Isopropyl Alcohol
Electronic Cleaner; 99.9% Pure, Anhydrous
824 Technical Data Sheet

824-Liquid

Description

The 824 *Isopropyl Alcohol* (IPA) liquid is a high purity, multipurpose cleaner and solvent. The purity level meets *Grade A* standard for ***MIL Spec TT-I-735*** and ***ASTM D770***, ensuring that no contaminations are left behind when used as a cleaner or solvent.

As a cleaner, it is fully miscible in water and most organic fluids, making it good at dissolving dirt and light organic contaminants, and ionic flux residues. Since the 824 is anhydrous (without water), it scavenges water off surfaces, trapping the water in the IPA solution as an azeotropic mixture. This helps to dry surfaces thoroughly.

As a solvent, it acts as a moderate evaporation, plastic safe diluent used to improve the properties of paint resins and other heterogeneous solid mixtures. It, therefore, serves as useful carrier solvent to adjust the rheological properties and compatibilities of complex mixture. Due to IPA's volatility, it resists entrapment in the coating. As it dries, it gives off a very light odor, which is not bothersome but serves as a cue to limit over-exposure due to poor ventilation.

Applications & Usages

Since the 824 is safe for most plastics, seals, ceramics, and printed circuit board components, it is used heavily in the electronics industry. It is great for cleaning or coating of screens, stencils, fiber optics, cables, keypads, and particularly printed circuit board components. It is also used to clean oxides and grime on audio or video tape heads. It effectively removes light greases, oils, and flux without adding additional residues to contacts, relays, and circuit boards connectors. It is quick drying relative to water. Further, it can be used to wash off more aggressive organic solvents like acetone or toluene.

Storage Properties

Properties	***Value***
Shelf Life @ 23 °C [73 °F]	5 years
Storage Temperature [a)]	-20 to 40°C [32 to 104 °F]

a) Storage below zero is not necessary. Cool, dry, and well ventilated area recommended.

Mil Spec #TT-I-735

Physical Property	***Method***	***Grade A Specifications***
Purity	Gas chromatography	>99.8%
Water (w/w)	ASTM D 1364	≤0.10%
Color (Pt-Co scale)	ASTM D 1209	≤5
Acidity (% of acetic acid)	ASTM D 1613	≤0.001
Density @ 20 °C	ASTM D 4052	0.785—0.786 g/mL
Specific gravity @20 °C / 20 °C	ASTM D 4052	0.785—0.787 g/mL
Dilution range	ASTM D 1078	
Initial boiling point	"	≥81.8 °C
Dry point	"	≥82.8 °C
Nonvolatile matter	ASTM D 1353	≤0.001 g/100 mL
Water miscibility	ASTM D 1772	clear and miscible
Appearance	ASTM D 4176	Clear & free from sediment and suspended matter

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Properties

Physical Property	*Method*	*Value*
Odor	—	Mild alcohol
Color	Visual	colorless
Refractive Index @20 °C	ASTM D 1218	1.3766
Flash Point	Literature	12 °C [54 °F]
Boiling Point	Literature	82 °C [180 °F]
Auto-ignition	Literature	425 °C [797 °F]
Heat Capacity	Literature	11 400 kJ/m [0.612 BTU·in/h·ft2·°F]
Viscosity	Literature	3.4 cP

Compatibility

It is generally compatible with plastics, seals, PCB components, paints, rubbers, and plant fibers.

Health, Safety, and Environmental Awareness

Please see the 824 **Safety Data Sheet** (SDS) for more details on transportation, storage, handling and other security guidelines.

Environmental Impact: The 824 has a high volatile organic content of 100%. Avoid runoff into storm and sewer drains. This product is biodegradable.

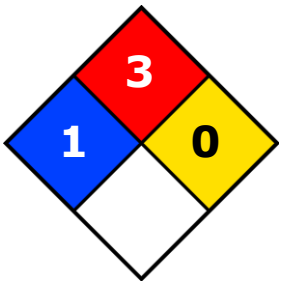
Health and Safety: Isopropyl alcohol solution is flammable and shouldn't be used in the presence of open flames or other ignition source. Keep container closed. Avoid prolonged breathing of vapors. Use with adequate ventilation.

NOTE: This product is not intended as a disinfectant for humans or animals. It was not treated to remove possible fungal spores or rare alcohol-resistant bacterial strains. Further, high purity anhydrous IPA is not an effective disinfectant.

HMIS® RATING

HEALTH:	**1**
FLAMMABILITY:	**3**
PHYSICAL HAZARD:	**0**
PERSONAL PROTECTION:	

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:
0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

Application Instructions

Follow the procedure below for best results.

To clean residues

1. Imbibe clean cloth.
2. Wipe surface to be cleaned with cloth.
   OR
3. Immerse component in a container filled with 824 solution.

WARNING! The 824 is hygroscopic, which means it can absorb moisture from air. Recap the bottle immediately after use to avoid moisture absorption.

Packaging and Supporting Products

Cat. No.	*Form*	*Net Volume*		*Net Weight*		*Shipping Weight*	
824-WX25	Wipes	47 mL	1.6 fl oz	37 g	1.3 oz	3.0 kg [a)]	6.6 lb
824-WX50	Wipes	95 mL	3.2 fl oz	75 g	2.7 oz	3.0 kg [a)]	6.6 lb
824-WX500	Wipes	191 mL	6.5 fl oz	150 g	5.3 oz	3.0 kg [a)]	6.6 lb
824-100ML	Liquid	125 mL	4.2 fl oz	102 g	3.4 oz	1.5 kg [b)]	3.3 lb
824-500ML	Liquid	500 mL	16.9 fl oz	393 g	13.9 oz	4.5 kg [b)]	9.5 lb
824-1L	Liquid	1 L	0.27 gal	786 g	1.74 lb	5.5 kg [c)]	12.1 lb
824-4L	Liquid	3.78 L	1.1 gal	3.2 kg	6.9 lb	3.8 kg [d)]	8.4 lb
824-1G	Liquid	4 L	1.0 gal	3.0 kg	6.6 lb	14 kg [e)]	31 lb
824-20L	Liquid	20 L	5.4 gal	15.9 kg	35.1 lb	18 kg [d)]	40 lb

a) Box pack
b) Pack of 10
c) Pack of 6
d) Each
e) Pack of 4

Technical Support

Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com .

Email: support@mgchemicals.com

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Warranty

M.G. Chemicals Ltd. warranties this product for 12 months from the date of purchase by the end user. *M.G. Chemicals Ltd.* makes no claims as to shelf life of this product for the warranty. The liability of *M.G. Chemicals Ltd.* whether based on its warranty, contracts, or otherwise shall in no case include incidental or consequential damage.

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