

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)

YOKOGAWA

Part No: K9088PE

Rev.1.00

Revision date: 9th May 2019

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

1.1 Product identifier : Polishing powder (Alumina)

Substance name : Aluminum oxide
CAS No. : 1344-28-1
EC No : 215-691-6

1.2. Relevant identified uses of the substance or mixture and uses advised against
Polishing powder for electrodes

1.3 Details of the supplier of the safety data sheet:

Manufacture:

Name Yokogawa Electric Corporation
Address 2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan
Phone 81-422-52-5649
(Product Analyzer Marketing Dept., Analyzer Center, IA-PS)
Website <http://www.yokogawa.com>

Importer (only in Europe):

Name Yokogawa Europe B.V. (Regional Headquarters in EU)
Address Euroweg 2 , 3825 HD Amersfoort, The Netherlands
Postal Address P.O. Box 163, 3800 AD Amersfoort, The Netherlands
Phone +31-(0)88-4641000
Website www.yokogawa.com/eu
E-Mail info@nl.yokogawa.com

1.4 Emergency telephone number (only in Europe):
+31-88-4641000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

Hazard Class and Category Code(s): according to Regulation (EC) No 1272/2008 [CLP]
Not classified

Hazard Class and Category Code(s): according to JIS Z 7252(Japanese standard)
Specific target organ toxicity after single exposure, Category 3; H335
Specific target organ toxicity after repeated exposure, Category 1; H372

2.2 Label elements

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

Product identifier : Polishing powder (Alumina)
Substance name : Aluminum oxide
CAS No. : 1344-28-1

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EC No : 215-691-6
Hazard pictograms : Not classified
Signal word : Not classified
Hazard statements : Not classified
Precautionary statements : Not classified
Supplemental Hazard information (EU) : Not applicable.

2.2.2 Labelling according to JIS Z 7252; 2014 and JIS Z 7253; 2012 (Japanese standard)

Product identifier : Polishing powder (Alumina)

Substance name : Aluminum oxide
CAS No. : 1344-28-1
EC No : 215-691-6
Hazard pictograms :



Signal word : Danger

Hazard statements : May cause respiratory irritation
Causes damage to lungs through prolonged or repeated inhalation

Precautionary statements :

Do not breathe dust.

Wash hands thoroughly after handling.

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

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Get medical advice/attention if you feel unwell.

Dispose of contents/container in accordance with local/regional/national/international regulation.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : Aluminum oxide
INDEX No : N/A
EC No : 215-691-6

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REACH Registration No : N/A
CAS No : 1344-28-1

Purity : >99.0%
Synonymes : Aluminium oxide, Alumina
Stabiliser : not available
Hazard impurities : not available

SECTION 4: First aid measures

4.1 Description of first aid measures

General information : Consult a physician. Show this safety data sheet to the doctor in attendance.
Following inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Following skin contact : Wash skin thoroughly with soap and water.
Following eye contact : Flush eyes thoroughly with water, take care to rinse under eyelids. If irritation persists, continue flushing for 15 minutes, rinsing from time to time under eyelids. If discomfort continues, consult a physician. Do not scrub, since the abrasion may cause irritation.
Following ingestion : Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 2.2 and Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No information available

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : No information available

5.2 Special hazards arising from the substance or mixture

No information available

5.3 Advice for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions:

No special environmental precautions required.

6.3 Methods and material for containment and cleaning up

For containment : Put in suitable, closed containers or plastic bags for disposal.
For cleaning up : Wipe with a damp cloth.

6.4 Reference to other sections

For disposal refer to section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures : Avoid contact with eyes or clothing. Use personal protective equipment as required.

Measures to prevent dust generation: Use ventilation equipment as appropriate.

Advice on general occupational hygiene : Wash hands thoroughly after handling.
Not to eat, drink and smoke in work areas.

7.2 Conditions for safe storage, including any incompatibilities

Further information on storage conditions:

Keep in cool and dried place, away from direct sunlight.

7.3 Specific end uses

Refer to section 1.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits :

(ACGIH TLV) TWA: 10 mg/m³ (Total dust)

(OSHA PEL) TWA: 15mg/m³ (Total dust)
TWA: 5mg/m³ (Respirable Dust)

* ACGIH : American Conference of Governmental Industrial Hygienist

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- * TLV : Threshold Limit Value
- * OSHA : Occupational Safety and Health Administration
- * PEL : Permissible Exposure Limits

8.2 Exposure controls

Use ventilation equipment as appropriate.

