



Advancion

Metalworking Fluid Additives

Specialty Additive Selection Guide

Essential inputs. Extraordinary outcomes.™

Extended Fluid Life. Enhanced Corrosion Control. Improved Environmental Profile.

Advancion offers an unmatched portfolio of globally registered multifunctional additives that meet the most complex formulating and regulatory requirements for next-generation metalworking fluids. From readily biodegradable and low-secondary-amines, to high-efficiency neutralization, multi-metal compatibility and extended fluid life, Advancion additives help improve the performance, profile and productivity of metalworking fluids, even in the most demanding environments.

Key | Good + | Better +++ | Best +++++

| Multifunctional Neutralizing Additives | | | | | | | | | | | | | | | | | | | |
|--|---------------------|-------------------------|------------------|------------------------|---------------------|-------------------|-----------------|-----------------|----------------------|--------------|----------------|-------|-------|-------|-----------|-------------|---------|-------------|--------|
| Product | Physical Properties | | | Performance Attributes | | | | | Chemical Inventories | | | | | | | | | | |
| | pKa | Secondary Amine Content | Water Solubility | pH Neutralization | Cast Iron Corrosion | Aluminum Staining | Fluid Longevity | Cobalt Leaching | USA (TSCA) | Canada (DSL) | Europe (Reach) | Korea | Japan | China | Australia | New Zealand | Mexico* | Philippines | Taiwan |
| CORRGUARD™ SELECT 95 | 9.9 | <5% | 100% | +++++ | ++ | +++ | ++ | ++++ | | | ● | ● | ● | ● | | | ● | | |
| CORRGUARD™ SELECT LSA | 9.9 | <0.75% | 100% | +++++ | ++ | +++ | ++ | ++++ | | | ● | ● | ● | ● | | | ● | | |
| CORRGUARD™ 95 | 9.8 | 5 - 7% | 100% | +++++ | ++ | ++ | ++ | ++++ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| CORRGUARD™ LSA | 9.8 | <0.75% | 100% | +++++ | ++ | ++ | ++ | ++++ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| CORRGUARD™ FLEX | 9.5 & 8.8 | <1% | 100% | +++ | ++++ | ++++ | ++++ | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| CORRGUARD™ FS | 9.7 | <7% | 100% | ++++ | +++ | +++ | +++ | +++ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| CORRGUARD™ FS LSA | 9.7 | <2% | 100% | ++++ | +++ | +++ | +++ | +++ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| CORRGUARD™ EXT | 9.8 | <2% | 5% | ++ | +++++ | +++++ | +++++ | +++ | ● | ● | ● | ● | ● | ● | ● | | ● | | ● |

| Multifunctional Emulsifiers | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---------------------|-------------------------|------------------|------------------------|---------------------|---------|-------------|--------------|-------------------|----------------------|--------------|----------------|-------|-------|-------|-----------|-------------|---------|-------------|--------|
| Product | Physical Properties | | | Performance Attributes | | | | | | Chemical Inventories | | | | | | | | | | |
| | HLB | Secondary Amine Content | Water Solubility | Hard Water Stability | Cast Iron Corrosion | Foaming | Lubrication | Film Forming | Aluminum Staining | USA (TSCA) | Canada (DSL) | Europe (Reach) | Korea | Japan | China | Australia | New Zealand | Mexico* | Philippines | Taiwan |
| CORRGUARD™ SI | N/A | <2% | Dispersible | | +++++ | | +++ | +++++ | +++++ | ● | | | ● | | ● | | ● | ● | | ● |
| CORRGUARD™ SA-100 | N/A | <1% | Dispersible | ++++ | ++++ | +++ | ++++ | ++++ | +++ | ● | ● | | ● | | | | | ● | | |
| ALKATERGE™ E | <5 | N/A | Insoluble | +++ | + | ++ | + | +++ | | ● | ● | ● | ● | | | ● | ● | ● | | |
| ALKATERGE™ T | <5 | N/A | Insoluble | +++ | + | ++ | + | +++ | | ● | ● | | ● | ● | | ● | ● | ● | ● | ● |

