Runex
Baking Equipment & Coatings
AN AMERICAN PAN COMPANY

Handling Procedures for Baking Pans with RilonElast Coating

RilonElast coatings have excellent non-stick properties and excellent bonding to the substrate; however, exposure to excess heat, pressure, alkalinity/acidity, or steam and abrasion from other plant equipment can shorten the life of your pans. Following these handling requirements will minimize the risk of damaging your pans and maximize the life of your coated pans. Neglecting to follow these guidelines may reduce the coating life.

PLANT HANDLING

Conveyors and Indexers

- **Conveyor Friction** – Pans should not be static on moving metal conveyors as this will cause wear on the bottom of the pan and potentially weaken the pan material.
- **Pan Indexers** – Adjust pan indexing fingers to prevent scratching the coated surface or causing damage to the sheet, both of which will result in early coating failure. Padding the fingers with rubber will help reduce friction and wear.
- **Transfer Points** – Avoid pan stack transfer over uneven surfaces. Pan truck rollers or roller conveyors should be small in diameter (25 mm) and closely spaced to distribute load. Pan stack heights should be as low as practical for the bakery.

Release Agents

- **Use of Oil** – Oil or other release agents should not be used on pans coated with RilonElast.
- **Use of Toppings** – Any debris or film left from liquid or dry toppings can affect the integrity and life of the coating. If the coating fails to release as required, the pan should be cleaned according to the guidelines found in this document.

Proofer and Oven

- **Operating Temperatures** – RilonElast coating is suitable for frozen products and is applicable at temperatures from -40° through 260° Celsius (-40° through 500° Fahrenheit). The maximum recommended peak temperature is 280° Celsius (536° Fahrenheit). It is important to note that the higher the temperatures used, the shorter the coating life will be.
- **Steam** – Coated pans should not be exposed to high temperature water or steam for a prolonged period of time. Exposure to too much steam can cause the coating to depolymerize and, ultimately, result in premature failure of the coating.
- **Empty Pans or Moulds** – Empty pans should not be allowed in the oven as this can lead to a deterioration of the coating surface. If possible, shut off heat during oven stoppages to prevent long exposure to elevated temperatures.
- **Oven Heat** – Oven experts should check to ensure that oven heat flow is consistent throughout the oven and that there are not areas where the oven reaches temperatures above the maximum (noted in the *Operating Temperatures* point above) suggested for RilonElast coating.

Depanning

- **Air Release** – It is recommended that air nozzles or jets are used prior to the depanner with bun and roll type products. Air should be monitored to ensure it is strong enough to assist with depanning, but gentle enough not to damage the product or drive particulates into the coating.
- **Vertical Depanning** – For vertical depanning, adjust the depanner to lift the product out of the mould as straight as possible. Ensure that the depanner head and pan conveyer are traveling at the same speed.
- **Sweep Depanning** – For sweep depanning, make sure that the depanner has enough clearance from the moulds to ensure that the coating is never touched. A minimum clearance of five millimetres is suggested.

Stacking

- **Gentle Stacking** – Plant personnel must ensure that automatic/manual stacking and handling operations do not damage the pans or coating. Careless stacking, dropping, or throwing of pans should be avoided. In general, always maintain slow drop speeds and minimize the drop height and angle when stacking pans.
- **Magnetic Stackers** – Check the adjustment of the magnetic pick up on un-stackers to ensure no force is applied to the pan as this could damage the pan material.
- **Stack Heights** – Tins/trays must not be stacked too high. Tall pan stacks create worker safety issues when moved on pan trucks as the pans can become unstable and fall or cause other accidents.

Cleaning

- **Clean Before First Use** – It is recommended that coated bakeware be wiped with a wet cloth prior to first use. Note that you do not need to perform a "burn off" on any new bakeware.
- **Thorough Cleaning** – Incomplete cleaning allows ingredients and product to gather on the coated surface and will cause a degradation of the non-stick properties.
- **Pressure Cleaning** – When pressure cleaning, make sure that the spray jet nozzle is not too close to the tray as jolts of the air gun can scratch the tray's surface. After cleaning, drain off excess moisture and dry trays in the oven for 10-15 minutes at 180°C/356°F.
- **Brush Cleaning** – If brushes are used to clean pans, use soft brushes to avoid scratching the coating. Scratches in the coating can lead to permeation and subsequent corrosion of the substrate and loss of release properties.
- **Sink/Tray Washer** – Although it is not recommended, mild detergents can be used in combination with a sink or tray washer if absolutely necessary. Be sure that the detergent used has a low concentration and does not contain aggressive substances. If detergents are used, the pans must be rinsed thoroughly with clean water after washing and dried completely by running through an empty in oven for 10-15 minutes at 180°C/356°F.

STORAGE

- **Clean Pans Before Storing** – Long-term storage of pans waiting to be put back into production should be avoided without prior cleaning as deposits are harder to remove over a long period of time.
- **Environment** – Pans should not be stored for long periods of time in a non-controlled environment. Never store pans that are still wet. Pans that are washed or become wet should be thoroughly dried and stored in a dry location.
- **Back to Production** – Pans that have been stored in a cold environment should be allowed to warm to ambient temperature before being placed on the line. Condensation on cold metal can result in sticking due to excess moisture on the coated surface.