Acute toxicity - Inhalation (Gas) No Data Acute toxicity - Inhalation (Vapor) No Data Skin corrosion /Irritation No Data Serious eye damage / Eye irritation No Data Respiratory sensitization No Data Skin sensitization No Data Germ cell mutagenicity No Data Carcinogenicity

Based on classification criterion of mixtures. =Category2 Reproductive toxicity No Data

Specific target organ systemic toxicity

(single)

Specific target organ systemic toxicity

(repeated)

Based on classification criterion of mixtures. =Category1

No Data Aspiration hazard

12. Ecological information

· No Data **Ecotoxicity** No Data Residual / Degradability Bioaccumulation potential No Data No Data Hazardousness in soil No Data Hazardousness on the ozone layer No Data Aquatic toxicity (acute)

: Based on classification criterion of mixtures. =Category4 Aquatic toxicity (chronic)

13. Disposal considerations

Remainder waste Comply with laws and regulations of local and federal governments for disposal.

Pollution container and Packing

Clean the container or perform suitable disposal in accordance with the standard of related laws and

regulations of local and federal governments.

Empty container, must be disposed of the content completely.



14. Transport information

[International transport information]

UN number : Not Restricted
UN classification : Not Restricted
Marine pollutant : Not Restricted

[Special precaution]

: Stack up containers securely so as not to fall. Containers may be damaged.

Cover the container to prevent direct sun rays and penetration of the rain.

Carry products so that container does not cause violent friction or vibration.

: Follow all regulations of concerned area the product pass through.

: Report in the nearest fire fighting organization when aluminum powder during transport leak

considerably. And take steps of "Section 5" at the same time.

15. Regulatory information

Ensure this material in compliance with federal and local regulations.

16. Other information

Reference : Preparation guideline of Material Safety Data Sheet Japan Chemical industry Association

: Guidebook of Product Liability Act Japan Paint Manufacturers Association

Statute book of chemicals
 16615 Chemicals
 The Chemical Daily Co., Ltd.
 The Chemical Daily Co., Ltd.

Information of GHS models
 Quick understanding of business for MSDS • Label
 Japan Advanced Information Center of Safety and Health
 Japan Environmental Management Association for Industry

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