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SCHOMBURG

Technical Data Sheet

ASODUR®-B3311

Chemical protection

Art.-No. 2 06408

CE 1119

SCHOMBURG GmbH & Co. KG
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D-32760 Detmold, Germany
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206408

EN 1504-2
ASODUR-B3311
Surface protection product – Coating

Principle 5.1/6.1

Capillary water absorption and water permeability	$w < 0.1$ kg/m² × $h^{0.5}$
Tensile adhesion strength by pull-off test	≥ 1.5 (1.0) N/mm²
Abrasion resistance	Loss in mass ≤ 3000 mg
Impact resistance	Class III
Resistance to strong chemical attack	Loss in hardness < 50%
Reaction to fire	Class E
Hazardous substances	In compliance with 5.3 of EN 1504-2

- Solvent-free, pigmented, two-component epoxy resin
- Resistant to organic and inorganic acids and alkaline solutions, mineral oils, petrol and solvents
- Softener-resistant (car tyres)
- High mechanical load capacity (directly accessible)
- Crack bridging up to 0.2 mm
- Temperature resistant to at least +70 °C at short-term stress.

Areas of use:

ASODUR-B3311 is used for coating reinforced concrete, concrete, plaster and screed surfaces in production and storage areas.

Technical data:

Basis:	2-comp. epoxy resin
Standard colours:	≈ RAL 7032, ≈ RAL 7030
Viscosity*:	approx. 3.300 mPa·s ± 15%
Density*:	approx. 1.39 g/cm³
Mixing ratio:	100 : 24 parts by weight
Ambient and substrate temperatures:	min. +10 °C max. + 35 °C at max. 80% rel. humidity
Pot life*:	approx. 35 min.
Foot traffic*:	after approx. 16 hours
Overcoat*:	after approx. 16 hours
Fully cured*:	after 7 days
Tensile adhesion strength:	> 1.5 N/mm²
Cleaning:	Immediately after use, clean tools meticulously with ASO-R001.
Packaging:	30 Kg containers Component A and component B are in the predetermined mix ratio.
Storage:	Frost-free, cool and dry, ≥+10 °C to +25 °C, 18 months in the original unopened container, use opened container promptly.
Note:	Frequent temperature changes may cause crystallisation in ASODUR-B3311. It is then necessary to heat the product in a water bath (+50 °C to +60 °C) for approx. 2 hours to allow unrestricted use.

* The values apply to +23 °C and 50% relative humidity.

Substrate preparation:

The surfaces to be treated must be

- dry, firm, load-bearing and grippy
- free of separating and adhesion inhibiting substances, e.g. dust, slurry, grease, rubber abrasion, coating residues, etc.
- protected from the effects of moisture from the rear.

Substrate preparations must be carried out in compliance with DIN EN 14879-1:2005, 4.2 et.seq.

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Depending on the condition of the substrate to be treated, suitable mechanical methods, e.g. high-pressure water jetting, milling, shot blasting, grinding, etc., are to be used to achieve a structured, open surface. (Larger voids and cracks must be repaired in advance using suitable products from the SCHOMBURG range.)

In accordance with the respective substrate, the following criteria must also be met:

Cement-based surfaces:

- Quality of concrete: min. C 20/25
- Quality of screeds: min. CT-C25-F4
  Tensile adhesion strength: ≥1.5 N/mm²
  Age: min. 28 days
- Quality of the plaster: min. P IIIa/P IIIb
  Tensile adhesion strength: approx. 0.8 N/mm²
  Residual humidity: < 4% (CM method)

Product preparation:

Component A (resin) and component B (hardener) are delivered in the predetermined mix ratio. Component B is added to component A. It should be ensured that the hardener runs completely out of its container. A suitable mixer should be used to mix the two components, and this should be done at approx. 300 rpm (e.g. drilling machine with stirrer). The contents should also be stirred up from the sides and from the base, so that the hardener will be distributed evenly. Stirring should be continued until the mixture becomes homogeneous (streak-free); mixing time: approx. 3 minutes.
The material temperature should be at the approximate level of +15 °C during the mixing procedure. Do not apply the mixed material from the delivered packaging! Decant the mass into a clean container, and stir meticulously once again.
Before application on vertical and inclined surfaces it is recommended to add ASO-FF. The added amounts are between 1 and 2 weight %.

