DAT Eurolack

DAT-Eurolack is a system for the surface-based calculation of labour times and material costs. It can be applied universally across all manufacturers.
The system based on vehicle-specific surface data allocated to each paintable component. These data are used to determine labour times and material costs (i.e. material points, MP) according to paint type and paint level complying with state-of-the-art paintwork technology.

Prerequisites for professional paintwork

All paintwork cost calculation is based on the assumption that a surface is ready for paint application according to the following definitions:

1.) The sections and parts have been prepared by a bodyworker (dent removal, welding, leading and body filler application), are dry and sanded with a grit of at least P80 to P120.
2.) The surface to be painted can be restored by the painter with a maximum of 3 swipes of finishing putty.

Individual decision when painting sections:

The suitability of painting sections instead of complete body panels depends on their shape and/or the design of the paint surface separations. If feasible, the painter shall discuss the options with the customer, technical expert or insurance company.

Paint surfaces can usually be separated along beads, edges or trim strips without a problem. Less pronounced edges may sometimes allow the sectional painting of the panel with optimal results when using "projecting masking tape".

Structure of the labour time

1.) Preparation time:
For each job, the maximum preparation time required is applied one single time. It is determined by the following parameters:

a.) Paint type:
- Single-layer
- Double-layer
- Triple-layer
- Four-layer

b.) Material:
- Metal part(s)
- Plastic part(s)

c.) Paint level:
- Metal parts: Surface, repair < 50%, repair > 50%, new part
- Plastic parts: Surface, repair < 15%, new part prepared, new part unprepared

d.) Assembly state:

- Part installed
- Part removed

Additional preparation time in excess of the maximum preparation time may apply in the following cases:

- Plastic parts in conjunction with metal parts
- Undercoat application with part removed
- Paint mixing
- Spraying samples for colour tone matching (number of sample panels may be entered)
- Allowance for second colour
- Masking of bonded windows
- Masking of removed plastic parts

Preparation times can be individually adjusted by entering a percentage. If, in a specific case, only a small part (e.g. parking aid sensor) is to be painted, a reduced preparation time for a single job or small part can be marked.

2.) Component-based labour time:

For each part comprised in a paint job, a component-based labour time is applied. It is determined by the following parameters:

a.) Paint type:

- Single-layer
- Double-layer
- Triple-layer
- Four-layer

b.) Material:

- Metal part(s)
- Plastic part(s)

c.) Paint level:

- Metal parts: Surface, repair < 50%, repair > 50%, new part
- Plastic parts: Surface, repair < 15%, new part prepared, new part unprepared

d.) Assembly state:

- Part installed
- Part removed

In addition to the component-based labour time, an allowance for difficult work may apply if the repair involves scratch-resistant paint. The following reference values apply:

- 0.3 hours per horizontal part (bonnet, roof, etc.)
- 0.1 hours per vertical part (wing, door, etc.)

Definition of paint levels for metal parts

Level 1 - Surface:
Cleaning and scuffing the existing topcoat, spraying a new topcoat

Level 2 - Repair < 50%:
Complete removal of the paint structure of up to 50% of the entire paint zone. Removal of damaged basecoat. Building up a new paint structure. Scuffing of topcoat over entire surface and spraying of new topcoat.

Level 3 - Repair > 50%:
Building up a completely new paint structure over more than 50% of the entire paint zone. Removal of topcoat and basecoat from the entire body part. Building up a completely new paint structure and spraying a new topcoat on the entire body part.

Stage 4 - New part:
Building up a completely new paint structure, including panel sections and partial sections. This paint level includes the painting of the inner surfaces.

Note: Inner parts are always painted as level 1 parts, but are identified as inner parts in the calculation. New assembly parts are identified as 'New part M', and new welded parts as 'New part S'.
When replacing a welded part, the seam areas (welded joints) extending beyond the border of the paint surface (up to 10 cm) are included in the allowance. If touching up the repaired area of the neighbouring part is not sufficient, the part must be painted as a level 1 part (Surface) if not included in the scope of repair.

