



BRULIN 1696 PNC

Exceptionally Effective, Neutral pH Spray Wash Detergent

An Exceptionally
Effective, pH Neutral
Cleaner



Spray Wash
Detergent

An exceptionally effective cleaner and degreaser with the advantages of a neutral pH formulation: Brulin 1696 PNC is safe for all types of process and general purpose cleaning of sensitive metals (including copper and its alloys), glass and electronics.

- **Enhanced Degreasing** – with the advantages of a pH neutral cleaner
- **Safely Cleans Sensitive Metals** – cadmium and copper (alloys & plating)

Benefits

- **Water-Based, Dilutable Formulation** – For Environmental Safety & Economy of Use
- **No Silicates**
- **Extends Bath Life** – Creates Labor Savings & Reduces Costs
- **Low Foaming at Temperatures Greater than 120°F (49°C)**
- **Free Rinsing** – Cleaner Parts & Simplified Cleaning

Greener 11 Ways

More user and environmentally friendly, reducing costly paperwork

1. No SARA Title III, Section 313 Reportable
2. No Ozone Depleting Substances
3. No Global Warming Potential
4. No RCRA Reportable Ingredients or Characteristics
5. No Caustic
6. No APs (Alkylphenols) or APEs (Alkylphenol ethoxylates)
7. No Chelants
8. No Butyl
9. Recycles Easily
10. Biodegradable
11. RoHS Compliant

Special Application — LCD Glass Cleaning

Brulin 1696 PNC is ideally suited for LCD glass cleaning:

- Mild pH and excellent compatibility with glass substrates
- Excellent performance in spray, brush, and immersion/ultrasonic cleaning equipment
- Very low solids content and exceptionally clean-rinsing for a residue-free glass surface
- Very effective removal of typical LCD glass soils

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Performance Properties

Substrates

Brulin 1696 PNC is non-corrosive and non-staining to a wide variety of alloys. Some selected categories of materials compatible with Brulin 1696 PNC include*:

Ferrous Metals: Carbon Steel • Stainless Steel

Non-Ferrous Metals & Alloys: Aluminum • Cadmium Plating • Chrome Plating • Copper (Alloys & Plating) • Titanium & Titanium Alloys

Plastic & Composites: High Density Polyethylene/HDPE • Nitrile Butadiene Rubber • Polyvinyl Chloride/PVC

Other: Glass

Soils

Brulin 1696 PNC removes a wide range of organic and inorganic soils. Some categories of soils that can be removed with Brulin 1696 PNC include*:

Coolants • Dirt (Particulate) • Grease • Inks • Oil (General, Cutting, Drawing Compounds, Fingerprints, Forming, Hydrocarbon, Lubricants, Self Emulsifying, Silicone/Greases, Water Soluble)

*Material compatibility should always be confirmed via testing with specific contaminants under specific cleaning conditions.

Use Ranges

System	Spray Wash (Batch or Continuous)
Dilution	3-15%, typically used at 5%
Temperature Range	120-150°F (49-66°C)
Cleaning Duration	1-30 minutes: typical parts are cleaned in 3-10 minutes
Rinsing	See your Brulin representative for guidelines about the rinse process. Recommended conductivity of final rinse water: <ul style="list-style-type: none"> • Ultra-Clean Applications: ≤ 50 microsiemens • Precision Cleaning: ≤ 500 microsiemens • Gross Cleaning: > 500 microsiemens
To avoid spotting, it is best if the parts remain wet between processing stages.	

Typical Chemical Characteristics

Physical Form	Liquid
Color	White
Odor/Fragrance	Mild
Viscosity	Water-thin
Weight	8.82 lbs./gal. (1.057 g/ml)
pH of Concentrate	9.2
pH of Working Solution	8.8
Flash Point	>200°F (93°C)
Foaming Tendency	Low
Cloud Point	>80°F (26°C)
Calculated V.O.C	3% (32 g/l)
Freeze/Thaw	Reusable after thawing & remixing

Concentration Verification

Brulin Titration Kit (Prod. No. XTRKIT)	
Sample Size:	20 mL
Titrant:	1.0 N HCl Solution
Indicator:	Bromophenol Blue
Concentration %:	Drops Titrant x 0.42
or	
Sample Size:	50 mL
Titrant:	0.5 N HCl Solution
pH Endpoint:	3.8
Concentration %:	mL Titrant x 2.33

Burette Test Method	
Sample Size:	50 mL
Titrant:	0.5 N HCl Solution
pH Endpoint:	4.50
Concentration %:	mL Titrant x 2.40



Safety

CAUTION: USE ONLY IN A WELL VENTILATED AREA – AVOID PROLONGED BREATHING OF VAPORS. Keep away from eyes, skin and clothing. Wear chemically resistant gloves if skin contact is likely. May cause eye irritation. Ingestion may cause irritation to mouth and throat. Excessive inhalation may cause drowsiness. Contains Propylene Glycol Methyl Ether and Triethanolamine.



Hazard Rating

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe		
HMIS		NFPA
1	HEALTH	1
0	FLAMMABILITY	0
0	REACTIVITY	0

FIRST AID: *Eye Contact:* Flush with large amounts of water for 20 minutes, lifting upper and lower lids occasionally. *Skin Contact:* Wash skin with mild soap and water. Remove contaminated clothing and laundry before reuse. *Inhalation:* Remove to fresh air. Administer oxygen if breathing is difficult. *Ingestion:* If conscious, dilute by giving 2 glasses of water. Keep warm, quiet and get medical attention.

PRECAUTIONS

- KEEP OUT OF REACH OF CHILDREN
- FOR INDUSTRIAL OR COMMERCIAL USE ONLY

Packaging

SHIPPING: Non-hazardous for shipping by ground, sea, or air in all package sizes.

STORAGE: Store in well-ventilated areas at temperatures between 40-110°F (4-43°C). The recommended shelf life of this product is 24 months.

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

AVAILABILITY:

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

Companion Products

Formula 224
Brulin's Most Aggressive Spray Wash Detergent

Brulin 1990GD
The Industry Standard Spray Wash Detergent

DISTRIBUTED BY:

PRODUCT NUMBER
431016



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