



The following technical datasheet is provided by Wakol.

For further information please either give us a call or visit the manufacturer's website.

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Registered in England under Company No: 03746590 VAT No: 765 9995 45

WAKOL PU 280 Polyurethane Primer

Technical Information

Area of application

1-component reaction resin primer for

- Priming absorbent and non-absorbent subfloors
- Solidifying abraded or sanded screed edges
- Blocking excessive residual moisture up to max. 6 CM %/98% CRH in cement screed without underfloor heating. Provided that the screed is at least 28 days old and there is no visible water on the surface, WAKOL PU 280 Polyurethane Primer can be used without a moisture restriction.
- blocking excessive residual moisture up to max. 3 CM% / 85 % CRH in cement screed with underfloor heating
- Blocking excessive residual moisture up to max. 7,5 by weight% / 98 % KRL in unheated concretes. Provided that the concrete is at least 28 days old, there is no visible water on the surface and there is a functioning moisture barrier available on-site, WAKOL PU 280 Polyurethane Primer can be used without a moisture restriction.

indoors and outdoors.

Special properties



- solvent-free as defined by TRGS 610

- 1) Based on the criteria of GEV (Association for Emission-controlled Laying Materials), classified as EMICODE EC1 PLUS: very low in emissions
- 2) M1 classification for construction products according to the guidelines of the institute "The Building Information Foundation RTS sr"
- 3) Emissions class according to French law
- 4) Solvent-free polyurethane laying materials
- 5) Suitable for underfloor heating
- 6) Suitable for exposure to castor wheels

Technical data

Raw material base: Polyurethane resins
Drying time: approx. 40 - 50 minutes

at least 2 hours for layers treated with quartz
 Cleaning agent: WAKOL RT 5960 Cleaning Cloth before primer dries
 Storage time: 12 months in the sealed container
 Storage temperature: not below +5 °C, sensitive to frost

Application and consumption⁷⁾

WAKOL Primer Roller, 11 mm Velour or Foam roller	100 - 150 g/m ²	As a primer when only one layer is applied
WAKOL Primer Roller, 11 mm Velour or Foam roller	250 - 350 g/m ²	As a moisture barrier when two to three layers are applied

7) Consumption is dependent on surface structure and absorbability of subfloor.

Subfloors

The subfloor as well as the room climate conditions must meet the requirements of the applicable standards and data sheets. An exception is only made for the residual moisture content of the cement-based subfloor if the primer is used to block capillary moisture.

Mechanically pre-treat and thoroughly vacuum-clean calcium sulphate screeds according to the manufacturer's specifications or according to the applicable standards and data sheets.

The usage as moisture barrier may only occur on permanently moisture-proof subfloors and for the purpose of blocking capillary moisture.

In the case of heavy, constantly rising moisture and water vapour diffusion the primer cannot be used, as the product does not replace structural waterproofing as set out in Part 4 of DIN 18195.

Usage

Shake the container well before using. Apply the primer with a WAKOL Primer Roller, velour or foam roller, without letting the substance pool. If using as a moisture barrier, WAKOL PU 280 Polyurethane Primer must be applied in two layers using a criss-cross method. Each layer must form a thin closed film. The direct bonding work with Wakol adhesive should be completed after the primer has dried and within a 72-hour period, or alternatively, WAKOL D 3045 Special Primer can be applied to the surface (once dry) before subsequent leveling with Wakol leveling compounds within 24 hours. For more information, please consult our Application Technology department. As an alternative to using the special primer, a third coat of WAKOL PU 280 Polyurethane Primer can be applied and WAKOL S 28 Sprinkling Sand subsequently spread on the surface.

After the primer has been left to dry for at least 2 hours, any excess quartz sand should be swept off and vacuumed up.

Levelling can be carried out using Wakol levelling compounds once the surface is completely set. Primed surfaces can be walked on after approximately 40 - 50 min.

Within 72 hours, bonding work can be carried out directly on the dried WAKOL PU 280 Polyurethane Primer using Wakol MS or PU adhesives.