Production of offsetting/scratch coat material:

ASODUR-GBM:	1.0 parts by weight
Quartz sand:	1.0 parts by weight (grain size: 0.1–0.6 mm Ø)
ASO-FF:	approx. 1.5 to 2.0 weight %

The quartz sand is mixed into the previously homogeneously mixed and repotted resin and hardener component of the binder ASODUR-GBM. Care must be taken that the liquid and solid components are mixed evenly.

Method of application/consumption:

1. Prior substrate preparation
2. Production of the fillets in the wall/floor area (radius: approx. 5 cm):

2.1 Priming in the fillet area:
ASODUR-GBM is applied by brush or roller in a single application step.
Consumption: approx. 40 g/running metre (with a fillet radius of approx. 4–5 cm).

2.2 Creation of the fillets:
The coved fillet mortar ASODUR-EMB is applied into the still fresh primer in one application step.
Consumption: approx. 1.8 kg/running metre.

3. Application of the primer: ASODUR-GBM is applied pore-clogging in at least one application step.
Consumption: min. 300–500 g/m².

3.1 The freshly applied primer is mixed with fire-dried quartz
sand of grain size 0.1–0.6 mm
Consumption: approx. 1.0 kg/m²
After the primer has hardened, the unbound quartz sand must be meticulously removed.

4. Contingency position: (Compensation for voids, larger pores and unevenness). The mixed scratch coat (see above) is applied in one application step.
Consumption of the finished levelling compound: approx. 1.6 kg/m² per mm layer thickness

4.1 The still fresh filler is sprinkled with fire-dried quartz sand of grain size 0.1–0.6 mm.
Consumption: approx. 0.8–1.0 kg/m²
After the filler has hardened, the unbound quartz sand must be meticulously removed.

4.2 To avoid the formation of bubbles in the following top coat, the scattered scratch coat should be sealed with ASODUR-GBM.
Consumption: approx. 0.3–0.5 kg/m².

4.3 The still fresh sealing is sprinkled with fire-dried quartz sand of grain size 0.1–0.6 mm.
Consumption: approx. 0.8–1.0 kg/m². After the sealant has hardened, the unbound quartz sand must be meticulously removed. After a waiting time of min. 12 hrs/max. 24 hours, apply the ASODUR-B3311 top coat.

5. Application of the top coat: ASODUR-B3311 is applied in a single application step. Layer thickness: approx. 2.0 mm.
Consumption: min. 2.5 kg/m².

5.1 To deaerate the applied ASODUR-B3311 top coat, it is imperative to roll the surface with a spiked roller after a waiting time of approx. 10–15 min. at +20 °C to avoid bubble formation.

Important advice:

- SCHOMBURG products are normally delivered in working packs, i.e. in matched and predetermined mix ratios. For deliveries in large packs, partial quantities must be weighed out using a scale. Always stir up the filled components thoroughly and only then mix them with the second component. This takes place using a suitable stirrer, e.g. Polyplan/a round-plate mixing machine or equivalent. To avoid mixing errors, the material is transferred to a clean container and mixed again. The mixing speed should be approx. 300 rpm. Ensure that air is not mixed in. The temperature of the components should be minimum +15 °C. This also applies to any filler materials that should be mixed in, e.g. sand. Mixing in filler materials should take placed after the liquid components have been mixed. Then apply the completely mixed material immediately to the prepared substrate and distribute meticulously in accordance with the instructions in the technical data sheets. For applications using the roller method, the use of short pile nylon fur rollers (6 mm) with textured polyamide cover or equivalent is recommended. Always stir 1-component products thoroughly before use.
- Higher temperatures shorten the application time. Lower temperatures increase the application and hardening times. The amount of material that is consumed also increases at low temperatures.
- Colours: Slight colour differences, caused by different production batches and raw material fluctuations, are unavoidable. Consider this during coating application work. Neighbouring surface sections should be coated using the same production batch (same batch no. on the delivered packaging).
- The bonding between the individual layers can be strongly disrupted between the individual application steps due to the effects of dampness and contamination. Coating work requires a substrate temperature of at least 3 °C above the dew point temperature.
- If longer waiting times arise between the individual application steps or surfaces that have already been treated with liquid resin are coated again after an extended period of time, the old surface must be well cleaned and thoroughly ground. Then apply a complete pore-free new coating.
- Synthetic resin products and surface protection systems must be protected from moisture (e.g. rain or condensation water) for approx. 4–6 hours after application. Moisture causes a white colour and/or stickiness on the surface and can cause problems during curing. Discoloured and/or sticky surfaces must be removed and reworked, e.g. through grinding or shot blasting.

