



CASE STUDY

Manufactured Since 1942 by: Apex Engineering Products Corporation



PLASTIC INJECTION MOLD CLEANING

One of the most important steps in the mold making process is a consistent and proper cooling cycle. This is due to the fact cooling rates can have a significant influence on the overall quality of the finished item. The cooling cycle must remain consistent throughout the entire production run to ensure all items are equal in quality.

The cooling process within plastic injection molding is critical to the quality of the mold, and may require about 50-75% of the total cycle time. From a production standpoint, this cycle time must be kept to a minimum in order to produce sufficient quantities on time. An optimum cooling process will also keep rejection rates to a minimum. Therefore, it is imperative to maintain clean, efficient cooling channels capable of removing heat within the set time. Over time, mineral deposits will fall out of the cooling water and will accumulate in the cooling passages. These deposits can cause poor product quality such as blistering, warping or twisting of part, thereby skyrocketing rejections and extending production time.

The solution for detrimental mineral deposits is **RYDLYME** Biodegradable Descaler. A diluted solution of **RYDLYME** can be circulated through all cooling passages to dissolve and flush the minerals in order to regain full cooling capacity.

CHALLENGE

Mold heat transfer and flow rates were found to be prohibiting acceptable quality at a large manufacturing facility.

SOLUTION

A diluted solution of 10 gallons of **RYDLYME** were circulated via a **10MDC** pump system through the mold's cooling passages for 30 minutes.

RESULTS

After the **RYDLYME** cleaning, flow rates increased an average of 13%. The mold is now prepared for installation and will be inspected thereafter. The rest of the facilities' molds are being scheduled for **RYDLYME** cleaning and the cooling tower loop is being sized as well.

BEFORE		AFTER	
CIRCUIT	GPM	CIRCUIT	GPM
1	32	1	34
2	29	2	31
3	29	3	30
4	18	4	20
5	13	5	15
6	13	6	15
7	15	7	19
8	11	8	15
AVERAGE	20.0	AVERAGE	22.4



800.451.6291
630.820.8888

1241 Shoreline Drive
Aurora, IL 60504

info@ApexEngineeringProducts.com
www.ApexEngineeringProducts.com