



# Safety Data Sheet According to Regulation

**(EC) 1907/2006 (REACH)**

**Trade Name: DIATRAC adhesive powder <sup>REF</sup> 19.274.10**

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

**1.1 Product identifier** Aluminium oxide  
 Trade name: DIATRAC adhesive powder <sup>REF</sup> 19.274.10  
 Registration number (REACH): 01-2119529248-35-xxxx  
 EC number: 215-691-6  
 CAS number: 1344-28-1

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

**Relevant identified uses**  
 fine blasting medium

### 1.3 Details of the manufacturer / supplier of the safety data sheet

HELMUT ZEPF Medizintechnik GmbH  
 Obere Hauptstr. 16-22  
 D-78606 Seitingen-Oberflacht, Germany  
 Telephone: +49 7464 9888-0  
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 E-Mail: info@zepf-dental.com  
 Internet: www.zepf-dental.com

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**1.4 Emergency tel. no.** +49 7464 9888-0 during business hours Mon - Fri 8:00 - 12:00 hrs and Mon - Thu 13:00 - 17:00 hrs or 112 (throughout Europe, toll-free emergency number)

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 (CLP):**

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

**Classification according to Directive 1999/45/EC (DPD):**

The most important adverse physicochemical, human health and environmental effects:

Repeated inhalation of large amounts of dust over a long period of time increases the risk of developing lung diseases. The product enters directly through the oral or nasal cavity.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008 (CLP):**

not required

### 2.3 Other hazards

Dust can cause irritation to the cornea and conjunctiva. Causes mild skin irritation. Localised redness, oedema, pruritis and/or pain. Inhalation of dust may cause respiratory irritation.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Substances

Name of substance: Aluminium Oxide, white  
 EC number: 215-691-6  
 CAS number: 1344-28-1  
 Composition / information on ingredients: Aluminum oxide, synthetic (alumina, Al<sub>2</sub>O<sub>3</sub> > 99%)





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## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

- General notes: In all cases of doubt, or when symptoms persist, seek medical advice.
- Following inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.
- Following skin contact: Rinse skin with water / shower. Do not rub affected area. Take off contaminated clothing. If skin irritation or rash occurs: get medical advice/attention.
- Following eye contact: Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Do not rub affected area.
- Following ingestion: Rinse mouth with water (only if the person is conscious).

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

Pulmonary irritation, localised redness, pruritis, cough

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

none

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media:  
The product itself does not burn. Combustible: Packaging materials

### 5.2 Special hazards arising from the substance or mixture

none

### 5.3 Advice for firefighters

Co-ordinate firefighting measures to the fire surroundings.

Special protective equipment for firefighters:  
Filtering half mask (EN 149), P3 (filters at least 99,95 % of airborne particles, color code: White).

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:  
Prevent skin contact. Control of dust. Do not breathe dust.

For emergency responders: In case of spillage - Wear respiratory protection: Half mask with particle filters P2 (filters at least 94 % of airborne particles, colour code: White)  
Dampen dust and place it in a properly closed receptacle and dispose it safely.

### 6.2 Environmental precautions

Knock down dust with water spray.

### 6.3 Methods and material for containment and cleaning up

Take up mechanically (control of dust, dampen dust).

Other information relating to spills and releases:  
Special danger of slipping by leaking/spilling product. Ventilate affected area (Particulates and dust). No dry sweeping using a broom. Do not blow off dust deposits.

### 6.4 Reference to other sections

Personal protective equipment:  
see section 8.

Disposal considerations: see section 13.



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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Don't use a brush or compressed air for cleaning surfaces or clothing. Avoid the release and swirling up of dust.

Measures to protect the environment:

Completely emptied packages can be recycled.

Advice on general occupational hygiene:

Wash hands after use. Do not to eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas.

### 7.2 Conditions for safe storage, including any incompatibilities

When not in use, keep containers tightly closed. Store in a dry place. Removal of dust deposits (control of dust).

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

National limit values: Occupational exposure limit values (Workplace Exposure Limits)

Dusts, particles:

Country (Identifier) - Source	TWA [mg/m³]	Country (Identifier) - Source	TWA [mg/m³]
BG (ГСПМ) - acc. to „Наредба No 13“	10 (i) / 4 (r)	PL (NDSiN) - acc. to „MPiPS“	10
EE (TKOP) - acc. to „VV 18. 2001. nr 293“	10 (i) / 5 (r)	PT (VLE) - acc. to „DL n.º 24/2012“	10 (i) / 3 (r)
GB (WEL) - acc. to „EH40/2005“	10 (i) / 4 (r)	RO (VLON) - acc. to „Hotărâre nr. 1218“	10
HR (GVI) - acc. to „NN 13/09“	10	RU (ПДК) - acc. to „GOST 12.1.005-88“	10
KR (EL) - acc. to „MoEL“	10	SE (HGV) - acc. to „AFS“	10 (i) / 5 (r)
LT (RD) - acc. to „HN 23:2011“	10 (i) / 5 (r)	SI (MVPI) - acc. to „Ur.l. RS, št. 102/2010“	6 (r)
LV (AER) - acc. to „BSN“ (recommendation)	10	TW (PEL) - acc. to „CLA“	10 (i) / 5 (r)

