WG-WELEFORCE HT

TECHNICAL DATA SHEET



PRODUCT DESCRIPTION

High build, two component, amine cured, novolac epoxy coating.

FEATURE

Application:

at temperatures from 10 to +50°C;

Provide:

- temperature resistant up to 230°C in areas subject to wet/dry conditions;
- chemical resistant and resistant to thermal shock.

RECOMMENDED TO USE

Steel surface:

- as a single layer coat to prevent corrosion under insulation;
- as a tank lining with very good chemical resistance;
- as a primer, intermediate or final coat in corrosivity categories C2-C4, C5 and CX (ISO-12944-2 / 2018);
- for structures immersed in fresh, sea or brackish water, lay pipeline compatible with cathodic protection as well (Im1; Im2; Im3 and Im4 ISO-12944-2 / 2018).

Galvanized, stainless steel and concrete surfaces:

as protective coating.

COMPATIBLE COATINGS

Depending on the operating conditions the material can be used with different types of coatings.

- Two-component epoxy coatings (2 pack EP) of Welesgard.
- Two-component polyurethane coatings (2 pack PUR) of Welesgard.

(For details please contact the Welesgard Technical Sales Support).

TECHNICAL DATA

Appearance		
Color:	Grey, Yellow, Light red etc.	
Appearance:	Semi-Gloss coating	
Material properties		
Volume solids:	87% ± 2%	
Density (at +20°C):	1.53 ± 0.03 g/cm ³	
VOC value:	<102.5 g/l	
Dry heat resistance (ASTM D2485):	215°C, constant; 230°C, intermittent	
Adhesion (ASTM D4541):	5.5 MPa	

SURFACE PREPARATION

Surface type	Minimum	Recommended
Surface profile	Ry5 (30-75 μm) (ISO 8503-1)	Ry5 (30-75 μm) (ISO 8503-1)
Primed and previously painted surfaces	P St3; P Ma ISO 8501-2, ISO 12944-4	P Sa2; PMa ISO 8501-2½, ISO 12944-4
Steel surfaces	Sa 2 (ISO 8501-1)	Sa 2½ (ISO 8501-1)
Surfaces of non-ferrous metals, galvanized and stainless steel	netals, galvanized and rinse with water.	
Concrete Surfaces	SSPC-SP 13/NACE No. 6	SSPC-SP 13/NACE No. 6

Note: Exposed to immersion: Sand blasting to minimum Sa2½ (ISO 8501-1).



AMBIENT CONDITIONS

Ambient air temperature:	from 10 to +50°C
Surface temperature:	from 10 to +50°C
Relative humidity, below:	85%
Dew Point	at least 3°C higher than steel temperature

Note: The product temperature during application should not be less than +15°C.

THICKNESS & THEORETICAL SPREADING RATE

Standard Grade	Min.	Med.	Max.
Dry Film Thickness:	100 μm	200 μm	300 μm
Wet Film Thickness:	115 μm	230 μm	345 μm
Spreading Rate:	8.7 m ² /l	4.4 m ² /l	2.9 m ² /l

Note: Practical coverage depends on the application conditions, structure to be painted, roughness of the surface and application method.

Do not apply over 250 microns total DFT when used in service above 150°C.

DRYING TIME

(Dry Film Thickness 250 μ)	10°C	23°C	40°C
Dry to touch	6h 30m	3 h	1h 30m
Min. recoating interval (itself)	14 h	5 h	2h 30m
Max. recoating interval (itself)	63 d	42 d	30 d
Min. recoating interval, with 2 pack EP/PUR	15 h	5h 45m	3 h
Max. recoating interval, with 2 pack EP/PUR	60 d	40 d	30 d
Cure for service	12 d	7 d	5 d

Note: Drying times and polymerization depend from the relative humidity, temperature, ventilation conditions and the thickness of the film.

- The curing and polymerization times are determined at a controlled temperature and relative humidity (RH) of 60 80%.
- In case of long periods of overcoating, it is necessary to consider the possibility of contamination of the substrate (grease, dust), which must be removed before carrying out the overcoating.
- If maximum recoat time is exceeded, it is necessary to make surface roughness with abrasive, rinse with clean water to remove dirt and allow drying.
- In the case of operation of the coating at elevated temperatures, the maximum overcoating interval is significantly reduced.

(For details please contact the Welesgard Technical Sales Support).

APPLICATION DATA

Mixing ratio: 4:1

Resin	4 parts by volume
Curing Agent	1 part by volume

Stir resin and curing agent separately (slow stirring) and then mix both components thoroughly with propeller stirrer. Before use the temperature of packaging and material should not be less than 3 ° C higher than the dew point.

Add thinner only after both components have been thoroughly mixed and stir the mixture.

Thinning: Add up to 5% by volume of thinner WG-Welethinner EP when thinning is needed.

Note: - Adding a thinner will increase the drying time.

- In the case of using thinner other than recommended, the manufacturer not takes responsibility for any possible reduction in the quality of the coating!



Cleaner: WG-Welethinner EP

Pot life (+23 °C): Approximately 45 min.

APPLICATION METHODS

Spray application: Airless spray is the main method of application. For other spraying methods, viscosity correction may be required.

Brush: Recommended for touch-up, stripe coating and small areas only. It is necessary to provide a nominal coating thickness.

Roller: Could be used for repair or minor touch-up work. Do not use roller for application of priming coat.

PACKAGING

	Volume (litres)	Size of containers (litres)
Comp. A	15.2	20
Comp. B	3.8	4

STORAGE & SHELF LIFE

The product must be stored in original sealed containers. The storage conditions are to keep the containers in a dry, well ventilated space away from source of heat and ignition.

Storage temperature:	from 5 to 30°C
Component "A"	2 years
Component "B"	2 years

<u>Note:</u> After lasting storage primer shall be stirred thoroughly until its precipitation is spread over the suspension homogeneously. Precipitation in primer does not change its properties or worsen its quality.

After the expiration date has passed, it is necessary to check the quality of the paint material.

SAFETY

Use with adequate ventilation. Do not inhale aerosol. Avoid contact with skin. After contact with skin, wash immediately with detergent, soap and water. In case of contact with eyes, rinse immediately with water and seek medical advice immediately..

For detailed information on the health and safety protection for use of this product see Safety Data Sheet (SDS).

IMPORTANT NOTE

The above-mentioned information is given according to our laboratory tests and practical application experience.

The manufacturer takes into consideration the fact that the material can be used out of control; the manufacturer cannot give guarantees except of the material quality.

The manufacturer has the right to improve the product and change the above-mentioned data without preliminary notification.

THE PRESENT TECHNICAL DATA SHEET REPLACES ALL PREVIOUS EDITIONS.