If the bonding should start after 72 hours, sand the surface und apply one coat of WAKOL PU 280 Polyurethane Primer on the top. After that, further time is given before levelling; 72 hours for direct bonding, 24 hours for WAKOL D 3045 Special Primer.

Important

Processing not below floor temperature of +15 °C and room temperature of +18 °C, as well as room humidity preferably between 40 % and 65 %, maximum 75 %. All information is based on approx. 20 °C and 50 % relative air humidity. Warm up all laying materials in due time in heated room.

Do not use the primer on floor coverings such as PVC, CV, rubber or linoleum flooring.

If the humidity is low or higher application quantities are used, this extends the drying time of the reaction resin primer. The surface must no longer be adhesive before work can be continued.

We guarantee the uniform high quality of our products. All data is based on tests and many years of practical experience and refers to standardised conditions. The variety of materials used and the different construction site conditions, which lie beyond our control, preclude any claims based on this data. We therefore recommend making sufficient trials. Accompanying flooring manufacturer's instructions and the current national standards must be observed. We gladly provide technical advice.

The product data sheets can be found in their latest version at www.wakol.com.

This Technical Information of 29.06.2023 supersedes all previous versions.

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

· **1.1 Product identifier**

· **Trade name:** WAKOL PU 280 Polyurethane Primer

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Primer/ Subcoating

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

WAKOL GmbH

Bottenbacher Str. 30

66954 Pirmasens

thomas.wieland@wakol.de

+49 (0)6331 8001 144

· **Informing department:** Industrial Safety Department

· **1.4 Emergency telephone number:**

During business hours: Industrial Safety Department; +49 (0) 6331 8001 144

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

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



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carc. 2 H351 Suspected of causing cancer.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

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



Xn; Harmful

R20-40-48/20: Harmful by inhalation. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation.



Xn; Sensitising

R42/43: May cause sensitisation by inhalation and skin contact.



Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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according to 1907/2006/EC, Article 31

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07 GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
diphenylmethanediisocyanate, isomeres and homologues
- **Hazard statements**
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**
P260 Do not breathe mist/vapours/spray.
P280 Wear protective gloves / eye protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P332+P313 If skin irritation occurs: Get medical advice/attention.
- **Additional information:**
Contains isocyanates. May produce an allergic reaction.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
 - **Description:** *Adhesive*
 - **Dangerous components:**
- | | | |
|----------------------|---|---------|
| CAS: 9016-87-9 | <i>diphenylmethanediisocyanate, isomeres and homologues</i> | 50-100% |
| EC number: 618-498-9 | ☒ Xn R20-40-48/20; ☒ Xn R42/43; ☒ Xi R36/37/38
Carc. Cat. 3 | |
| | ☒ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; ☒ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 | |
- **Additional information** *For the wording of the listed risk phrases refer to section 16.*

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SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Mount respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Protect from frost.
Keep receptacle tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **Components with critical values that require monitoring at the workplace:**
9016-87-9 diphenylmethanediisocyanate, isomeres and homologues
WEL (Great Britain) Short-term value: 0,07 mg/m³
Long-term value: 0,02 mg/m³
Sen; as -NCO
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
Not necessary if room is well-ventilated.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:** Protective gloves
- **Material of gloves:** Butyl rubber, BR
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Tightly sealed goggles

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Fluid
Colour:	Blue
Smell:	Characteristic
- **Change in condition**

Melting point/Melting range:	<0 °C
Boiling point/Boiling range:	351 °C
- **Flash point:** 210 °C

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- **Ignition temperature:** >600 °C
- **Self-inflammability:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Critical values for explosion:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Steam pressure at 20 °C:** <0,00001 hPa
- **Density at 20 °C** 1,17 g/cm³ (EN ISO 2811-1)
- **Solubility in / Miscibility with Water:** Hydrolised.
- **Viscosity:**
 - dynamic at 20 °C:** 300 mPas (ISO 2555)
- **Solvent content:**
 - VOC** 0,00 %
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with alcohols, amines, aqueous acids and alkalis.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
 - Danger of forming toxic pyrolysis products.
 - Carbon dioxide