- The indicated consumption quantities are calculated values without additions for surface roughness and absorbency, level compensation, and residual material in the container. We recommend a calculated safety addition of 10% on top of the calculated consumption quantities.
- Abrasive stress during use can scratch the coating surfaces, visible especially with dark colours. This does not affect the functionality. We recommend regular care of the surfaces with ASO-R008 to maintain the surface quality and appearance in the area of use.
- Applications that have not been clearly mentioned in this technical data sheet may only be carried out after the technical service department of SCHOMBURG has been consulted, and after the department has confirmed a course of action in writing.
- Hardened product leftovers can be disposed of in accordance with disposal code AVV 150106.
- For detailed information on application, read and observe supplementary technical information no. 19 "Applying ASODUR products".

Please observe a current valid safety data sheet.

Chem VOC colour V (2004/42/EC):
Group Lb: j
Level 2 (2010): max. 500 g/l
ASODUR-B3311 contains: < 500 g/l
GISCODE: RE 30

Resistance list

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DIBt media group	approved liquids	Examples for substance name	Operating mode and level	S = Storage	F = Filling	T = Turning over
3	EL heating oil according to DIN 51 603-1 unused combustion engine oils and unused motor vehicle transmission oils, mixtures of saturated and aromatic hydrocarbons with an aromatic content of ≤ 20% by weight and a flash point > +55 °C	n-paraffins 1-methylnaphthalene	LA3 / U2	max. 3 months	up to 200 × / year	Reloading (2)
3a	Diesel fuel according to DIN EN 590 with max. 6 vol.% biodiesel according to DIN EN 14214	Fatty acid methyl ester	L3 / AU2	max. 3 months	up to 200 × / year	Reloading (2)
3b	Diesel fuel according to DIN EN 590 with addition of biodiesel according to DIN EN 14214 up to a total content of max. 20% by volume		L3 / AU2	max. 3 months	up to 200 × / year	Reloading (2)
4	all hydrocarbons, as well as mixtures containing benzene with a maximum of 5% by volume of benzene, except fuel	Xylene, paraffins, diesel, petroleum (boiling point 150-280 °C), toluene, 1-methylnaphthalene	L3 / AU2	max. 3 months	up to 200 × / year	Reloading (2)
4a	Benzene and mixtures containing benzene	Benzene, toluene, xylene, 1-methylnaphthalene	LAU2	max. 72 hours	up to 200 × / year	Reloading (2)
4c	Used combustion engine oils and used motor vehicle transmission oils with a flash point > +55 °C		LA3 / U2	max. 3 months	unlimited number of filling processes	Reloading (2)
5	mono- and polyhydric alcohols up to max. 48% by volume methanol, glycol ether	1-butanol (n-butyl alcohol), chem. de-icing agent, ethanol (methylated spirits), ethyl acetate, ethanediol, wine, propanol, glycol, phenol solution 1%, methonol, isopropanol	L2 / AU1	max. 72 hours	up to 4 × / year	Reloading (1)
5a	all alcohols and glycol ethers	methanol	L2 / AU1	max. 72 hours	up to 4 × / year	Reloading (1)
5b	mono- and polyhydric alcohols ≥ C2 to max. 48% by volume ethanol	methanol isopropanol	L2 / AU1	max. 72 hours	up to 4 × / year	Reloading (1)
7	all organic esters and ketones	diethyl phthalate, dibutyl phthalate, dimethyl phthalate, dioctyl phthalate, ethylhexyl phthalate, methyl acetate, methyl ethyl ketone, butanone, methyl isobutyl ketone, ethyl acetate	LAU2	max. 72 hours	up to 200 × / year	Reloading (2)
7a	aromatic esters and ketones	salicylic acid methyl ester acetophenone	LAU2	max. 72 hours	up to 200 × / year	Reloading (2)
7b	Biodiesel as per DIN EN 14214	Biodiesel	LAU2	max. 72 hours	up to 200 × / year	Reloading (2)
8	aqueous solutions of aliphatic aldehydes up to 40%	formaldehyde < 40% propionaldehyde	L3 / AU2	max. 3 months	up to 200 × / year	Reloading (2)
9	aqueous solutions of organic acids (carboxylic acids) up to 10% and their salts (in aqueous solution)	oxalic acid 10%, tartaric acid 10%, tannic acid 10%, acetic acid ≤ 10%, formic acid ≤ 5%, lactic acid ≤ 10%, citric acid 10%, carbon dioxide solution saturated	LAU2	max. 72 hours	up to 200 × / year	Reloading (2)
10	inorganic acids (mineral acids) up to 20% and acidic hydrolysing inorganic salts in aqueous solution (pH < 6), except hydrofluoric acid and oxidising acids and their salts	aluminium (III) chloride, potassium chloride iron (III) chloride, iodine water < 40%, tin (II) chloride	L3 / AU2	max. 3 months	up to 200 × / year	Reloading (2)

