



SDE FOOD GRADE EPOXY SYSTEM

PRODUCT DESCRIPTION

SDE FOOD GRADE EPOXY SYSTEM is a highly resilient 2K high solid epoxy resin coating. Odourless, fast-drying, for internal & external areas, and is particularly suitable for surfaces that are temporarily or continuously in direct contact with solid or liquid, foods, also recommended for coating ceilings and walls in production, refrigeration and storage areas. Ideal for any application in internal areas in which a certified and highly resistant hygienic coating is required.

REGULATION CERTIFICATION:

- Conforms to Regulation (EC) 1935/2004 and Regulation (EU) 10/2011 for direct contact with foods. Creates a highly resilient surface with good durability against most of the cleaning agents that are normally used in the food industry. High Level of abrasion resistance: UNE EN ISO 5470-1:1999
- Water impermeable. After drying fully, it forms a waterproof film that is easy to clean.
- No Absorption of water/non-swelling (avoidance of microbial contamination). Along with being suitable for coating minerals substrates, metals, tiles, plastics, glass fibre and intact old coatings (e.g. epoxy coatings, emulsion paints)



Conforms to Regulation (EC) 852/2004, fulfils all current European Regulations for materials that come into contact with food.

Regulation (EC) 1935/2004, Regulation (EC) 2023/2006, Regulation (EU) 10/2011 of the Commission and its subsequent Alterations (EC) No. 1282/2011 in relation to plastic materials and objects that come into contact with foods. VO (EC) in 2018/213 about the use of Bisphenol A in varnish and coatings which are intended to get into contact with food. The criteria for the European market were standardised with the implementation of the European regulations. In these standards, among other things, a variety of simulants as well as global and specific migration tests were defined for every food group

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Categories / criteria of test simulants	
Contact foods	Simulant
Only aqueous foods	Simulant A
Only acidic foods	Simulant B
Only alcoholic foods	Simulant C
Only greasy foods	Simulant D
All aqueous and acidic foods	Simulant B
All alcoholic and aqueous foods	Simulant C
All alcoholic and acidic foods	Simulants C + B
All greasy and aqueous foods	Simulants D + A
All greasy and acidic foods	Simulants D + B

CONSUMPTION:

TRANSPARENT			
Coating thickness per coat: Approx. 75µm wet (= 82.50 g/m ²)			Theoretical coverage
Dry	Wet	g/m ² wet	
50 µm	54 µm ± 2%	58 g/m ²	17.27 m ² /kg
75 µm	79 µm ± 2%	87 g/m ²	12.95 m ² /kg
100 µm	105 µm ± 2%	116 g/m ²	8.63 m ² /kg
WHITE /GREY			
Coating thickness per coat: Approx. 125µm wet (= 170 g/m ²)			Theoretical coverage
Dry	Wet	g/m ² wet	
75 µm	83 µm ± 2%	113 g/m ²	8.28 m ² /kg
100 µm	111 µm ± 2%	151 g/m ²	6.63 m ² /kg
150 µm	166 µm ± 2%	226 g/m ²	4.14 m ² /kg

CLASSIFICATION OF COATING THICKNESS				
	Coating thickness Consumption			Theoretical coverage
	Dry	Wet	g/m ² wet	
	100 µm	111 µm ± 2%	151 g/m ²	6.62 m ² /kg
Low	200 µm	222 µm ± 2%	302 g/m ²	3.31 m ² /kg
Medium	300 µm	333 µm ± 2%	453 g/m ²	2.21 m ² /kg
High	400 µm	444 µm ± 2%	604 g/m ²	1.66 m ² /kg
Very High	500 µm	555 µm ± 2%	755 g/m ²	1.32 m ² /kg

The material consumption is dependent on the type of processing, the environmental conditions, the shape and the quality of the substrate and on the technical requirements placed on the surface. Apply a minimum of 2 layers. **For tanker coatings, silos and surfaces with a very high level of mechanical load, we exclusively recommend applying with a coating thickness of 400µm.** For other applications, e.g. as a ceiling and wall coating, the minimum coating thickness can vary between 200-300µm.