**Notation:** i = inhalable fraction / r = respirable fraction / \* = this OEL value corresponds to that of other listed phthalates

BG (Bulgaria)	ГСПМ: Граничните Стойности на Работното Място (limit values at workplace) Наредба No 13: За защита на работещите от рискове, свързани с експозиция на химични агенти при работа. (The protection of workers from the risks related to the exposure to biological agents at work.)
EE (Estonia)	TKOP: Töökeskkonna Keemiliste Ohutegurite Piirnordid (occupational exposure limit values) VV 18. 2001. nr 293: Vabariigi Valitsuse 18. septembri 2001. a määrus nr 293 „Töökeskkonna Keemiliste Ohutegurite Piirnordid“ (18 Government of the Republic September, 2001. Regulation No. 293 „Occupational Exposure Limits“)
GB (Great Britain)	WEL: Workplace Exposure Limits EH40/2005 Workplace exposure limits, Table 1: List of approved workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/opengovernment-licence/">http://www.nationalarchives.gov.uk/doc/opengovernment-licence/</a> )
HR (Croatia)	VI: Graničnim Vrijednostima Izloženosti (exposure limits) NN 13/09: Narodne novine 13/09 „Pravilnik o graničnim vrijednostima izloženosti opasnim tvarima pri radu i o biološkim graničnim vrijednostima.“ (Official Gazette 13/09: „Regulations on limit values for exposure to hazardous substances at work and on the biological limit values.“)
KR (Korea, Republic of)	EL: Exposure Limit MoEL: Ministry of Employment and Labor „Exposure limits of chemicals and physical agents“
LT (Lithuania)	RD: profesinio poveikio Ribinis Dydis (occupational exposure limit value) HN 23:2011: HIGIENOS NORMOS HN 23:2011 „Cheminių medžiagų profesinio poveikio ribiniai dydžiai. Matavimo ir poveikio vertinimo bendrieji reikalavimai.“ (Hygiene Standard HN 23:2011 „Occupational exposure limit of chemicals. Measurement and impact assessment of general requirements.“)
LV (Latvia)	ER: Aroda Ekspozīcijas Robežvērtība (occupational exposure limit value) MKN 325: Ministru kabineta noteikumi Nr.325 „Darba aizsardzības prasības saskarē ar ķīmiskajām vielām darba vietās.“ (Cabinet Regulation No. 325 „Labour protection requirements when coming in contact with chemical substances at workplaces.“) BSN: Baltic Sea Network on Occupational Health and Safety ( <a href="http://www.balticseaosh.net/files/82.pdf">http://www.balticseaosh.net/files/82.pdf</a> )
PL (Poland)	NDSiN: Najwyższych Dopuszczalnych Steżeń i Natężeń (Maximum admissible concentrations and intensities) MPiPS: Ministerstwo Pracy i Polityki Społecznej „Najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy.“ (Ministry of Labour and Social Policy „Maximum admissible concentrations and intensities for agents harmful to health in the working environment.“)



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PT (Portugal)	LE: Valores Limite de Exposição profissional (occupational exposure limit values) DR - DL n.º 24/2012: Diário da República - Decreto-Lei n.º 24/2012 „Valor limite de exposição profissional obrigatório (Anexo I)“, „Valores limite de exposição profissional com carácter indicativo (Anexo III)“; (Official Gazette - Decree-Law no. 24/2012 „Binding occupational exposure limit value (Annex I)“, „Indicative occupational exposure limit values (Annex III)“)
RO (Romania)	VLON: Valori Limită Obligatorii Naționale de expunere profesională ale agenților chimici (National mandatory limit values of occupational exposure to chemical agents) Hotărâre nr. 1218: Cerințelor minime de securitate și sănătate în muncă pentru asigurarea protecției lucrătorilor împotriva riscurilor legate de prezența agenților chimici. (Minimum requirements of safety and health for the protection of workers from risks related to chemical agents.)
RU (Russia)	ДК: Предельно Допустимые Концентрации вредных веществ в воздухе рабочей зоны. (Maximum allowable concentration of harmful substances in occupational air.) GOST 12.1.005-88: Система стандартов безопасности труда. Общие санитарно-гигиенические требования к воздуху рабочей зоны. (Occupational safety standards system. General sanitary requirements for working zone air.)
SE (Sweden)	HGV: Hygieniska Gränsvärden AFS: Arbetsmiljöverkets författningssamling „Hygieniska gränsvärden“ (Work Environment Authority „Occupational exposure limit values“)
SI (Slovenia)	MVPI: Mejnih Vrednosti Poklicne Izpostavljenosti (occupational exposure limit values) Ur.l. RS, št. 102/2010: Uradni list Republike Slovenije št. 102/2010 „varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu.“ („Protection of workers from the risks related to exposure to chemical substances at work.“)
TW (Taiwan)	PEL (Permissible Exposure Limits of hazardous substances in air) CLA: Council of Labor Affairs „Standards of permissible exposure limits of airborne hazardous substances in workplace.“

