Poor adhension

Poor adhesion generally refers to the phenomenon that a paint film deficient in the level of adhesion to the ground develops cracks, lift, or peeling immediately or days after drying due to an internal or external physical force. (For poor adhesion between paint films, see the description of “Interlayer Adhesion Failure.”)

Q1:

Are there any changes of workpiece?

A1:

The difference of workpiece make adhesion vary greatly, so be careful.

Q2:

Is the pre-treatment proper for the workpiece?

A2:

Perform pre-treatment that is suitable for the kind of workpiece.

If this is not possible, thoroughly degrease the workpiece followed by sanding or abrasive blasting.

(Specifically, in case of solvent degreasing, be careful not to retain the that no thin film of oil)

Q3:

Is the workpiece thick?

A3:

In case of baking paint system, insufficient baking results in poor adhesion.

Either raise the temperature of the drying oven or extend the baking time.

Q4:

Is there any oil, dust or silicone grease, etc. on the pre-treatment?

A4:

If the substance is oil or silicone grease, perform surface treatment again.

If it is dust, remove with an air blower or brush.

Q5:

Is the pre-treatment layer thick or rough?

A5:

Control the condition of pre-treatment solution appropriately.

Change to pre-treatment of a thin film type.

Q6:

Is the drying water condition after surface treatment good?

A6:

If not, ensure thorough draining and drying. In particular, be careful to avoid contamination of the draining air blower.

Q7:

Does the treated surface show yellow rust, a temper color or other mottling, or a dusty look?

A7:

Control the condition of solution for pre-treatment appropriately.

Check the angle and clogging of the spray nozzle .

If faulty, correct these condition.

Q8:

Do you perform coating immediately after pre-treatment process?

A8:

Perform coating immediately after pre-treatment.

If some time has elapsed, dry the surface again.

For those which are going to be left for some time after pre-treatment, consider using a shop primer.

(e.g. Vinilex 110 Active Primer)

Q9:

Is the paint film thicker than appropriate?

A9:

Achieve the specified film thickness.

Q10:

Are the paint drying conditions appropriate?

A10:

Perform the specified drying conditions.

Q11:

Does the paint film show yellowing or a low gloss and higher hardness than the standard one?

A11:

It is highly likely overbaking condition.

Adjust the baking temperature and time appropriately.

Poor adhension

Q12:

Is the paint film tacky?　Is its hardness lower than the standard hardness?

A12:

It is highly likely insufficient drying. Ensure the specified drying conditions.

Q13:

Is there change of the batch of paint?

A13:

Check whether there was a recent batch change or an old batch was used.

Q14:

Is the solubility of the thinner appropriate?

A14:

Use the specified thinner.

Use a thinner with high solubility.

Q15:

Did you stir the paint sufficiently?

A15:

Stir the paint sufficiently.

Q16:

Are there any contamination of another paint?

A16:

Check the appearance by using unopened paint.

Q17:

Is there any airborne dust or oil in the paint booth?

A17:

Improve the condition in the paint booth and introduce fresh air.

Q18:

Is the humidity in the paint booth higher than appropriate?

A18:

Raise the booth temperature or improve the ventilate condition.

Poor adhension

Q19:

Is it recoating paint?

A19:

Be careful about the baking temperature and the film thickness.
(Recoating generally results in degraded flexibility.)

Q20:

Is the coating system appropriate?

A20:

Either ensure the specified coating system or review the coating system.

Q21:

Are there any characteristic in the areas of poor adhesion?

A21:

Check for uneven surface treatment, variability of baking conditions (variability of drying conditions), and film thickness variability. Then, investigate the cause.

Q22:

Is the coated work placed in a hot and humid place or in a place rapidly changing condition.?

A22:

Place them in a low-humidity place with a relatively constant temperature.

Q23:

Is the mixing ratio appropriate (for two-component paints)?

A23:

An inappropriate mixing ratio results in poor adhesion due to insufficient hardness.
Keep an appropriate mixing ratio.