Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Revision Date: 8-Aug-2011 Version No.: 2

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name/designation	Aluminium oxide Durmax® for metallography 48 hour
Product No.	
Substance name	Aluminium oxide
CAS No.	1344-28-1
INDEX no.	
REACH registration No.	Not yet communicated down the supply chain.
other means of identification	

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

Relevant identified uses	for laboratory use and chemical production.

1.3 Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor)

VWR International Ltd.

Street	Hunter Boulevard, Magna Park
Postal code/city	Lutterworth, LE17 4XN
country	United Kingdom
Telephone	0800 22 33 44
Telefax	01455 55 85 86
E-mail (competent person)	vwrsds@eu.vwr.com

1.4 Emergency telephone

Telephone	+44 (0) 1270 502894

2. Hazards identification

2.1 Classification of the substance or mixture

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

This substance is not classified as dangerous according to regulation (EC) 1272/2008 [CLP].

2.1.2 Classification according to Directive 67/548/EEC or 1999/45/EC

This substance is not classified as dangerous according to 67/548/EEC.

2.2 Label elements

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

Hazard pictogram(s):

not applicable

Signal word	not applicable

Hazard Statements
not applicable

Precautionary statements
not applicable

2.2.2 Labelling (67/548/EEC or 1999/45/EC)

Hazard symbols:

not applicable

R-phrases
not applicable

S-phrases

S22	Do not breathe dust.

2.3 Other hazards

none

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3. Composition/ Information on ingredients

Formula:	Al2O3
Molar mass:	101.96 g/mol
CAS No.	1344-28-1
EC No	215-691-6
INDEX no.	

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4. First-aid measures

4.1 General information

When in doubt or if symptoms are observed, get medical advice. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

4.2 After inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician.

4.3 In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

4.4 After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

4.5 After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Give nothing to eat or drink. Do not induce vomiting.

4.6 Self-protection of the first aider

First aider: Pay attention to self-protection!

4.7 Information to physician:

Symptoms	No data available
Hazards	No data available
Treatment	No data available

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5. Firefighting measures

5.1 Suitable extinguishing media

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

5.2 Extinguishing media which must not be used for safety reasons:

no restriction.

5.3 Special hazards arising from the substance or mixture

In case of fire may be liberated: Pyrolysis products, toxic

5.4 Advice for firefighters

DO NOT fight fire when fire reaches explosives. In case of fire: Wear self-contained breathing apparatus.

5.5 Additional information

Do not allow run-off from fire-fighting to enter drains or water courses. Do not inhale explosion and combustion gases.

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6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid generation of dust.

6.2 Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

Take up carefully when dry. Collect in closed and suitable containers for disposal.

6.4 Additional information

No data available

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7. Handling and storage

7.1 Precautions for safe handling

Provide adequate ventilation as well as local exhaustion at critical locations.

7.2 Conditions for safe storage, including any incompatibilities

storage temperature	No data available

Store in a cool dry place. Keep container tightly closed in a cool, well-ventilated place. Strong dehydrating effect (hygroscopic).

7.3 Specific end use(s)

No data available

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8. Exposure controls / Personal protection

8.1 Control parameters

Does not contain substances above concentration limits fixing an occupational exposure limit.

8.2 Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

8.3 Personal protective equipment

Wear suitable protective clothing.

8.3.1 Eye / face protection

8.3.2 Skin protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Recommended glove articles DIN-/EN-Norms: DIN EN 374 In the case of wanting to use the gloves again, clean them before taking off and air them well.

By short-term hand contact	
Suitable material:	No data available
Thickness of the glove material	No data available
Breakthrough time (maximum wearing time)	No data available
By long-term hand contact	
Suitable material:	No data available
Thickness of the glove material	No data available
Breakthrough time (maximum wearing time)	No data available

8.3.3 Protective clothing

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

8.3.4 Respiratory protection

Respiratory protection necessary at: aerosol or mist formation.

