

## DARACLEAN<sup>®</sup> 235 AQUEOUS CLEANING SOLUTION

### GENERAL DESCRIPTION

DARACLEAN<sup>®</sup> 235 is a low-foaming, all-purpose neutral cleaning solution that is an excellent general cleaner for use on a broad spectrum of soils.

### COMPOSITION

DARACLEAN<sup>®</sup> 235 is formulated with a blend of surfactants, emulsifiers, and corrosion inhibitors. It is safe to use with most metals and is non-aggressive towards aluminum, brass, copper, titanium, and zinc alloys.

### SOIL REJECTING PROPERTIES

DARACLEAN<sup>®</sup> 235 possesses excellent soil-rejecting qualities. After soils are lifted from part surfaces they are suspended in the cleaner for a short time. Over time, solids will settle out, and oil and grease droplets will coalesce and float on the surface of the solution. Removal of soils can easily be accomplished using filters or skimmers as necessary. This action extends the useful life of DARACLEAN<sup>®</sup> 235 much further than emulsion-type cleaning solutions.

### APPLIATION METHOD

DARACLEAN<sup>®</sup> 235 is designed to be used with immersion, spray, and ultrasonic applications.

Cleaning Method	Concentration	Temperature	Typical Duration
Immersion	5 - 30%	80 - 180°F (27 - 82°C)	2 - 30 Minutes
Ultrasonic	5 - 30%	80 - 180°F (27 - 82°C)	2 - 30 Minutes
Spray	1 - 12% 2 - 5 % Recommended	130 - 180°F (54 - 82°C)	0.25 - 3 Minutes
Steam	1 - 12 %	150 - 200°F (66 - 93°C)	1 - 5 Minutes

*Operating parameters should be optimized for each individual application.*

### SPECIFICATION COMPLIANCE

DARACLEAN<sup>®</sup> 235 has been tested and certified to meet and exceed Aerospace industry specifications for aqueous and alkaline cleaners. OEM Certifications include Boeing and Douglas. Independent laboratory testing has confirmed that DARACLEAN<sup>®</sup> 235 complies with AMS 1526 (except dichromated magnesium), ARP 1755, and ASTM F-331, F-483, F-484, F-485, F-502, F-519, F-945, F-1110, and F-1111.

### PACKAGING

5 Gallon Pail (18.9 Liters) Part Number: 01-6050-40  
55 Gallon Drum (208 Liters) Part Number: 01-6050-45

## DARACLEAN® 235 PROPERTIES

pH Level	13-14	Caustic	Higher pH cleaners are more aggressive and will clean tougher soils but high pH levels can also corrode or etch soft metal surfaces.
	11 - 13	High Alkaline	
	9 - 11	Alkaline	
	7 - 9	Neutral	
Foam Level	High		High foam levels will penetrate cracks and holes better but foam cannot be tolerated in spray applications.
	Moderate		
	Low		
Silicates	Yes	No	Silicates prevent corrosion of metal surfaces but can form mineral films at high temperatures.
Phosphates	Yes	No	Phosphates provide excellent cleaning action but are subject to environmental regulations.
Hard Water tolerance	High		Hard water can suppress cleaning actions. Some cleaners are formulated to counteract hard water effects.
	Moderate		
	Low		
Aerospace Compliant	Yes	No	See Specification Compliance.
SCAQMD Certified	Yes	No	VOC (10%) 4.2 g/L

 Correct Application

## CONCENTRATION VERIFICATION

### HACH Alkalinity Titration Kit\*

Titrant	<b>0.5N Sulfuric Acid</b>
Indicator	<b>Bromcresol Green-Methyl Red</b>
Concentration %	<b>Titrant drops × 2.15</b>

\* Ordering info: **Alkalinity Test Kit, Model AL-TA; Product # 2314500; Mfr. Hach Company; Website [www.hach.com](http://www.hach.com)**

## DARACLEAN® 235 APPLICATIONS

Excellent	••••	Aluminum	Anodized Aluminum	Brass & Bronze	Carbon Steel & Cast Iron	Copper	Magnesium	Nickel & Superalloys	Plating (Cd, Cr, Ir, Pt)	Stainless Steel	Titanium	Zinc
Good	•••											
Fair	••											
Poor	•											
Not Recommended												
Water-Soluble Oils	••••	••••	••••	••••	••••	•••		••••	••••	••••	••••	••••
Machining Fluid	••••	••••	••••	••••	••••	•••		••••	••••	••••	••••	••••
Synthetic Coolants	••••	••••	••••	••••	••••	•••		••••	••••	••••	••••	••••
Medium Weight Oils	••••	••••	••••	••••	••••	•••		••••	••••	••••	••••	••••
Lube Oils	••••	••••	••••	••••	••••	•••		••••	••••	••••	••••	••••
Buffing Compounds	•••	•••	•••	•••	•••	••		•••	•••	•••	•••	•••
Motor Oils	•••	•••	•••	•••	•••	••		•••	•••	•••	•••	•••
Heavy Petroleum Oils	•••	•••	•••	•••	•••	••		•••	•••	•••	•••	•••
Carbonized Soils	•	•	•	•	•			•	•	•	•	•
Railroad & Axel Grease												
Glues												
Spray Adhesives												



NFPA Rating (Concentrate)