

ECOCOOL

Fluids for Automotive and Aerospace Alloys and Hard Metal Machining



LUBRICANTS.
TECHNOLOGY.
PEOPLE.



FUCHS

ECOCOOL 810 and ECOCOOL 820

Two field proven fluids for difficult alloys. Accepted by European and North American automotive and aerospace industry customers during two years of critical evaluation.

Range of Metals and Processes

| | Light Machining or Grinding | Heavy Machining | Corrosion / Stain Protection | High Pressure Delivery |
|---------------------------------------|-----------------------------|-----------------|------------------------------|------------------------|
| Titanium | ECOCOOL 810 | ECOCOOL 810 | YES | YES |
| Inconel | ECOCOOL 810 | ECOCOOL 810 | YES | YES |
| Hastalloy | ECOCOOL 810 | ECOCOOL 810 | YES | YES |
| Stainless 300, 400 | ECOCOOL 820 | ECOCOOL 810 | YES | YES |
| Carbon Steel | ECOCOOL 820 | ECOCOOL 820 | YES | YES |
| Aluminum Castings: 3xx Series | ECOCOOL 820 | ECOCOOL 820 | YES | YES |
| Aluminum Extrusions: 5xxx, 6xxx, 7xxx | ECOCOOL 820 | ECOCOOL 820 | YES | YES |

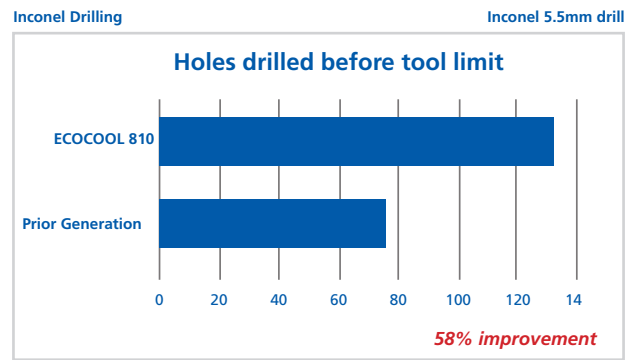
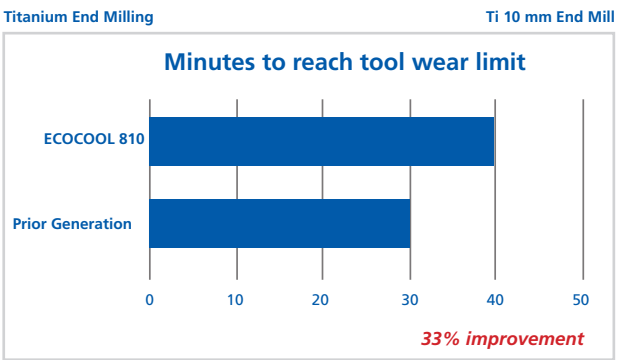
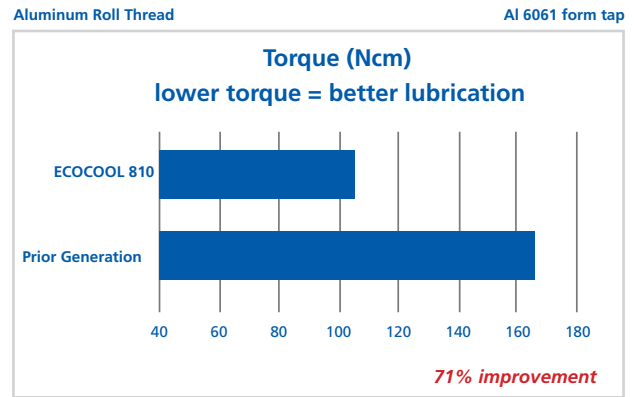
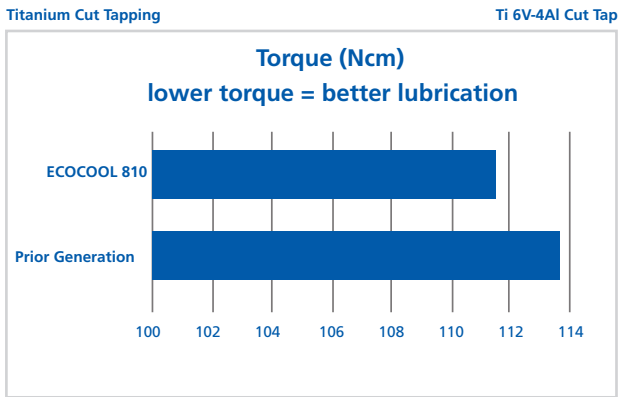
Industry Leading Metalworking Process Lubricants

| Product | Tap Torque, Mean Plateau, Ncm 1018 ST | Tap Torque, Mean Plateau, Ncm 6061 Al | Notes |
|--------------|---------------------------------------|---------------------------------------|--|
| ECOCOOL 810 | 269 | 175 | Best in class on both metals |
| ECOCOOL 820 | 312 | 188 | Outstanding performance on Al 6061 |
| ECOCOOL 711 | 295 | 239 | FUCHS Benchmark for Automotive Al and Steel Grades |
| ECOCOOL 7830 | 295 | 239 | FUCHS Benchmark for Aerospace Al Grades |
| Competitor B | 296 | 238 | |
| Competitor C | 307 | 239 | |
| Competitor H | 294 | 239 | |
| Competitor M | 346 | 244 | |
| Competitor Y | 351 | 228 | |

Doing More with Less: A generational improvement in the EHS footprint

| Product | Boron | Chlorine | Sulfur | Secondary Amine | Formaldehyde Release Biocide |
|--------------|-------|----------|--------|-----------------|------------------------------|
| ECOCOOL 810 | NO | NO | NO | NO | NO |
| ECOCOOL 820 | NO | NO | NO | NO | NO |
| ECOCOOL 711 | YES | YES | YES | YES | YES |
| ECOCOOL 7830 | YES | YES | NO | YES | YES |

ECOCOOL 810: Performance Spectrum



What our customers are saying:

"No odor when we charged the machine"

"Excellent tramp oil rejection"

"Machine is clean, no residues?"

"No bacterial growth"



"No foam"

"Good detergency"

"Improved tool life over incumbent coolant"

"Better surface finishes"

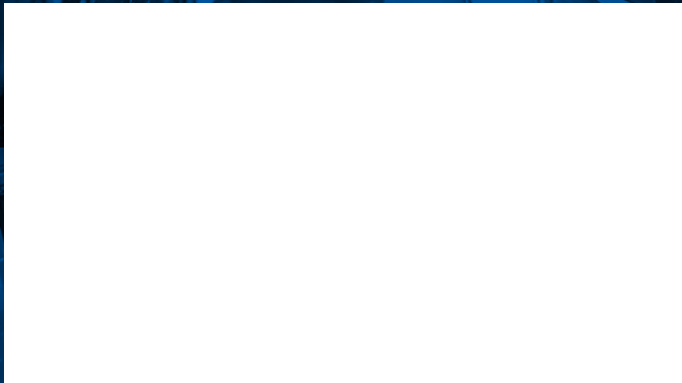
FUCHS Lubricants

Innovative lubricants need experienced application personnel

Every lubricant change should be preceded by expert consultation on the application in question. Only then the best lubricant system can be selected. Experienced FUCHS sales and technical personnel will be glad to advise on products and process optimization for the application in question.



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