Personal protective equipment:

- Eye / Face protection** : Safety glasses recommended.
 - Skin protection** : Protective glove (as appropriate)
 - Respiratory protection** : Dust mask recommended. (If excessive dust concentrations occur)
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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Powder
- Colour** : White

Odour : Odourless

- pH** : No data available
- Melting point / freezing point** : 2030°C (HSDB), 2054°C (ICSC), 2072°C (IUCLID)
- Initial boiling point /boiling range** : 2977°C (HSDB), 3000°C (ICSC)
- Flash point** : incombustibility
- Evaporation rate** : No data available
- Flammability (solid, gas)** : No data available

Upper/lower flammability or explosive limits

- Upper** : No data available
- Lower** : No data available
- Vapour pressure** : 0hPa(20°C), 1hPa(2158°C) (HSDB)
- Vapour density** : No data available
- Relative density** : 3.4-4.0 (HSDB), 3.97 (ICSC)
- Solubilities** : insoluble
- Partition coefficient(n-octanol/water)** : No data available
- Auto-ignition temperature** : No data available
- Decomposition temperature** : No data available
- Viscosity** : No data available
- Explosive properties** : No data available
- Oxidising properties** : No data available

9.2 Other information:

Physical hazards: No data available

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SECTION 10: Stability and reactivity

- 10.1 Reactivity** : Stable under recommended storage conditions.
- 10.2 Chemical stability** : Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions** : No data available
- 10.4 Conditions to avoid** : Extremes of temperature and direct sunlight.
- 10.5 Incompatible materials** : No information available
- 10.6 Hazardous decomposition products** : No known hazardous decomposition products.
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SECTION 11: Toxicological information

11.1 Information on toxicological effects

- (a) acute toxicity : Oral LD50 > 5000mg/kg (RAT, IUCLID (2000)).
Dermal LD50 = no data available
Inhalation LC50 = no data available
- (b) skin corrosion/irritation ; No data available
- (c) serious eye damage/irritation ; No data available
- (d) respiratory or skin sensitization ; No data available
- (e) germ cell mutagenicity ; No data available
- (f) carcinogenicity ; No data available
- (g) reproductive toxicity ; No data available.
- (h) STOT-single exposure;
Inhalation of concentrated dust caused irritation of upper airway.
(ICSC 0351-ALUMINIUM OXIDE ICSC (2000))
- (i) STOT-repeated exposure ;
According to one report, occupational exposure to aluminum oxide caused lung fibrosis,
but detailed information is not available. (8.2.1 Respiratory tract effect (EHC (1999)))
- (j) aspiration hazard ; No data available

11.2 Other information

When used and handled according to specifications, the product does not have any harmful effects.

SECTION 12: Ecological information

12.1 Toxicity:

- Aquatic toxicity** : NOEC (Algae) : 100mg/L 72h (not harmful)
NOEC (Daphnia magna): 100mg/L 48h (not harmful)
NOEC (Fish; Salmo trutta): 100mg/L 96h (not harmful)

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(IUCALID dataset Existing chemical substance ID: 1344-28-1 (2000))

- 12.2 Persistence and degradability** : No information available
- 12.3 Bioaccumulative potential** : No information available
- 12.4 Mobility in soil** : No information available
- 12.5 Results of PBT and vPvB assessment** : Not applicable.
- 12.6 Other adverse effects:**
No ecological problems are to be expected when the product is handled and used with due care and attention.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product / Packaging disposal:

Disposal should be in accordance with applicable regional, national and local laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.

Empty container can be treated like household refuse.

Waste codes / waste designations according to EWC:

16 03 03; inorganic wastes containing dangerous substances

SECTION 14: Transport information

	Land transport (ADR/RID)	Inland waterway transport (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN No.	-	-	-	-
14.2 UN Proper shipping name	Non-hazardous material	Non-hazardous material	Non-hazardous material	Non-hazardous material
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	Not applicable	Not applicable	Not applicable	Not applicable

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14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

This product is not subject to classification according to regulation EC 1272/2008 [CLP].

Other regulations, limitations and prohibitive regulations

Directive 67/548/EEC

Hazard symbol : Not Listed

Risk phrase : Not Listed

Safety phrase : Not Listed

International Regulation

EINECS (EU) : 215-691-6

IECSC (China) : Listed

EINECS (EU) : 215-691-6

KECL (Korea) : KE-01012

TSCA (US) : Listed

PICCS (Philippine) : Listed

DSL (Canada) : Listed

AICS (Australia) : Listed

ENCS (Japan) : 1-23

Observe the normal safety regulations when handling chemicals.

15.2 Chemical Safety Assessment:

For this product a chemical safety assessment is not required.

SECTION 16: Other information

16.1 Indication of changes

Issued on 2Xth April 2019 (Rev.1.00)

16.2 Abbreviations and acronyms:

No information available.

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16.3 Key literature references and sources for data

SDS provided by NIPPON LIGHT METAL Company, Ltd.
Aluminum Oxide January 25th, 2019

SDS provided by NIPPON LIGHT METAL Company, Ltd.
Aluminum Oxide (No. A-01-1) August 9th, 2016 (for Japan)

SDS provided by SHOWA DENKO K.K.
Alumina (aluminum oxide) July 9, 2010

SDS provided by FUJIFILM Wako Pure Chemical Corporation
W01W0101-0196 JGHEEN 05-Feb-2019

SDS provided by Sigma-Aldrich Japan G.K.
Aluminum oxide 13.12.2018

16.4 Further information:

The information provided in this Safety Data Sheet is based on the present state of knowledge and is believed to be correct. Its purpose is to characterize the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.