Industrial surface treatment

LIVING CONTAINERS

COLORLAK
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SURFACE TREATMENT OF LIVING CONTAINERS

In this document, we offer our customers an overview of some of the most commonly used coating systems (CSs) for surface treatment (ST) of metal (sheet metal) living and commercial containers (whole residential or office buildings). These CSs are based on the practical knowledge and experience of our technicians.

Selection of the coating system

The choice of suitable coatings for a particular application affects many technical and economic parameters whose importance may not be the same in every situation. It is necessary to take into account the corrosive aggressiveness of the environment, the required life of the treated area, the possibilities of maintenance and renewal, the aesthetic requirements, hygienic and ecological regulations, the suitability of the application equipment and of course the summary of the properties determining the paint, such as the drying rate, the workability, colours offered, application options, etc.

The most appropriate design of coating systems for specific cases will be prepared for you by the technical service department of COLORLAK, a.s. company in Staré Město.

Basic terms and conditions

- The structure of the proposed CS and their thickness (NDFT) are designed for exterior (and interior) environments characterized by C3 - medium corrosive aggressiveness (eg. urban environment). This is not a condition, for example, with high chemical aggression, extreme loads.
- When requiring a longer service life or a higher level of corrosive aggressiveness (C4), it is always advisable to consult with COLORLAK technicians.
- NDFT – the nominal thickness of the dry film, ie. the total recommended thickness for the required service life (here for the C3 environment).
- For application and drying of coatings, general conditions apply: temperature 18-25 ° C and relative humidity up to 75%. Specific conditions for individual materials are given in their technical documentation.
- It is always advisable to consult COLORLAK technicians on the specific requirements of the customer.

Selected coating systems (most common use)

The surface treatment of residential and utility containers mainly uses better and more durable coating materials such as acrylic or two-component acrylic urethanes or polyurethanes. The use of zinc is also relatively widespread - ie. CS directly on galvanized material, but also aluminium or titanium. Depending on the specific design and customer requirements, the CS series is directly targeted - for example, certified for high resistance to UV radiation, for more demanding corrosive environments, etc.

IRON SURFACES

A — combined acrylate polyurethane two-layer CS (1k AY + 2k PUR)

primer	top coat	whole CS	
S2212 ZINOREX PRIMER	**U2218** or **U2219 AXAPUR**	**S2212 + U2218 (U2219)**	
NUMBER OF LAYERS / DFT	NUMBER OF LAYERS / DFT	TOTAL NDFT	EXPECTED LIFE
1 / 40 µm	**1 / 60-80 µm**	**100-120 µm**	**C3 / 5-10 years**
BASIC CHARACTERISTICS	BASIC CHARACTERISTICS	BASIC CHARACTERISTICS	
quick-drying also on galvanized material	quick-drying and thicker layers U2218 by default semi-matt, but also gloss, matt and structural surface U2219 semi-matt and higher weather resistance	easy and quick application excellent UV and weather resistance	

B — polyurethane two-layer CS (2k PUR)

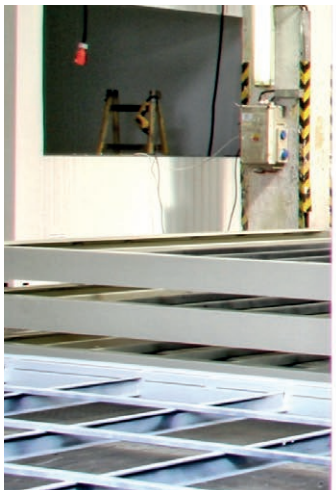
primer	top coat	whole CS	
U2008 AXAPUR PRIMER	**U2060** or **U2074 AXAPUR**	**U2008 + U2060 (U2074)**	
NUMBER OF LAYERS / DFT	NUMBER OF LAYERS / DFT	TOTAL NDFT	EXPECTED LIFE
1 / 40 µm	**1-2 / 60-80 µm**	**100-120 µm**	**C3 / 10 years**
BASIC CHARACTERISTICS	BASIC CHARACTERISTICS	BASIC CHARACTERISTICS	
quick-drying also on galvanized material, aluminium and titanium zinc	U2060 gloss, semi-matt, matt and structural surface U2074 gloss and it is an economic option	high UV and weather resistance for roofs it is recommended at least NDFT 120 µm	

C — combined epoxy polyurethane two-layer CS (2k EP + 2k PUR)

primer	top coat	whole CS	
S2318 EPAX	**U2060** or **U2074 AXAPUR**	**S2318 + U2060 (U2074)**	
NUMBER OF LAYERS / DFT	NUMBER OF LAYERS / DFT	TOTAL NDFT	EXPECTED LIFE
1 / 40 µm	**1-2 / 60-80 µm**	**100-120 µm**	**C3 / 10 years**
BASIC CHARACTERISTICS	BASIC CHARACTERISTICS	BASIC CHARACTERISTICS	
high corrosion protection also on galvanized material even thicker layers	U2060 gloss, semi-matt, matt and structural surface U2074 gloss and it is an economic option	high UV and weather resistance for roofs it is recommended at least NDFT 120 µm	

D — combined epoxy polyurethane two-layer CS (2k EP + 2k PUR)

primer	top coat	whole CS	
S2328 EPAX	**U2219** or **U2068 AXAPUR**	**S2328 + U2219 (U2068)**	
NUMBER OF LAYERS / DFT	NUMBER OF LAYERS / DFT	TOTAL NDFT	EXPECTED LIFE
1 / 40 µm	**1 / 60-80 µm**	**100-120 µm**	**C3 / 10 years**
BASIC CHARACTERISTICS	BASIC CHARACTERISTICS	BASIC CHARACTERISTICS	
high corrosion protection even thicker layers fast drying	U2219 semi-matt U2068 gloss, semi-matt, matt and structural surface even thicker layers high UV and weather resistance	easy and quick application high UV and weather resistance	



GALVANIZED SURFACES

A — acrylic (solvent based) one-layer CS (AY)

one-layer paint	whole CS	
S2214 ZINOREX	**S2214**	
NUMBER OF LAYERS / DFT	TOTAL NDFT	EXPECTED LIFE
1-2 / 80-120 µm	**80-120 µm**	**C3 / 10 years**
BASIC CHARACTERISTICS	BASIC CHARACTERISTICS	
semi-matt quick-drying one-layer application	easy and quick application good UV and weather resistance	

B — polyurethane one-layer CS (2k PUR)

one-layer paint	whole CS	
U2218 AXAPUR	**U2218**	
NUMBER OF LAYERS / DFT	TOTAL NDFT	EXPECTED LIFE
1-2 / 80-120 µm	**80-120 µm**	**C3 / 10-15 years**
BASIC CHARACTERISTICS	BASIC CHARACTERISTICS	
semi-matt, gloss, matt or structure also on aluminium, titanium zinc, steel quick-drying one-layer application	easy and quick application high UV and weather resistance for roofs it is recommended at least NDFT 120 µm	

C — polyurethane one-layer CS (2k PUR)

one-layer paint	whole CS	
U2219 or **U2068 AXAPUR**	**U2219 (U2068)**	
NUMBER OF LAYERS / DFT	TOTAL NDFT	EXPECTED LIFE
1-2 / 80-120 µm	**80-120 µm**	**C3 / 12-15 years**
BASIC CHARACTERISTICS	BASIC CHARACTERISTICS	
U2219 semi-matt U2068 semi-matt, gloss, matt or structure very high resistance also on aluminium, titanium zinc, steel	easy and quick application very high UV and weather resistance for roofs it is recommended at least NDFT 120 µm quick-drying one-layer solution