



CITGO® Autokut® AS Series

OVERVIEW

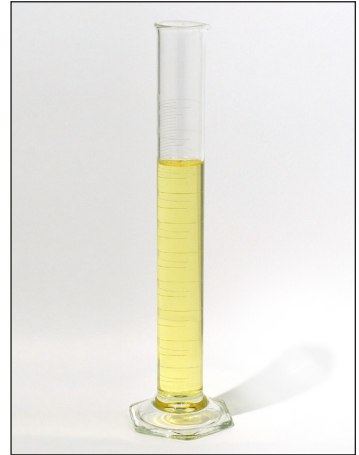


- Transparent, highly active metal removal fluids designed for severe machining operations.
- Available in four different viscosity grades to meet the requirements of a modern engineering facility.

FEATURES & BENEFITS

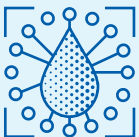


- Contains active sulfur and other anti-weld components.
- High lubricity.
- Low odor.
- Free of chlorinated paraffins.
- Light color aids visibility of operation.
- Contain a stable oil mist suppressant to improve working environment and worker safety.
- Improved worker acceptability.
- Improved productivity and lower operation costs.
- Excellent surface finish at high feeds and speeds.
- Reduction in disposal costs and reduced risk of rust.



NOTE: Not recommended for yellow or non-ferrous metals

APPLICATIONS



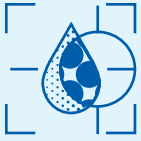
- Designed for machining operations involving alloyed, stainless and chrome steels.
- Recommended for severe machining operations such as broaching, tapping, and cold-heading.
- Lower viscosity grades are used for higher speed, lighter duty applications and higher viscosity is used for slower speed, heavier duty operations.



Material Compatibility

	Recommended	Highly Recommended
P - Steels	Recommended	
M - Stainless Steel	Highly Recommended	
K - Cast Iron	Not Recommended	

PROPERTIES



Typical Properties for CITGO Autokut AS Series:

Grade	AS 15	AS 32	AS 46	AS 68
Material Code	639430001	639432001	639433001	639434001
Gravity, ASTM D4052, °API	33.6	31.1	29.7	28.2
Gravity, Specific, ASTM D1298, 60/60 °F	0.857	0.870	0.878	0.886
Density, lb/gal	7.2	7.3	7.3	7.4
Flash Point, COC, ASTM D92, °F (°C)	349 (176)	363 (184)	356 (180)	356 (180)
Viscosity				
cSt at 40°C	16.6	30.7	45.5	65.4
cSt at 100°C	3.8	5.6	7.1	8.9
SUS at 100°F	89	158	245	338
SUS at 210°F	39	45	50	56
Color, ASTM D1500	1.0	1.5	1.5	1.5
Pour Point, ASTM D97, °F (°C)	-45.4 (-43)	-22 (-30)	-14.8 (-26)	-14.8 (-26)
Copper Corrosion, ASTM D130, 3 hrs at 212°F	4	4	4	4
Active Sulfur	Yes	Yes	Yes	Yes
Phosphorus	No	No	No	No
Lubricity Additive	Yes	Yes	Yes	Yes

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