FreiLacke

Technical Data Sheet

EFDEDUR

Paint
UR1040

- 2-component-polyurethane-finish paint with solvent
- In- and outdoor usage
- For industrial goods, e.g. mechanical engineering
- Good working properties

Technical / Physical Data	**Resin/ binder**			polyacrylic resin to be hardened with isocyanate	
	Colour			acc. to RAL 840 HR other colour shades on request	
	Gloss value with **HU0001, outdoor usage** DIN 67530 and DIN EN ISO 2813	UR1040**G** UR1040**H** UR1040**M** UR1040**Z**	= = = =	high glossy satin glossy mat acc. to customer´s requirement	70 to 80 geometry 20° 40 to 60 geometry 60° 40 to 60 geometry 85°
	Gloss value with **HU0032, indoor usage** DIN 67530 and DIN EN ISO 2813	UR1040**G** UR1040**H** UR1040**M** UR1040**Z**	= = = =	high glossy satin glossy mat acc. to customer´s requirement	80 to 90 geometry 20° 60 to 80 geometry 60° 50 to 70 geometry 85°
	Original viscosity DIN 53211* without hardener			90 to 120 Sec. / 4 mm cup	
	Mixing ratio by weight	UR1040**G** UR1040**H** UR1040**M** UR1040**Z**	= = = =	high glossy satin glossy mat acc. to customer´s requirement	4 : 1 5 : 1 10 : 1
	Hardener base	**outdoor-usage** **indoor-usage**	= =	EFDEDUR-Hardener EFDEDUR-Hardener polyisocyanate see “Special remarks”	HU0001 HU0032
	Potlife after hardener addition			max. 6 h / 20°C	
	Thinner			EFD-Thinner	400018, 400320 or 400500
	Density after hardener addition calculated			1,1 g / ml	+ / - 0,15
	Solid content after hardener addition calculated			62 %	+ / - 2
	Solid content in volume after hardener addition calculated			420 ml / kg	+ / - 20
	Consumption calculated after hardener addition in original viscosity, without application loss			110 to 120 g / m² dry film thickness 50 µm see „Special remarks“	

DIN EN ISO 9001
ISO/TS 16949
EMAS II

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Storability

Approx. 24 month in original packings at an ambient temperature of 5 to 25 °C, in case the original packings are tightly closed. Opened packing must be used very shortly. The minimum storage stability of each batch is mentioned on the product label. A storage time beyond the mentioned date doesn´t necessarily mean that the material is unusable. In this case a check of the qualities which are important for the respective

Processing and application

Application

Components are to be mixed homogeneously (e.g. with high-speed mixer).

spraying-highpressure:	after hardener addition and viscosity adjustment to 18 to 22 sec. nozzle: 1,4 mm spraying pressure: 3 to 4 bar
by roller / brush:	in original viscosity after hardener addition

For roller and brush apllication add. 0,5 to 1,0 % by weight EFD-deaeration agent 300807 in case of bubble creation.

Substrates

steel, non ferrous metals, plastic: e.g. PA, ABS, GFK

Pretreatment

The substrate must be free of materials which prevent adhesion, e.g. oil, grease, dust and surfactant. According to the requirements we recommend to apply the suited chemical (e.g. phosphatizing, chromating) or / and mechanical (e.g. shot blasting) pretreatment.

Proposal for a coating system 1

subtrate:	steel	
primer:	FREOPOX-Primer	ER1912
top coat:	EFDEDUR-Paint	UR1040

Proposal for a coating system 2- as one coat paint (no outdoor usage)

subtrate:	steel, iron phosphatized	
top coat:	EFDEDUR-Paint	UR1040

Application temperature

above 10 °C

Drying air drying at 20°C

dust dry:	after 40 min.	(degree of drying 1/ DIN EN ISO 9117-5)
dry to touch:	after 9 h	(degree of drying 4/ DIN EN ISO 9117-5)
complete dry:	after 14 days	(swinging beam hardness/ DIN EN ISO 1522)
oven drying:	to 100°C possible	(object temperature)

Cleaning of working equipment

EFD-Thinner 400500

Advise for safety protection and protection of health

The usual precautionery measures for ventilation as well as for personal protection are to be observed when handling painting materials. Detailled information about dangerous goods, safety data and recommendations concerning health protection and environment protection can be read in the corresponding safety data sheet.

Special remarks

Information about Hardener and Thinner
The hardener and the thinner mentioned on page 1 are stated as standard componentes for this paint system. The standard hardener is also written in the order documents as well as on the label. Furthermore there are additional hardeners and thinners, which can be used as alternative in case the standard components doesn´t meet the requirements.
These products are tailor-made e.g. faster or slower hardening.

Hardener are taking influence on the gloss. (see page 1).

Resistance
EFDEDUR-Hardener HU0001
outdoor usage, good light fastness and weather resistance, indoor usage in case of higher requirements to light fastness when using light colour shades

EFDEDUR-Standard-Hardener HU0032
indoor usage, good mechanical and chemical resistance

Test condition
*Indication of the delivery viscosity according to DIN 53211:
DIN 53211 was withdrawn in October 1996.
On request the value is available according to DIN EN ISO 2431.

The statements concerning efficiency and drying depend on colour shade.
The values mentioned in this data sheet are based on UR1040GRA910,pure white, high glossy and hardening with HU0001.

All information is based on a standard climate 20/65 DIN 50014.

For the calculation of the practical consumption loss additions have to be considered. Indications to this are the practical experience and advices given in DIN 53220.

All information are based on our product knowledge and experience. To the application we have no direct influence. For further information please don’t hesitate to contact us.

The information mentioned herein are reference values and are not given as specification.