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DIBt media group	approved liquids	Examples for substance name	Operating mode and level	S = Storage	F = Filling	T = Turning over
11	inorganic alkaline solutions as well as alkaline hydrolysing inorganic salts in aqueous solution pH > 8), except ammonia solutions and oxidising solutions of salts (e.g. hyochlorite)	saturated calcium hydroxide, potassium hydroxide ≤ 20%, lithium hydroxide, sodium hydroxide ≤ 20%	L3 / AU2	max. 3 months	up to 200 × / year	Reloading (2)
12	aqueous solutions of inorganic non-oxidising salts with a pH between 6 and 8	ammonium chloride, ammonium sulphate, barium chloride, iron sulphate, potassium nitrate, saturated potassium cyanide solution, potassium nitrate, zinc chloride, zinc sulphate, borax, copper sulphate, magnesium chloride solution ≤ 35%, saturated sodium nitrate solution, sodium sulphate solution 16%, saturated sodium hydrogen carbonate, saturated sodium carbonate solution ≤ 27%, sodium chloride ≤ 20%, sodium hydroxide solution 10%, sodium cyanide saturated, magnesium phosphates, magnesium sulphate solution ≤ 26%, seawater	L3 / AU2	max. 3 months	up to 200 × / year	Reloading (2)
13	Amines and their salts (in aqueous solution)	triethanolamine n-butylamine N,N-dimethylaniline	L2 / AU1	max. 72 hours	up to 4 × / year	Reloading (1)
14	aqueous solutions of organic surfactants	sulfonates	LAU2	max. 72 hours	up to 200 × / year	Reloading (2)
tested individual media						
	Hydrochloric acid (HCl) ≤ 37%		L3 / AU2	max. 3 months	up to 200 × / year	Reloading (2)
	Sulphuric acid (H2SO4) ≤75%		LAU2	max. 72 hours	up to 200 × / year	Reloading (2)
	Phosphoric acid (H3PO4) ≤ 85%		LAU2	max. 72 hours	up to 200 × / year	Reloading (2)
	aqueous ammonia solution (NH3n H2O) ≤ 32%		LAU2	max. 72 hours	up to 200 × / year	Reloading (2)
	Hydrogen peroxide (H2O2) ≤ 30%		LAU2	max. 72 hours	up to 200 × / year	Reloading (2)
	Hydrofluoric acid (HF) ≤ 5%		LAU2	max. 72 hours	up to 200 × / year	Reloading (2)
	Chrome VI electroplating solution		L2 / AU1	max. 72 hours	up to 4 × / year	Reloading (1)
Note on the table	Permissible reloading operations in accordance with TRwS DWA-A-786: Reloading (1): Only for reloading operations of liquids in packaging which comply with the requirements of dangerous goods law or are equivalent to these. Reloading (2): For reloading operations of liquids in packaging which do not comply with the requirements of dangerous goods law or are equivalent to these.					
	Depending on the colour shade, colour changes are possible in the event of contamination, but these do not affect the function of the coating.					
	The media groups were tested at +23 °C.					