



CITGO® Autokut® IS Series

OVERVIEW

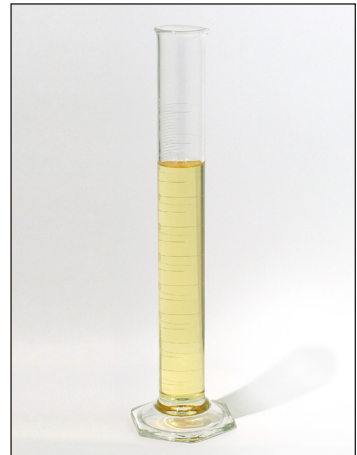


- Non-staining metal removal oils designed for machining both non-ferrous and ferrous metals.
- Available in two viscosity grades to meet the requirements of a modern engineering facility; the lower viscosity grade is used for lighter duty applications at higher speeds, and the higher viscosity is used for heavier duty operations at slower speeds.

FEATURES & BENEFITS



- Excellent lubricity and mild extreme pressure (EP) additives.
- Compatible with most metals.
- Chlorine-free.
- Light color aids visibility of operation and is non-staining on ferrous and non-ferrous metals.
- Contain a stable oil mist suppressant to improve working environment and worker safety.
- Improved productivity and lower operation costs.
- Benefits environmental needs and reduces disposal costs.



APPLICATIONS

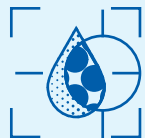


- CITGO Autokut IS 15 is a low-viscosity oil, primarily recommended for machining operations on aluminum and magnesium and their alloys. Also suited for deep drilling and the honing of steel, cast iron, and alloyed copper.
- CITGO Autokut IS 46 is designed for more severe duty applications and contains a high level of non-staining EP agent to permit its use over a wide variety of materials and over a wide range of cutting depths, feeds and speeds. Can also be used in turning, sawing, milling, and drilling of non-ferrous metals, some plain carbon steels, and free-machining steel alloys.



Material Compatibility

	Recommended	Highly Recommended
P - Steels	Yes	Yes
M - Stainless Steel	Yes	Yes
K - Cast Iron	Yes	Yes
N - Non-ferrous	Yes	Yes

PROPERTIES**Typical Properties for CITGO Autokut IS Series:**

Grade	IS 15	IS 46
Material Code	639440001	639443001
Gravity, ASTM D4052, °API	31.9	31.1
Gravity, Specific, ASTM D1298, 60/60°F	0.866	0.870
Density, lb/gal	7.1	7.3
Flash Point, COC, ASTM D92, °F (°C)	361 (183)	428 (220)
Viscosity ASTM D445		
cSt at 40°C	18	45
cSt at 100°C	3.9	6.9
SUS at 100°F	95	230
SUS at 210°F	39	49
Color, ASTM D1500	0.5	0.5
Pour Point, ASTM D97, °F (°C)	-44 (-42)	-6 (-21)
Copper Corrosion, ASTM D130, 3 hrs at 212°F	1B	1B
Active Sulfur	No	No
Phosphorus	No	No
Lubricity Additive	Yes	Yes

CITGO and Autokut are registered trademarks of CITGO Petroleum Corporation. All other registered trademarks or trademarks are the property of their respective owners. Values shown are typical values only and do not constitute a specification. The information contained herein is subject to change without notice.