PRE-COATED STEEL WITH PVC FILM TYPE DL12E – DL19E – DL89E – DL96E

1. COMPOSITION

1.1 Standard metallic support:
Continuously hot-dip zinc coated low carbon steel sheet and strip for cold forming.
Technical delivery condition (UNI EN 10327:2004).

Other available supports:
- Cold-rolled low carbon steel flat products for cold forming – Technical delivery conditions (UNI EN 10130:2000
- Aluminium and aluminium alloys – Coil coated sheet and strip for general applications (EN AW-3103 [Al Mn 1]) (UNI EN 1396:98).
- Stainless steel – List of stainless steel (UNI EN 10088-1/97)

1.2 Adhesive

1.3 Coating: Semi-rigid polyvinylchloride (PVC) film, decorated using rotogravure printing.

1.4 Available on request:
- Primer on second face, to help the adhesion of the polyurethane foam to the steel support.
- Second face coated with PVC film.

Water based adhesive film for temporary protection

2. TECHNICAL FEATURES

2.1	**Film thickness:**		*130-140 µ*
	• Thickness tolerance:		*± 7%*
2.2	**Adhesion after drawing (drawing depth: 6 mm.)**	(standard of reference ECCA T6):	*No film detachment*
2.3	**Resistance to bending**	(ECCA T7[1996] method 5.1.1):	*½ T*
2.4	**Resistance to rapid deformation**	(method ASTM D 2794-93):	*Not below 140 in.- lb*
2.5	**Resistance to salt fog**	(method ASTM B 117-95):	*500 hours (adhesion loss ≤ 2 mm.)*
2.6	**Resistance to 100% relative humidity**	(method ASTM D 2247-94):	*Not below 1000 hours.*
2.7	**Pencil hardness**	(method ASTM D 3363-92a):	*B*
2.8	**Artificial light fastness**	(ISO 4892-2 method A):	*Colour variation ≤ 4 on the grey scale, after the samples received radiant energy equal to 5 Gigajoule/sqm in the test conditions.*
	• Test conditions	➢ Temperature:	*58/60 °C*
		➢ Cycle:	*Only radiance*
		➢ Radiancy strenght:	*550 W/sqm*
		➢ Radiancy:	*Spectrum between 290 and 800 nm.*

2.9 Stain resistance (method ASTM D 1308-87 – ECCA T18 [1995] procedure 5.1):
- Period of test: *16 hours*
- Reagents: *Butter, margarine, vegetable oil, vinegar, fresh and conserved tomato, strawberries, coffee, tea, solution of 5% caustic soda, solution of 5% surface active agent, lubricating oil or grease, solution of 10 % citric, lactic or tartaric acid, 5% HCl solution.*
- Results: *Stain building up in the contact zone with fresh tomato and coffee, and formation of slight halation in the zone of contact with NaOH 5%.*

2.10 Resistance to solvents: ***NO RESISTANCE TO ORGANIC SOLVENTS:*** *Including: acetone, ethyl acetate, chlorinate and aromatic solvents (Toluene and Xylene) solvent adhesives.*

2.11 Taber abrasion: (ASTM D 4060-95; mole type CS-10, weight 500 g.)
- Index of abrasion (after 1000 cycles): *10 – 13*

2.12 Gloss at 60°: (ASTM D523-89, ECCA T2 [1995]) *6 – 9*

N.B. The various tests were carried out at temperatures of 23 ± 1 °C, beyond what was expressly required by the reference norms.

MAINTENANCE OF PVC COATED STEEL

1. CLEANING

1.1 General rules

- Cleaning must be effected with water and neutral soap.
- We recommend cleaning with soft cloth, accurate rinsing and drying of the surface
- Avoid the use of abrasive products.

1.2 Little stains removal

- Stains on the surface can be removed with white spirit or denatured alcohol.
- Various substances (such as nail enamel, rouge, polish, ink, tar) may penetrate into the film surface causing permanent staining.

Note:
Avoid solvents such as acetone, toluene, ethylacetate, thrichloroetylene, perchloretylene.

2. REPAIRING OR PAINTING OF PVC COATED STEEL

2.1 Preliminary operations

Before applying the enamel, clean the surfaces with denatured alcohol or neutral detergents preferably diluted with water, rinse and dry accurately.

2.2 Usable materials

Repairing or painting of PVC coated steel can be effected with the following products, which can be found on the market:

- Water based acrylic enamel (for repairing and painting).
- Bi - component polyurethane enamel with volatile solvents (for repairing).

STORAGE AND PROCESSING OF SHEETS AND COILS

1. STORAGE

1.1 Sheets and coils must be kept under shelter, in order to avoid sudden changes in temperature and the consequent condensation. The presence of humidity may cause whitish stains (white oxide) that could endanger the adhesion of polyurethane and provoke the alteration of the PVC coating.

1.2 Sheets covered with the adhesive film for temporary protection must be stored away from heat sources and sun - rays.

2. PROCESSING

2.1 Sheets and coils should be processed within 6 months of shipment, with the most suitable equipment in order to avoid abrasions on the surface of the coating or fissures of the coating and of the zinc layer.

2.2 Bending and roll forming machines should consider the final thickness and possible tolerances to avoid re-rolling processing.

2.3 We suggest not processing our materials at temperature inferior to 18 degree C°.