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

9016-87-9 diphenylmethanediiisocyanate, isomeres and homologues

Oral LD50 >10000 mg/kg (rat) (OECD RL 401)

Dermal LD50 >9400 mg/kg (rabbit) (OECD RL 402)

Inhalative LC50/4h 310 mg/l (rat) (OECD RL 403)
- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitisation:**
 - Sensitising effect through inhalation is possible by prolonged exposure.
 - Sensitising effect by skin contact is possible by prolonged exposure.
 - Sensitisation possible through inhalation.
 - Sensitisation possible through skin contact.
- **Additional toxicological information:**
 - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

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- Harmful
- Irritant
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- Carc. 2

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
- 9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**
- EC50/24h >100 mg/l (bacteriums)
- EC50/3h >100 mg/l (sludge) (OECD 209)
- EC50/48h >1,000 mg/l (Daphnia magna)
- LC0/96h >1000 mg/l (Brachydanio rerio)
- LC50/96h >1000 mg/l (Danio rerio)
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
- Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- Must be specially treated adhering to official regulations.
- **European waste catalogue**
- 08 00 00 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
- 08 05 00 wastes not otherwise specified in 08
- 08 05 01* waste isocyanates
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, ADN, IMDG, IATA** Void
- **14.2 UN proper shipping name**
- **ADR, ADN, IMDG, IATA** Void

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- **14.3 Transport hazard class(es)**
- **ADR, ADN, IMDG, IATA**
- **Class** Void
- **14.4 Packing group**
- **ADR, IMDG, IATA** Void
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Not applicable.
- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **Transport/Additional information:** Not dangerous according to the above specifications.
- **UN "Model Regulation":** -

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Other regulations, limitations and prohibitive regulations**
- **GEV-Guideline/EMICODE: EC 1 plus R, "very low emission"**
- **VOC:**
- **VOC (EU) 0,0 g/l**
- **15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- R20 Harmful by inhalation.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R40 Limited evidence of a carcinogenic effect.
- R42/43 May cause sensitisation by inhalation and skin contact.
- R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

· **Department issuing data specification sheet: Industrial Safety Department.**

· **Contact: Dr. Thomas Wieland**

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)

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VOC: Volatile Organic Compounds (USA, EU)

MAL-Code: Måleteknisk Arbejdshygiejnisk Luftebehov (Regulation for the labeling concerning inhalation hazards, Denmark)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

GB2

ENVIRONMENTAL PRODUCT DECLARATION

for **WAKOL PU 280 Polyurethane Primer**
as per ISO 14025 and EN 15804

The general Environmental Product Declaration (EPD) of the German IBU (Institut Bauen und Umwelt e.V) with the declaration number

EPD-DBC-20130055-IBG1-D

for **Reactive resins based on polyurethane, unfilled/solvent-free, containing polyols**

is applicable for the above mentioned building product and describes its environmental performance to promote sustainable construction.

The product is manufactured and distributed by:

Wakol GmbH
Bottenbacher Straße 30
D-66954 Pirmasens
(herinafter referred to as manufacturer)

This declaration of the "Institut Bauen und Umwelt e.V." is the data basis for presenting technical properties of a product, because it reveals all the relevant environmental data, which are indispensable for calculating the life cycle assessment or the energy consumption of a building.

It contains in detailed manner:

- General indications
- Product definition
- LCA (Life Cycle Assessment): calculation rules
- LCA: Szenarios and further technical information
- LCA: results
- LCA: interpretations
- Verifications

More information to EPDs can be found on the homepage of the "Institut Bauen und Umwelt e.V." – www.bau-umwelt.de.

The technical data sheet and more information to the product can be found on www.wakol.de.

This environmental product declaration is issued under the sole responsibility of the manufacturer.

Signed for and on behalf of the manufacturer by:



Pirmasens, 14.02.2017

Dr. Martin Schäfer
Director Research & Development,
Technical Service and Purchasing