Definition of paint levels for plastic parts

Level 1 - Surface:
Cleaning and scuffing the existing topcoat, spraying a new topcoat (also applies when applying paint of a different colour)

Level 2 - Repair < 15%:
Sanding the repair area, applying adhesion promoter, body filler, filler/fill primer, drying and sanding, spraying a topcoat

Level 3 - New part prepared:
New part is primed and filler has been applied. Scuffing of new part and spraying of topcoat

Level 4 - New part unprepared:

New part unprimed and without substrate. Applying adhesion promoter and filler. Drying and sanding. Spraying the topcoat
or
New part made of PU soft foam. Cleaning the part and filling the pores. Flexibilising the part.
Applying adhesion promoter and filler. Drying and sanding. Spraying the topcoat.

Level 5 - New part unprepared, wet-in-wet:
New part unprimed, substrate may exist. Opacity of topcoat is insufficient. Applying adhesion promoter, filler or filler/primer, and wet-on-wet spraying of topcoat without prior scuffing.

Note: For calculation purposes, new parts are identified as 'New part K-V' for 'New part prepared', 'New part K-R' for 'New part prepared including sanding' and 'New part-K-N' for 'New part unprepared, wet-in-wet'.

Scope of work

Labour time allowances include the procedures marked with an [x].

Metal parts

Job-based labour time	**Paint levels**			
Operation	1	2	3	4
Moving vehicle or object	x	x	x	x
Retrieving, cleaning and returning tools, equipment and auxiliaries	x	x	x	x
Procurement and preparation of material	x	x	x	x
Putting on and taking off protective clothing	x	x	x	x
Masking the vehicle	x	x	x	x
Removing sanding dust from vehicle	x	x	x	x
Setting up the spray booth	x	x	x	x
Removing paint residue	x	x	x	x
Removing adhesive residue	x	x	x	x
Flash-off and finishing	x	x	x	x

Component-based labour time	**Paint levels**			
Operation	1	2	3	4
Cleaning parts using silicone remover (repeatedly, if necessary)	x	x	x	x
Partial removal of topcoat and substrate		x		
Complete removal of topcoat and substrate			x	
Removal of subsurface corrosion		x	x	
Sanding the primed surface	x	x	x	x
Scuffing the topcoat	x	x		

Applying finishing putty with max. 3 swipes (new part if slightly damaged during transport, weld joints)		x	x	x
Sand down the body filler		x	x	x
Applying the filler		x	x	x
Sanding the filled surface		x	x	x
Cleaning the surface to be painted	x	x	x	x
Painting the inside of parts				x
Applying stone chipping protection		x	x	x
Applying the topcoat	x	x	x	x
Applying the clearcoat (double-layer paint)	x	x	x	x
Joints of welded parts (up to approx. 10 cm)				x

Plastic parts

Job-based labour time Operation	Paint levels 1	2	3 K-V	4 K-R	5 K-N
Moving the vehicle and object	x	x	x	x	x
Retrieving, cleaning and returning tools, equipment and auxiliaries	x	x	x	x	x
Procuring and preparing material	x	x	x	x	x
Putting on and taking off protective clothing	x	x	x	x	x
Setting up the spray booth	x	x	x	x	x
Removing paint residue	x	x	x	x	x
Removing adhesive residue	x	x	x	x	x
Flash-off and finishing	x	x	x	x	x

Component-based labour time Operation	Paint levels 1	2	3 K-V	4 K-R	5 K-N
Cleaning parts using silicone remover (repeatedly, if necessary)	x	x	x	x	x
Sanding the existing paint surface	x	x			
Sanding the damaged area		x			
Scuffing the primed surface of new part			x		
Sanding the new part			x	x	x
Part tempering				x	x
Applying pore filler (PU soft foam only)				x	
Applying adhesion promoter	-	x	x	x	x
Applying the body filler		x			
Sand down the body filler		x			
Applying the filler		x		x	x
Sanding the filled surface		x		x	
Cleaning the surface to be painted	x	x	x	x	x
Flexibilising the paint material	x	x	x	x	x
Applying the topcoat	x	x	x	x	x
Applying the clearcoat (double-layer paint)	x	x	x	x	x