Specialty Additives to Address Specific Formulation Needs

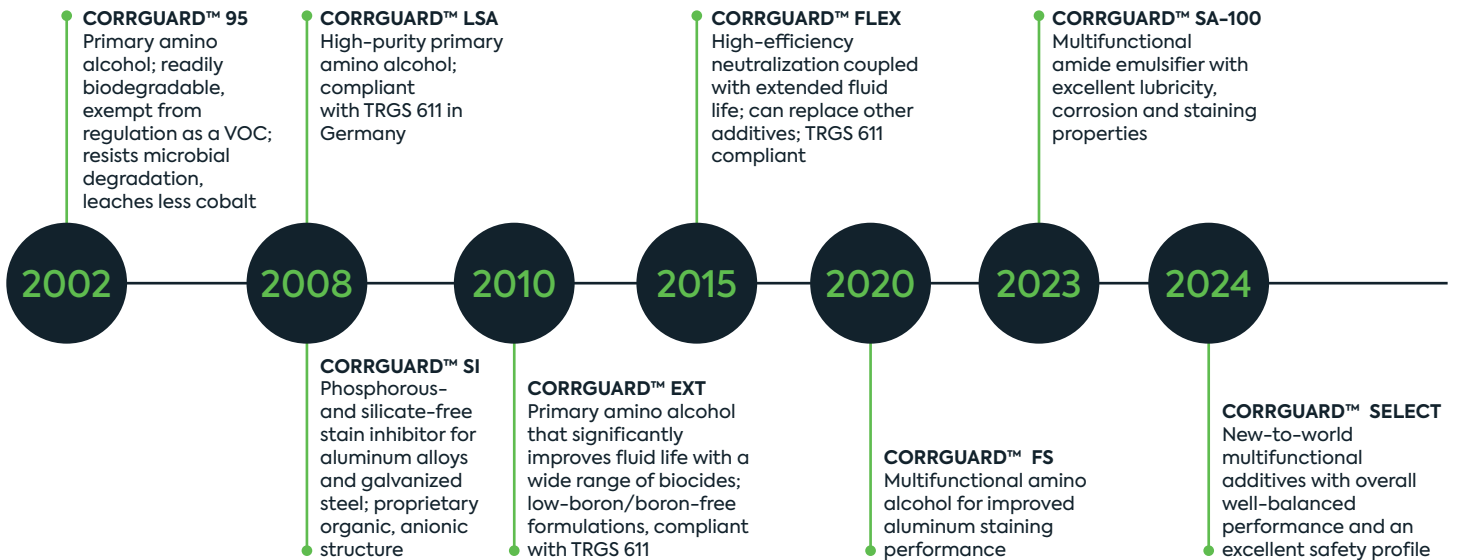
Advancion offers specialty amino alcohols that help meet specific performance requirements for metalworking fluids, such as excellent microbial resistance to extend fluid life, good multi-metal compatibility, and low secondary amines.

| Product | Physical Properties | | Performance Attributes | | | Chemical Inventories | | | | | | | | | | |
|-----------|---------------------|------------------|------------------------|-----------------|-------------------------|----------------------|--------------|----------------|-------|-------|-------|-----------|-------------|---------|-------------|--------|
| | pKa | Water Solubility | Vapor Phase Corrosion | Odor Scavenging | Formaldehyde Scavenging | USA (TSCA) | CANADA (DSL) | EUROPE (REACH) | KOREA | JAPAN | CHINA | AUSTRALIA | NEW ZEALAND | MEXICO* | PHILIPPINES | TAIWAN |
| AEPD™-85 | 8.8 | 100% | | +++++ | +++++ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| DMAMP-80™ | 10.2 | 100% | +++++ | + | + | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

Supporting Growth Through a Sustainable Approach

Over our 70-year history, we've gained deep expertise and experience that enables us to continuously develop solutions that help the best metalworking fluids perform better. We also have maintained an enduring commitment to supporting the sustainable growth of the metalworking fluid market through innovation that delivers value to our customers, our partners and for Advancion.

A History of Sustainable Innovation



Our toolkit of metalworking fluid additives is designed to address the latest trends and regulatory requirements that impact not only formulators and manufacturers, but also operators and end users.

Health And Safety

- Low boron
- No formaldehyde
- Low secondary amines

Environment

- Broadly registered
- Globally compliant
- Readily biodegradable in the environment

Productivity and Profitability

- Multifunctional pH buffering
- Extended fluid life when used with registered biocides
- Works across a broad range of formulation platforms

Product Stewardship

Through our investments in application and new product development, we have a deep understanding of where our chemistries are (and can potentially be) used to actively address global trends in Life Sciences, Beauty and Personal Care, and other essential industries to help make our lives healthier, and more sustainable and comfortable. To help ensure that Advancion products are not used in ways for which they are not intended, Advancion personnel will assist customers in dealing with environmental and product safety considerations. Before handling any of the products, obtain available product safety information including the Safety Data Sheet(s) and take the necessary steps to ensure safety of use. For assistance, product Safety Data Sheets, or other information, please visit advancionsciences.com or contact us at info@advancionsciences.com.

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