

# FORMULA 515DD

## **Double-Duty Cleaner Degreaser**

An Economical,
One-Product
Solution Effective
on a Wide-Range of
Soils and Substrates



Immersion
& Ultrasonic
Detergent
Spray Wash
Detergent

Double-duty cleaner degreaser is tough enough for immersion & ultrasonic tanks ... yet low foaming for spray wash systems. This one-product solution is effective on a wide-range of soils and substrates. Plus it's economical.

- Universal Parts Cleaner One-Product for Both Immersion & Ultrasonic and Spray Wash Cleaning
- Powerful Degreaser Cleans Most Soils at 5-10% Solution
- Versatile Cleans a Wide Range of Soils & Substrates
- Economical

#### **Benefits**

- Water-Based, Dilutable Formulation For Environmental Safety & Economy of Use
- Water-Dilutable Formulation For Environmental Safety & Economy of Use
- Extends Bath Life Creates Labor Savings & Reduces Costs
- In-Process Corrosion Control
- Low Foaming
- Free Rinsing Cleaner Parts & Simplified Cleaning
- Low Evaporation Rate

#### **Greener 9 Ways**

More user and environmentally friendly, reducing costly paperwork

- 1. No Ozone Depleting Substances
- 2. No Global Warming Potential
- 3. Moderate Caustic
- 4. No Glycol Ethers
- 5. No Chelants
- 6. No Butyl
- 7. Recycles Easily
- 8. Biodegradable
- 9. RoHS Compliant

**Industry Approvals & Conformance** 

USDA A1 (LG)



### **Performance Properties**

#### **Substrates**

Formula 515DD is non-corrosive and non-staining to a wide variety of alloys. Some selected categories of materials compatible with Formula 515DD include\*:

Ferrous Metals: Carbon Steel • Stainless Steel

Non-Ferrous Metals & Alloys: Aluminum • Brass\*\* • Chrome Plating • Copper (Alloys & Plating)\*\* • Magnesium & Magnesium Alloys\*\* • Tin • Titanium & Titanium Alloys

Plastic & Composites: Epoxy Resin • High Density Polyethylene/HDPE • Nitrile Butadiene Rubber • Polypropylene/PP • Polyvinyl Chloride/PVC • Vinyl

Other: Concrete

#### Soils

Formula 515DD removes a wide range of organic and inorganic soils. Some categories of soils that can be removed with Formula 515DD include\*:

Buffing Compounds • Carbon • Coolants • Dirt (Particulate) • Fat • Flux • Grease • Oil (General, Cutting, Drawing Compounds, Fingerprints, Forming, Honey, Hydrocarbon, Lubricants, Self Emulsifying, Silicone /Greases, Sulfur/Chlorinated, Water-Soluble) • Rubber & Tire Marks • Tar & Pitch

\*Material compatibility should always be confirmed via testing with specific substrates under specific cleaning conditions. \*\*Minor discoloration may occur under certain conditions.

#### **Use Recommendations**

System	Immersion & Ultrasonic Tanks	Spray Wash (Batch or Continuous)
Dilution	5-20%, typically used at 10%	3-15%, typically used at 5%
Cleaning Temperature Range	120-170°F (49-77°C), typically used at 130- 150°F (54-66°C) For copper alloys, do not exceed 135°F (57°F)	135-170°F (57-77°C), typically used at 150°F (66°C)
Cleaning Duration	5-30 minutes: typical parts are clean in 10 minutes	3-10 minutes: typical parts are cleaned in 7 minutes
Rinse Temperature	A heated rinse may improve overall performance. Some OEM process specifications may require a heated rinse.	A heated rinse may improve overall performance. Some OEM process specifications may require a heated rinse.
Rinse Water Quality	Recommended conductivity of final rinse water:  • Precision Cleaning: ≤ 500 microsiemens  • Gross Cleaning: > 500 microsiemens	Recommended conductivity of final rinse water:  • Precision Cleaning: ≤ 500 microsiemens  • Gross Cleaning: > 500 microsiemens

<sup>•</sup> To avoid spotting, it is best if the parts remain wet between processing stages.

#### **Typical Chemical Characteristics**

Physical Form	Liquid	
Color	Blue-Green	
Odor/Fragrance	Mild	
Viscosity	Water-thin	
Weight	9.11 lbs/gal (1.092 g/ml)	
pH of Concentrate	13.2	
pH of Working Solution	12.1	
Flash Point	> 212°F (PMCC)	
Foaming Tendency	Low	
Calculated V.O.C	1.45% (15.83 g/L)	
Freeze/Thaw	Reusable after thawing & remixing	

#### **Concentration Verification**

Brulin Titration Kit (Prod. No. XTRKIT)		
Sample Size:	5 mL	
Titrant:	1.0 N HCI Solution	
Indicator:	Bromophenol Blue	
Concentration %:	Drops Titrant x 0.66	
Precision Titration		
Sample Size:	50 mL	
Titrant:	.5 N HCl Solution	
pH Endpoint:	pH 3.8	
Concentration %:	mLs titrant X 0.8273	

PRODUCT NUMBER





#### **Packaging**

SHIPPING: PACKING GROUP II

STORAGE: Store in well-ventilated areas at temperatures between 40-120°F (4-49°C). The recommended shelf life of this product is 18 months.

DISPOSAL: Biodegradable. Pretreat by skimming and/or filtering. Final sewerability is determined by the municipal sewer district covering the plant location.

#### AVAILABILITY:

- Bulk up to 5,000 Gal (~19,000L)
- 5 Gal (19L) 55 Gal (208L) 275 Gal Tote (1,041L)

Companion Products
Brulin Copper Protector (Product No. 431009) **Ultra-Concentrated Corrosion Inhibitor** 

RP 800 (Product No. 421001) **RTU Oil-Based Corrosion Inhibitor** 

RP 802 (Product No. 422001) Dilutable Oil-Based Corrosion Inhibitor