ADHESION TO SUBSTRATE:

Material	Adhesive strength 200 µm dry coating thickness		
	Traction force (Kg/cm ²) (UNE-EN ISO 4624:2002)	Cohesive losings (UNE-EN ISO 4624:2002)	Cross-cut (UNE-EN ISO 2409:2007)
Concrete	180 ± 10	100% RCB	-
Wood	140 ± 10	100% RCB	-
Tile	135 ± 10	100% RCB	0
Glass	130 ± 10	100% RCB	0
Sandwich panel	55 ± 5	100% RA	0

Material	Adhesive strength primer coat RM 40 dry coating thickness primer coat : 80 µm 200 µm		
	Traction force (Kg/cm ²) (UNE-EN ISO 4624:2002)	Cohesive losings (UNE-EN ISO 4624:2002)	Cross-cut (UNE-EN ISO 2409:2007)
Iron	70 ± 5	100% RCI	0
Steel	60 ± 5	100% RCI	1
Galvanized steel	60 ± 5	100% RCI	1
Aluminium	50 ± 5	100% RCI	1

Explanations:		DIN EN ISO 4624:2002 Determining the level of adhesion		
		Adhesion strengths (kg/cm ²)		
		0-30	30-50	> 50
DIN EN ISO 2409:2007	≥ 3	very low	low	low
	2	low	low	mittel
	1	low	medium	high
	0	medium	high	Very high

RCB = Cohesive losings from the substrate / RA = Cohesive losings with the substrate

The values given are medium guide values, measured after 7 days of drying at 25°C / 50% relative air humidity. The application / suitability / transferring to a property must be confirmed by a sample application.

DRYING PERIOD:

Relative drying periods :			
111 µm wet layer- 100 µm dry (relative air humidity 60-70%)	+ 10° C	+ 20° C	+ 30° C
Touch-proof	15-20 h	10-12 h	6-7 h
Can be painted over	24-36 h	12-24 h	8-12 h

Drying periods between coats are determined by coating thickness, temperature, relative air humidity and ventilation. The drying period between coats should not exceed 48 hours.

The lower the temperature and the higher the humidity and the coating thickness, the longer the ideal hardening period is. During the hardening period, an additional method of ventilation should be set up. Warm air accelerates hardening. Before filling a container with food, the coating must be cleaned with clear water. Maximum permanent temperature of a metal container in operation (internal side and surface): 40°C.

Other applications: The coating exhibits good general properties after a hardening period of at least 48 hours. We recommend, however, exposing the coating to serious chemical and mechanical strains only after a minimum hardening period of 7 days.

POT LIFE:

A + B (2,5 kg)	10° C	20° C	30° C
Pot life	1 hour 45 min.	40 min.	20 min.

A + B (5,0 kg)	10°C	21° C	32° C
Pot life	1 hour 35 min.	35 min.	15 min.

APPLICATION & PROCESSING:

Application: The substrate must be clean, dry and stable. The room and substrate temperature must not fall below +10°C and not exceed +30°C during application and drying. The surface temperature of the substrate that is to be painted should always lie 3°C above the dew point. Maximum relative air humidity during painting: 70%.

Mixture: Stir components A and B separately. This process is important since both components are highly viscous in the rest condition. Subsequently, stir component B into component A slowly. Stir either manually or with the lowest rotation speed for approximately 2-3 minutes and then leave to stand for 2 minutes. Air should not be allowed to intermix.

Important: Decant the mixture into a clean bucket for use. Possible residues of component A from the edge of the container could lead to faults in the film. Only stir the quantity of material that can be used within a period of 25 minutes (see the pot life).

Manual application: Apply with a short nap roller (<= 5mm) or a paintbrush. Apply a minimum of 2 layers.

Airless spraying: Application in a spraying procedure should be well planned due to the short pot life. Optimum spray results will be obtained with the SF23 Plus airless sprayer from Wagner using the AirCoat procedure. Nozzle 9/40 flat jet, spray pressure 180 bar. AirCoat data: Pistol ACF 3000, air cap blue, pistol filter red, air pressure 3 bar.

After the pot life has expired, a temperature of up to +80°C can be created in the unused mixture. Do not leave the container to stand unattended in an exposed area.

NOTES:

The information given in this leaflet is based upon laboratory research, as well as extensive field work and application experience. All products are subject to standard conditions of sale which are available upon request. This information is based on **Safety Direct Egypt's** present state of knowledge and is intended to provide general information on **Safety Direct Egypt's** products and their methods of use.

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The information given in this data sheet represents test results & practical experience obtained under controlled conditions, and are correct to the best of our knowledge. However, as products are often used under different conditions, we can only guarantee the quality of our product, and reserve the right to change data without further notice.

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