

# TECHNICAL DATA SHEET

## QH DIE SLICK™ AD400 SERIES DIE RELEASE AGENTS – WATER-BASED

QH DIE SLICK™ AD400 series products are enhanced high performance water-based die lubricants for spray processes. These products provide premium solder resistance and release properties, while reducing die build-up.

Products in this range are formulated with unique and innovative Smart Polymer (SP) technology, a thermodynamically reactive polymer system that forms a tough barrier on hot areas of the die, while lightly coating cooler, less demanding areas. Products also contain an active wax component that enhances the performance of the Smart Polymer, leading to reduced product use and improved lubricity to produce bright and clean castings, and eliminates the need for over-spraying in hot die areas.

### Applications

QH DIE SLICK™ AD400 series products are water-based high pressure die casting lubricants designed to offer maximum benefits when used diluted in water.

Products in this range are formulated for excellent solder resistance and die cleanliness when used with optimized spray processes.

These versatile products are ideal for aluminum and magnesium high pressure die casting operations.

### Recommendation for Use

QH DIE SLICK™ AD400 series products are designed to be used in diluted form and applied to the die face before each casting cycle, with water to lubricant dilution ratios typically in the range 80:1 to 200:1. Application of the lubricant can be tailored to the specific needs of each die casting facility to ensure optimum amount of product is applied.

To maximize the benefits of QH DIE SLICK™ AD400 Series lubricants, Quaker Houghton recommends use of one of its high specification QH FLUIDCAST™ lubricant mixing and delivery systems to ensure accurate control of die lubricant concentration and application quantity, improving process consistency, efficiency and part quality.

### Concentration Control

QH DIE SLICK™ AD400 series products perform optimally within the established concentration range determined for your operation. Regular monitoring of product dilution ratio in water is recommended to ensure effective

### Benefits

- Contains Smart Polymer technology, provides optimum protection for challenging areas without building up on the die face
- Maximum protection on all areas of the die, prevents solder and minimizes die maintenance
- Precision application, formulated for enhanced performance with optimized spray processes
- Contains active wax component to enhance Smart Polymer performance
- Castings are bright and shiny, does not cause paint or coating problems

application. QH FLUIDCAST™ application equipment offers automated monitoring and control capabilities.

For manual monitoring, Quaker Houghton recommends the use of a handheld colorimeter in conjunction with a standard calibration curve for rapid determination of product dilution ratio. Please consult your Quaker Houghton representative for assistance or calibration samples.

### Health, Safety and Handling

Please consult the Safety Data Sheet (SDS) for information on storage, safe handling and disposal. The conditions or methods of handling, storage, use and disposal of the product are beyond our reasonable control – we assume no liability for any ineffectiveness of the product or any injury or damage, arising out of or in connection with these conditions. This product has a shelf life of 12 months, and it should be stored in a tightly sealed container in temperatures between 41°F (5°C) and 95°F (35°C). Do not freeze.



# QH DIE SLICK™ AD400 SERIES

## DIE RELEASE AGENTS - WATER-BASED

### Properties

The series comprises a range of lubricants with varying amounts of lubricating power, to suit a wide range of customer needs.

Series consists of the following products:

PROPERTY	AD-400	AD-410	AD-420	AD-430	AD-440	AD-450	AD-460	UNIT
Appearance	White	White	White	White	White	White	White	
Odor	Mild	Mild	Mild	Mild	Mild	Mild	Mild	
% Active content	47.00	40.00	35.00	30.00	25.00	20.00	15.00	%
Specific Gravity at 15°C	0.920	0.970	0.975	0.978	0.980	0.983	0.987	g/cc
Density at 15°C	7.677	8.095	8.136	8.161	8.178	8.203	8.237	lbs/gal
Viscosity	1600-1700	230-260	55-60	3-7	2-6	1-4	1-4	cP
Boiling Point	212   100	212   100	212   100	212   100	212   100	212   100	212   100	°F   °C

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