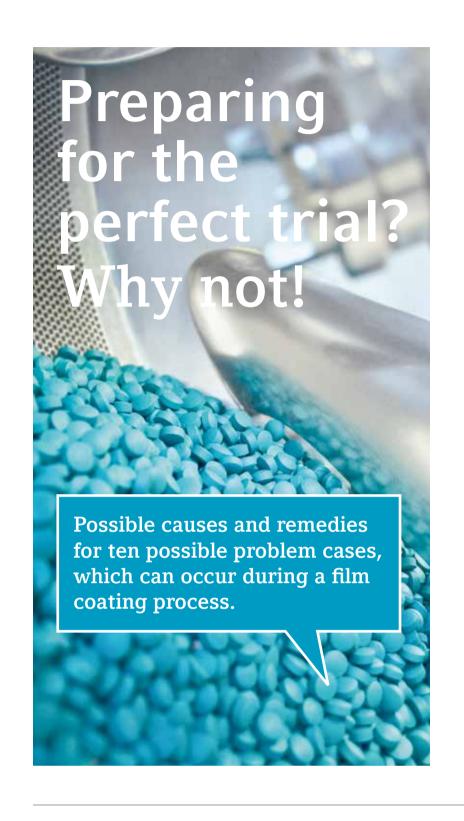
Troubleshooting Guide Film Coating



Orange Peel/Roughness Problem

Description

Rough or uneven surface of the tablets



Possible Reason

- Distance between nozzle and tablet bed is incorrect

- Spray angle is wrong
- Spray drying
- Sedimentation of the dispersion
- Viscosity/solid content is too high
- Core properties are inadequate (high friability)
- Atomizing air pressure incorrect (too low/high) (AA)

Remedy

- Increasing the spray rate
- Decreasing the drying capacity
- Reducing the atomizing air pressure
- Decreasing the viscosity - Optimizing the distance between
- nozzle and tablet bed

Logo Bridging

Filling of the logo or the break line



- Viscosity is too high
- Plasticizer content is too low
- Spray rate is too high
- Atomizing air pressure is not right (too low/high)
- Decreasing the viscosity
- Increasing the plasticizer content
- Reducing the spray rate
- Adjusting the spray pressure (increase or decrease)

Twinning

Two or more tablets stick together



- Overhumidification
- Process air volume is too low
- Tablet shape "planar" is not suitable
- Reducing spray rate
- Increasing the drying capacity
- Optimizing the form of the tablets to "biconvex"
- Using release agents in the formulation

Sticking and ripping off coating

Tablets rip off the coating from each other



- Pan speed is too low
- Air temperature is too low

- Increasing the pan speed

- Reducing the spray rate

- Increasing the inlet air temperature

- Increasing the process air volume

- Process air volume is too low
- Spray rate is too high
- Process is too damp

Scuffing

Gray layer forms on the tablet surface



- Titanium dioxide quantity is too high
- Interaction between drum wall and coating
- Reducing the titanium dioxide
- Spraying the drum prior to the trial

Capping Problem

Description

Detachment of the film surface



Possible Reason

- Hygroscopic core - Disintegrants are used

Remedy

- Using a subcoat

- Optimizing process parameters

Color variation I

Batch has heterogeneous color



- Coverage properties of the coating are insufficient - Solid content of the suspension is too high - Weight gain level is too low
- Batch quantity is too low
- Increasing the coverage properties of the coating (more pigments)
- Reducing the solid content
- Increasing the weight gain level

Color variation II

Individual tablets have heterogeneous color



- Application rate is too low
- API interacts with the coating material Low opacity
- Active ingredients diffuse from the core
- Overhumidification
- Increasing the weight gain
- Adapting the formula/changing the pigments
- Increasing the coverage properties
- of the coating formulation - Using a subcoat
- Increasing the tablet bed temperature

Peeling

Spalling of the film – possible cracking of the coating



- Tablet is swelling
- Plasticizer content in coating suspension is too low
- Tablet is too wet
- Tablet hardness is too low
- Tablet is outgassing
- Using a subcoat - Increasing the plasticizer content
- Spraying with drier conditions
- Increasing the film forming polymer

Friability

Tablet mass reduced due to abrasion



- Mechanical stress
- Tablets are too soft
- Tablets are too damp
- Pan speed is too high
- Reducing the pan speed - Optimizing the core formulation
- Spraying with drier conditions
- Using the interval "jog mode" while heating cores

More support? Why not! Contact us.

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