Suitable respiratory protection apparatus:	No data available
Suitable material:	No data available

8.4 Additional information

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. provide eye shower and label its location conspicuously

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9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state	solid
Colour	white
(b) Odour	No data available
(c) Odour threshold	No data available

Safety relevant basic data

(d) pH	No data available
(e) Melting point/freezing point	2045℃
(f) Initial boiling point and boiling range	2980℃ (1013 hPa)
(g) Flash point	No data available
(h) Evaporation rate	No data available
(i) Flammability (solid, gas)	not applicable
(j) Upper/lower flammability or explosive limits	

Lower explosion limit (Vol-%)	No data available
Upper explosion limit (Vol-%)	No data available
(k) Vapour pressure	No data available
(l) Vapour density	No data available
(m) Relative density	3.94 g/cm³ (20℃)
(n) Solubility(ies)	
Water solubility (g/l)	insoluble
at ℃:	20
Soluble (g/l) in	No data available
(o) Partition coefficient: n-octanol/water	No data available
(p) Auto-ignition temperature	No data available
(q) Decomposition temperature	No data available
(r) Viscosity	
Kinematic viscosity	No data available
Dynamic viscosity	No data available
(s) Explosive properties	not applicable
(t) Oxidising properties	not applicable

9.2 Other information

Bulk density	No data available
refraction index	No data available
dissociation constant	No data available
Surface tension	No data available
Henry constant	No data available

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10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

No data available

10.7 Additional information

No data available

11. Toxicological information

11.1 Information on toxicological effects

Acute effects

Acute oral toxicity	
Effective dose	LD50: Min. 5000 mg/kg
species:	rat
Exposure time	
remark	
source	OECD 401

Acute dermal toxicity	
Effective dose	No data available
species:	No data available
Exposure time	
remark	
source	

Acute inhalation toxicity	
Effective dose	No data available
species:	No data available
Exposure time	
remark	
source	

Irritant and corrosive effects

Primary irritation to the skin	
Exposure time	
species:	
Result	

Irritation to eyes	
Exposure time	
species:	
Result	

Irritation to respiratory tract	
Exposure time	
species:	
Result	

Sensitisation

In case of skin contact	not sensitising.
After inhalation	not sensitising.

Specific target organ toxicity (single exposure)

not relevant

Specific target organ toxicity (repeated exposure)

not relevant

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

No indication of human carcinogenicity.

Germ cell mutagenicity/Genotoxicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

No indications of human reproductive toxicity exist.

Aspiration hazard

not relevant

11.2 Other adverse effects

No data available

11.3 Additional information

No data available

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12. Ecological information

12.1 Ecotoxicity

Acute (short-term) fish toxicity

LC50:	No data available
EC50	
species:	
Exposure time	

Chronic (long-term) fish toxicity

LC50:	No data available
EC50	
species:	
Exposure time	

Acute (short-term) daphnia toxicity

LC50:	No data available
EC50	
species:	

Exposure time

Chronic (long-term) daphnia toxicity

LC50:	No data available
EC50	
species:	
Exposure time	

Acute (short-term) algae toxicity

LC50:	No data available
EC50	
species:	
Exposure time	

Chronic (long-term) algae toxicity

LC50:	No data available
EC50	
species:	
Exposure time	

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

(o) Partition coefficient: n-octanol/water No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT assessment

No data available

12.6 Other adverse effects

No data available

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13. Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product

Dispose of waste according to applicable local, state, and federal regulations.

Waste code product No data available

Appropriate disposal / Package

Dispose according to legislation.

13.2 Additional information

No data available

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14. Transport information

14.1 Land transport (ADR/RID)

No dangerous good in sense of these transport regulations.

14.2 Sea transport (IMDG)

No dangerous good in sense of these transport regulations.

14.3 Air transport (ICAO-TI / IATA-DGR)

No dangerous good in sense of these transport regulations.

14.4 Additional information

No data available

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15. Regulatory information

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

Water hazard class (WGK)	0

15.2 Chemical Safety Assessment

No data available

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16. Other information

16.1 Relevant R-, H- and EUH-phrases (Number and full text)

not applicable

not applicable

16.2 Additional information

Indication of changes

general update

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.