

## Oven Chain Lubrication For Safe Food Production

Oven chains need to operate freely and smoothly in food manufacturing facilities, but lubricating these chains is tricky, given the intense temperatures they are subjected to. Without good lubrication, chains harden due to heat and moisture, which causes corrosion and oxidation. This can eventually lead to the premature failure of oven chain pins and brushings, as well as introducing contaminants into food and thereby compromising food safety.

Only the most robust lubricant formulations can perform in this application, and these must also be food-grade lubricants, which means they need to be approved for incidental food contact (category H1 of food-safe lubricants).

Roan Van Der Walt, Sales Technician at Lubrication Engineers (LE) SA, explains that the problem is that most lubricants melt under the extreme heat ovens are subjected to, and then they don't stick to the hot oven chains. He says it's therefore necessary to use a specialised lubricant designed to stay on the oven chain, which minimises application intervals and increases chain longevity.

"There are two main ways to lubricate oven chains. You can use a liquid lubricant, or a solid lubricant that is suspended in a carrier fluid. Both of these options are designed to stop metal surfaces from coming into direct contact with one another, which cuts down on friction and wear and tear," Van der Walt says. "The LE Ovenworx™ H1 Syn Chain Lubricant (4061) has been formulated specifically to combat the demanding conditions oven chain applications require. In addition, it is approved for incidental food contact and contains no artificial dyes, making it a good choice for food manufacturing plants, such as bakeries or meat processing plants."

LE's 4061 lubricant is a liquid, and Van der Walt explains that this is because lubricants with solids suspended in a carrier fluid have to be stirred to keep the solids distributed within the carrier and prevent them from falling out of the suspension. "Solids can also build up over time, creating gunk around the application area, especially when over-applied," he says.

The LE 4061 lubricant is designed to penetrate all moving parts of the oven chain, enabling them to move freely, and can be applied to hot oven chains without interrupting operation. It also meets NSF H1 and Kosher Pareve requirements.

Van der Walt says that LE is now also able to supply the revolutionary RotaLube chain lubricator. "This offers an automated chain lubricating system that disperses lubricant at predetermined and controlled intervals," he says. "The design means it will not 'clog-up' and it always maintains accurate lubrication, whatever the condition of the chain and pins, loads and usage. This product has only recently become available in South Africa, and we believe we'll see good uptake as customers realise the benefits of an automated system that accurately lubricates each chain link, irrespective of chain speed."