

# AXAREL<sup>®</sup> 2200

## Muti-Purpose Electronics Cleaner

### DESCRIPTION

**AXAREL 2200** Cleaner is a blend of highly refined isoparaffinic hydrocarbons and linear alcohols. The product's broad solvency and relatively fast evaporation make it ideal for solder paste stencil and misprint cleaning as well as defluxing after touch-up and rework. It is also effective in removing unfired, thick film ink (paste) from assemblies and process equipment.

It is an ideal replacement for isopropanol (IPA) in hand wipe or immersion cleaning applications where cleaning performance, safety, and/or VOC emissions need to be improved.

\* AXAREL is a registered trademark of Petroferm, Inc.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

### APPLICATION GUIDELINES

**Uses** - AXAREL 2200 Cleaner may be used for hand wipe or immersion applications. AXAREL 2200 is available in presaturated wipes.

Stencil / Misprint Assembly Cleaning	Miscellaneous
Rosin solder paste	Uncured encapsulants
Water-soluble solder paste	Acrylic conformal coatings
No-clean solder paste	Silicone conformal coatings
Epoxy solder paste	Oily contaminants
Uncured SMD adhesives	Unfired thick film inks

**Process (Stencil/PWA Cleaning)** - AXAREL 2200 Cleaner is applied concentrated by hand or immersion at ambient temperature. The cleaning agent can be used in appropriately designed non-aqueous equipment such as modified vapor degreasers, ultrasonic cleaners, IPA (batch) stencil cleaners, and metal dip tanks.

After cleaning stencils or assemblies, surface can be dried by evaporation or solvent displacement with forced air. No water rinse is required. Misprinted assemblies cleaned in AXAREL 2200 Cleaner may be rinsed with fresh AXAREL 2200 Cleaner if additional rinsing is desired.

**Bath Life** – After normal use, the AXAREL 2200 bath will become contaminated or "loaded" with solids from solder paste and/or SMD adhesive residues. As loading increases, cleaning performance decreases. Either an oily film or visible solids will be left behind on the stencil after drying indicating the bath has lost its effectiveness. Depending on the amount of paste or adhesive being cleaned from stencils and misprints, the typical bath life for AXAREL 2200 Cleaner ranges from 2 weeks to 8 weeks.

**Disposal** – Petroferm recommends contacting your current or local environmental service company for disposal of AXAREL 2200 Cleaner via fuel blending. This method has proven to be the easiest, most cost-effective way to dispose of spent AXAREL Cleaning Products. For assistance in finding suitable disposal service, please contact your Petroferm representative.

**Materials Compatibility** - AXAREL 2200 Cleaner is compatible with all metals as well as most epoxies, flex laminates, and other cross-linked polymers. The product is compatible with screen emulsions, stencils, ceramic and epoxy substrates, and most electronic components. Emulsions used to bind stencils to frames may be attacked after prolonged exposure to the liquid or temperatures above 120°F/49°C.

Effects of Axarel 2200 on Plastics and Elastomers	Percent (%) Weight Change				Percent (%) Thickness Change			
	77 °F (25 °C) 1 Week	140 °F (60 °C) 1 Hour	140 °F (60 °C) 1 Week	Control1 140 °F (60 °C) 1 week	77 °F (25 °C) 1 Week	140 °F (60 °C) 1 Hour	140 °F (60 °C) 1 Week	Control 1 140 °F (60 °C) 1 week
ACETAL (Delrin, Celcon)	-0.18	-0.03	-0.01	-0.16	0.31	-0.31	0.00	0.92
ACRYLIC (Lucite, Plexiglas)	-0.42	-0.06	0.12	-0.13	0.00	0.00	0.60	0.00
ACRYLONITRILE	1.46	1.15	20.53	-0.08	2.17	0.93	21.50	0.93
BUNA N	15.38	6.91	19.01	-0.39	9.51	4.56	12.38	0.00
BUNA S	107.75	52.03	110.68	-0.05	28.82	19.05	30.36	-0.59
BUTYL RUBBER	81.15	11.73	NA	-0.11	30.15	7.45	NA	0.00
CPVC	0.14	0.04	8.66	-0.03	NA	NA	NA	NA
EP RUBBER	24.62	10.29	38.22	-0.19	11.11	3.74	17.13	0.63
EPDM	20.81	24.43	22.53	-0.13	14.81	11.85	16.30	2.96
EPOCHLOROHYDRINE	23.64	35.17	26.22	-0.16	11.01	13.16	12.28	8.11
FIBERGLASS	0.10	0.02	0.38	-0.19	1.87	2.43	2.70	-0.26
FLUOROELASTOMER	10.68	10.87	13.56	-0.11	7.43	8.19	10.53	-2.29
G-10 Epoxy Glass	-0.05	-0.02	-0.10	-0.08	-0.59	0.00	0.30	0.30
HDPE	1.41	0.19	4.86	-0.01	0.63	-1.23	4.62	0.00
Hypalon® (DuPont Dow Elastomer)	11.58	9.66	13.96	-0.23	10.00	5.94	10.89	4.12