Relevant DNELs / DMELs / PNECs and other threshold levels:  
Human health values

Endpoint	Threshold level	Protection goal, route of exposure
DNEL	15,63 mg/m <sup>3</sup>	human, inhalatory
DNEL	3,29 mg/kg	human, oral

Für die Umwelt maßgebliche Werte

Endpoint	Threshold level	Organism
PNEC	74,9 µg/l	aquatic organisms
PNEC	20 mg/l	microorganisms

## 8.2 Exposure controls

Appropriate engineering controls:

Don't use a brush or compressed air for cleaning surfaces or clothing. Regular cleaning of work area. Use a vacuum cleaner fitted with an HEPA (High-Efficiency Particulate Air) filter.

## 8.3. Individual protection measures (personal protective equipment)

Eye / face protection: Use safety goggle with side protection.

Skin protection / hand protection:

Wear protective gloves.

Type of material: reinforced coating: nitrile, NR: natural rubber, latex

Other protection measures:

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams / ointments) is recommended. Wash hands thoroughly after handling. Wear suitable working clothes.

Respiratory protection: Use respiratory protection for dust-intensive work: Filtering half mask (EN 149).

Environmental exposure controls:

Control of dust. Use of compressed air to clean clothes prohibited.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state: solid (powdery-spherical)

Color: white

Odour: odourless





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### Other physical and chemical parameters

pH (value):	not applicable
Melting point:	ca. 2,000° C
Initial boiling point and boiling range:	not applicable
Flash point:	not applicable
Evaporation rate:	not applicable
Flammability (solid, gas):	not applicable
Vapour pressure:	not applicable
Density:	4 g/cm <sup>3</sup>
Bulk density:	1.4 - 1.8 g/cm <sup>3</sup>
Solubility(ies):	water solubility: insoluble
Partition coefficient:	not applicable
Viscosity:	not relevant (solid matter)
Explosive properties:	none
Oxidizing properties:	none

### 9.2 Other information

none

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

See below „Conditions to avoid“.

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

## 11. TOXICOLOGICAL INFORMATION / INFORMATION ON TOXICOLOGICAL EFFECTS

### 11.1 Classification according to GHS (1272/2008/EC, CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

### 11.2 Acute toxicity

Shall not be classified as acutely toxic.

### 11.3 Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

### 11.4 Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

### 11.5 Specific target organ toxicity (STOT)

Shall not be classified as a specific target organ toxicant.

### 11.6 Aspiration hazard

Shall not be classified as presenting an aspiration hazard.





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### 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity / Aquatic toxicity (acute)

Shall not be classified as hazardous to the aquatic environment (acc. to 1272/2008/EC).

#### 12.2 Process of degradability

Data are not available.

#### 12.3 Bioaccumulative potential

Data are not available.

#### 12.4 Mobility in soil

Data are not available.

#### 12.5 Results of PBT and vPvB assessment

Data are not available.

#### 12.6 Other adverse effects

Data are not available.

### 13. DISPOSAL CONSIDERATIONS / WASTE TREATMENT METHODS

#### 13.1 Waste treatment-relevant information

Possibility of reuse or recycling.

#### 13.2 Waste treatment of containers/packagings

Completely emptied packages can be recycled.

#### 13.3 Relevant provisions relating to waste

Non-hazardous waste in accordance with Article 3 (2) in conjunction with Annex III of Directive 2008/98/EC.

Please consider the relevant national or regional provisions.

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

### 14. TRANSPORT INFORMATION

#### 14.1 UN number

not relevant (not subject to transport regulations)

#### 14.2 UN proper shipping name

not relevant

#### 14.3 Transport hazard class(es)

Class -

#### 14.4 Packing group

not relevant

#### 14.5 Environmental hazards

none (non-environmentally hazardous acc. to the dangerous goods regulations)

#### 14.6 Special precautions for user

There is no additional information.

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

The cargo is not intended to be carried in bulk.



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## 15. REGULATORY INFORMATION

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

Industry or sector specific available guidance(s):

European Network on Silica (NEPSI) „10 Golden Rules to suppress dust“

National regulations: see section 8 for Occupational Exposure Limits (OELs)

Recommendations: Health and Safety Executive (HSE): Control of exposure to silica dust

Health and Safety Executive (HSE): Respiratory protective equipment at work (practical guide HSG53)

### 15.2 Chemical Safety Assessment

For this substance a chemical safety assessment is not required.

## 16. OTHER INFORMATION

### 16.1 Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
DPD	Dangerous Preparations Directive (1999/45/EC)
GHS	„Globally Harmonized System of Classification and Labelling of Chemicals“ developed by the United Nations
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
vPvB	very Persistent and very Bioaccumulative

### 16.2 Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 453/2010/EU

- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

### 16.3 Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

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