Material costs calculation

The calculation of the paint material is based on so-called Material Points (MP).
As already mentioned, each paintable component is assigned specific surface values. These are used to determine a specific number of material points depending on paint type, paint level and material (metal or plastic). Each material point is given a price derived from the material calculation sheet. In this sheet, the materials required for painting are classified in different categories according to the quantity required and the corresponding costs. The sales prices calculated for the reference values are then used to determine the cost percentage per 100 Material Points by applying the specified multiplication factors. The total of these costs is then divided by 100 to obtain the price per Material Point. A further differentiation by paint types and paint levels is not necessary as these are considered in the calculation logic. The price per Material Point maintained in DAT-Eurolack is determined as a mean value of the individual consumables taken from the current price lists of the relevant paint material manufacturers. Accordingly, extra allowances for pearlescent and xirallic paints or matte clearcoats are considered in the material calculation.

Paintshops can calculate individual prices per MP or individual material indexes. To this end, the following procedure is recommended.

1.) Based on three representative paint jobs, the paintshop determines the actual job-based and component-based material costs.
2.) These costs are summed up (not including VAT).
3.) The shop-specific cost parameters (quantity discount, material overheads, risk/profit) are determined and summed up.
4.) The three paint jobs are then calculated using DAT-Eurolack (with index 100) in the Silver-DAT application.
5.) The two total costs are contrasted by dividing the paintshop's material costs by the calculated costs in order to obtain a specific value.
    This value is multiplied by the current price per MP to determine the shop-specific price per MP.
    This value is then multiplied by 100 to determine the shop-specific material index.

Note:
If exceptionally expensive paints are used (e.g. multi-effect lacquers), an additional one-off amount can be entered via the input field "Special Paint Surcharge".

A manually entered price per MP is applied if:

· no other value is provided in field EUR/MP,

· no cost rate EUR/hour (EUR/unit) including material has been applied,
· no lump-sum calculation is carried out in EUR or in percent of the labour costs.

The functions listed below are maintained.

· Lump-sum deductions
· Deductions for individual parts
· Manual items
· Overwriting values

Note:
For OD items, the material requirement must be specified in EUR if the calculation is to be carried out for EUR/MP. This does not apply for lump-sum amounts.

Spot painting

Spot painting has been created by the Institut für Fahrzeuglackierung (IFL) in conjunction with the task force of the publicly appointed and certified technical experts for vehicle paintwork of the painter and varnisher trade, the Federal expert group of vehicle painters in the Hauptverband Farbe, Gestaltung, Bautenschutz (BFL), the Allianz Zentrum für Technik (AZT) and the board for automotive paintwork and surface technology in the Zentralverband Karosserie und Fahrzeugtechnik (ZKF).
Spot painting is a repair method where the repair is limited to the damaged spot, without clearcoating the entire repair part.

Spot painting is a blending technique. It must be noted that the long-term behaviour of the blend edge between old and new clearcoat has not yet been scientifically analysed. There is a risk of the blend edges emerging when polishing the paint.

For technical and economical reasons, spot painting is **recommended** under the following conditions:
- Damage no larger than 3.5 cm, scratch marks on bumpers; with both damage types requiring only minimal finishing putty application
- Not more than one damage spot per body part
- Body part remains on vehicle
- Outer surfaces below bead/edge/bump strip
- Outer surfaces above bead/edge/bump strip, only if the damage is close to an edge
- Bumpers and all inner surfaces

Spot painting is **not recommended** under the following conditions:
- Two-tone paintwork (e.g. only single-tone feasible for bumpers)
- Panels coated with Powder Slurry 2
- Horizontal surfaces such as bonnets, lids and roof down the glazing bottom edge

Freedom of decision
- The painter decides, if possible in coordination with the customer, technical expert or insurance company, whether the repair is performed as a paint job of level 2 or 3 or as spot-painting job.

Scope of work:
- Moving the vehicle
- Identifying the colour tone
- Cleaning
- Masking neighbouring parts up to a width of approx. 1.5 m
- Polishing (if required)
- Sanding
- Applying body filler and sanding it down (if required)
- Priming
- Spraying basecoat, clearcoat and blending paint
- Finishing