



## Increase Production Output & Reduce Maintenance Costs with High-Temperature, Food-Grade Chain Oil

**Application: Tunnel Ovens for Molded Fiber Trays**  
**Location: USA**

### Challenge

A manufacturer of molded fiber trays for food packaging (like egg cartons) uses tunnel ovens to dry the trays at temperatures up to +300°C (+572°F). The conveyor chains that move the trays through the ovens are automatically lubricated by a system that detects the drive amperage and applies oil accordingly. The customer was consuming two drums of a competitor's oil a month to lubricate four ovens.

The customer tried to increase the production output by raising the oven temperatures. At increased temperatures the incumbent chain oil evaporated quickly, leaving behind carbon deposits that increased friction and wear on the chain. The customer tried several other lubricants but none of them performed well at these high temperatures. As carbon deposits built on the chain, the ovens had to be shut down for maintenance so the chains could be cleaned, a time-consuming process that lowered production output.

### Solution

As a result of the extreme high temperature requirement in these ovens, FUCHS recommended switching to CASSIDA CHAIN OIL XTE. CASSIDA CHAIN OIL XTE is a synthetic, high-performance ester-based oil which has been specially formulated for the food industry to lubricate drive and conveyor chains at elevated temperatures.

### Advantages

Reduced formation of burned solid residues

Excellent high-temperature performance up to +300°C (+572°F)

Certified by NSF for ISO 21469 and registered by NSF (Class H1). Kosher and Halal Certified

# CASE STUDY

**CASSIDA CHAIN OIL XTE** offers:

- High temperature performance up to +300°C (+572°F)
- Exceptionally low evaporation loss
- Reduced formation of burned solid residues
- Medium viscosity for easy application
- Excellent corrosion resistance
- Easy application by either brush, bath or by automatic lubrication systems
- Neutral odor and taste Solvent-free formulation to provide greater safety in use
- Excellent adhesive properties minimize “fling-off” in use

## Testing

Prior to sending the customer the product, FUCHS conducted laboratory testing to compare the performance of the incumbent lubricant to CASSIDA CHAIN OIL XTE. FUCHS’ lubricant displayed improved wear performance and less evaporation loss which helps maintain the lubricant barrier at high temperatures.

Test	COMPETITOR PRODUCT	CASSIDA CHAIN OIL XTE
Kinematic Viscosity @ 40°C	287 cSt	193 cSt
4 Ball Wear (Scar Diameter)	0.71 mm	0.38 mm
Evaporation Loss	4.6 %	1.7 %

## Results

After implementing CASSIDA CHAIN OIL XTE the customer reported:

- Reduced carbon build up resulting in less maintenance and downtime.
- Increased production, due to the ability to run the oven at elevated temperatures.
- Reduced oil consumption, due to lower evaporation and fling-off losses.
- Energy savings, due to less amperage draw and better lubrication.

## Savings

The customer estimated that by switching to CASSIDA CHAIN OIL XTE they:

- **Saved \$10,000 per year in the chain oil costs**
- **Reduced maintenance costs by ~ \$20,000 per year**
- **Increased their production output by 10%**

**FUCHS Promise: Technology that pays back!**



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