



Proven Precision Dry Lubrication

DICRONITE®



Plastic Molding

Functional Properties:

- Friction reduction via ultralow coefficient of friction ($\mu=0.030$).
- No effect on mold dimensions, film thickness maximum 0.5 microns.
- High temperature stability up to 538°C.
- Useful on both mold surfaces and moving/sliding parts.

Dicronite Dry Lubrication Benefits

Reduced Cycle Times:

- Up to 25% cycle time reduction demolding PP undercut screw caps.
- 15% cycle time reduction demolding EVA seal.
- 10% cycle time reduction demolding PP measuring cup closure.

Reduced Reject Rates:

- Force-demolded PP notched snap reject rate reduced plus an added benefit of 12% cycle time reduction.
- Force-demolded PP measuring cup closure reject rate reduced from ~1% to <0.1% by reduced jolting during demolding.

Reduced Maintenance Costs:

- 1 million cycles with no noticeable wear on 70N side loaded 3mm ejector pins.
- 10x ROI (cost reduction/application cost) on sliding parts used in shaping interior honeycomb contour for molded polyamide gear levers.

Reduced Filling Pressure:

- In molds with long flow distances and small wall thickness the filling pressure may be reduced, lowering flash production and energy costs, and extending mold life.

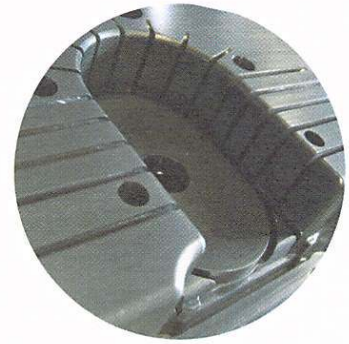


Dicronite is available throughout the world. For more information visit us at: www.dicronite.com or contact Lubrication Sciences International at 800.874.4319 • 408.834.7442 • inquiries@dicronite.com



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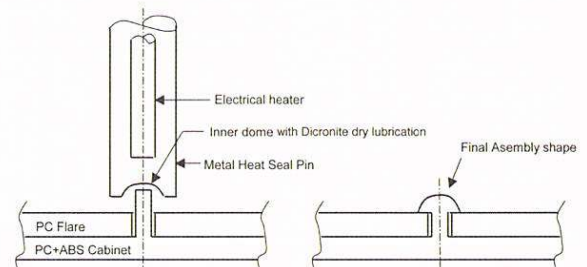
Plastic Molding Heat Seal Pins

Situation:

- A major manufacturer of LCD televisions is using a heat-sealed pin system to bond two pieces of the front cabinet panel. There are 10-15 heat seal pins per jig depending on panel size.
- The manufacturer encountered severe sticking of the resin to the heat seal pin resulting in waste and stoppage. Production was less than 50% of the goal.
- A Teflon coating was applied to attempt to improve the situation. With the Teflon coating:
 - Production increased but to only 60% of the production goal.
 - 2 stoppages per shift were required to manually remove waste resin and apply an additional mold release agent to the pins.
 - The Teflon coating required complete repolishing and reapplication every 2 to 3 weeks, at a cost of \$7,000.

Requirements:

- Operate at or above a temperature of 185°C continuously.
- Increase production at least 25% over current situation.
- Not change pin cavity geometry to ensure specifications.
- Net cost reduction relative to Teflon coating and downtime.



Results:

Dicronite dry lubrication is being applied to the cavity and sliding surfaces of the pins.

As a result:

- Production throughput has increased by over 28% and scrap rates have decreased.
- Production stoppages and secondary release agent usage have been eliminated.
- Higher operating temperatures (>185°C) are being used, allowing production staff to further optimize production.
- Coating operating costs were reduced by greater than 50%.

Dicronite dry lubrication has been incorporated into the facility-wide regular preventative maintenance program.

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