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NATURAL RUBBER	NA	29.09	NA	NA	NA	8.63	NA	NA
NEOPRENE	17.79	7.28	20.37	-0.16	12.37	6.90	14.14	0.34
NYLON	-0.44	-0.12	-0.90	-0.16	0.00	0.00	-0.92	0.00
PBT (Valox, Gafite, Celanex)	-0.05	-0.01	-0.05	-0.02	0.38	0.96	-0.24	0.36
POLYCARBONATE (Lexan)	-0.13	-0.03	-0.08	-0.04	0.33	0.67	0.67	0.67
POLYETHERIMIDE (Ultem)	-0.34	-0.04	-0.46	-0.13	0.00	0.31	0.00	0.00
POLYPHENYLENE OXIDE (Noryl)	-0.01	0.04	5.93	-0.04	0.32	-0.31	8.70	0.31
POLYPROPYLENE	1.50	0.26	10.70	-0.01	0.64	0.00	5.45	0.00
POLYSTYRENE	8.11	2.05	NA	-0.04	5.92	-0.31	NA	0.00
POLYSULFIDE	21.57	26.08	23.35	-0.12	11.11	13.64	12.88	1.50
POLYSULFONE	-0.32	-0.06	-0.31	-0.10	0.95	0.00	0.96	0.00
POLURETHANE	6.52	0.90	12.98	-0.20	3.24	0.32	6.13	0.32
PVC, WHITE	0.00	0.01	0.23	-0.09	-0.46	0.42	0.21	0.42
PVC, CLEAR	-0.07	-0.02	0.39	-0.03	0.00	0.32	0.32	0.00
SILICONE		37.40	NA	NA	NA	15.26	NA	NA
TEFLON	0.00	0.00	0.00	-0.01	0.31	0.92	0.92	0.61
TYGON	5.74	1.26	-0.17	-0.37	2.70	-3.33	-3.33	1.42
UHMW POLYETHYLENE	1.23	0.19	4.59	-0.02	0.93	-1.52	-1.52	-0.31
Viton® A/B (DuPont Dow Elastomer)	0.68	0.13	3.18	-0.07	0.31	0.62	2.80	0.00
Viton® G/F (DuPont Dow Elastomer)	1.53	0.18	3.41	-0.03	0.71	0.00	0.72	0.00

NOTE: 1 Effect of temperature only. Sample kept at 140 °F (60 °C) with no solvent.

**TECHNICAL DATA**

Physical Properties	Typical Value
Appearance	Colorless to Yellow Liquid
Odor	Mild Alcohol
Specific Gravity (@ 25°C)	0.82 ± 0.01
Flash Point (PMCC)	111 °F (44 °C)
Evaporation Rate (BUAC = 1.0)	0.32
Vapor Pressure (mmHg @ 25°C)	5
Kauri-Butanol (KB) Value	>150
Ozone Depletion Potential (ODP)	Zero
Global Warming Potential (GWP)	Essentially zero
Significant New Alternatives Program (SNAP)	Approved
Hazardous Air Pollutants (HAP)	No
National Emission Standards for Hazardous Air Pollutants (NESHAP)	Not regulated
Superfund Amendments and Reauthorization Act (SARA)	Not regulated
Resource Conservation and Recovery Act (RCRA)	Not regulated

**SAFETY & WARNING**

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available at [MacDermidAlpha.com/assembly-solutions/knowledge-base](http://MacDermidAlpha.com/assembly-solutions/knowledge-base)**

**STORAGE**

AXAREL 2200 Cleaner is available in 5-gallon pails (33 lb/16 kg) and 55-gallon drums (365 lb/166 kg). Samples are available in one-quart and one-gallon containers.

AXAREL 2200 Cleaner should be stored in the original container, preferably in a cool, ventilated, fire-resistant building. In the USA, AXAREL 2200 Cleaner is considered a Class II "combustible" liquid by NFPA Code which regulates the use, storage and handling of flammable combustible materials.

The shelf life for this product is indefinite when it is stored in its original, sealed container at room temperature. However, the product should be inspected after the designated date on the product label (twenty-four months from the date of manufacture) prior to customer use.

**CONTACT INFORMATION**

**To confirm this document is the most recent version, please contact [Assembly@MacDermidAlpha.com](mailto:Assembly@MacDermidAlpha.com)**

[www.macdermidalpha.com](http://www.macdermidalpha.com)

<p><b>North America</b> 109 Corporate Blvd. South Plainfield, NJ 07080, USA 800.367.5460</p>	<p><b>Europe</b> Unit 2, Genesis Business Park Albert Drive Woking, Surrey, GU21 5RW, UK 01483.758400</p>	<p><b>Asia</b> 8/F., Paul Y. Centre 51 Hung To Road Kwun Tong, Kowloon, Hong Kong 852.3190.3100</p>
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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE . Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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