Description

The 435 *Thinner* is a super fast drying thinner, low VOC solvent for use with the MG Chemical's conformal and EMI/RFI shielding coating products. It is designed to ensure good adherence to plastic substrates.

Application

This fast drying time of the 435 makes is a good choice for spray application of EMI/RFI shielding and conformal coatings that require low VOC and need quick drying times.

Features and Benefits

- **Low VOC**
- **Fast Evaporation Rate**
- **Enhances Adhesion to Plastic Substrates**
- **Highly Miscible with Other Common Organic Solvents**
- Compatible with most substrates used in electronic parts and enclosures

Principal Components

Name	***CAS Number***
toluene	*108-83-3*
methyl ethyl ketone	*78-93-3*

Properties

Physical Property	***Method***	***Value***
Color		Clear
Odor	—	Ketone, nail polish remover
Density at 25°C [77 °F]		0.81 g/mL
Viscosity at 25°C [77 °F]	Brookfield SP1	0.5 cP [0.0005 Pa·s]
Flash Point	Closed Cup	-18 °C [-0.4 °F]
Freezing Point		-94 °C [-70 °F]
Boiling Point		56 °C [133 °F]
Vapor Pressure at 25°C [77 °F]		21.7 kPa [163 mm of Hg]
Relative Evap. Rate (BuAc = 1)		~6
Volatile Organic Content (VOC)		7.5% [60 g/mL]
MIR value		0.52 g O_3/ g of product

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Solvation Parameters		Value
Solubility in water		Highly soluble
Hansen Solubility Parameters [a]	Total	9.7 [19.8]
$(cal/cm^3)^{½}$; $[MPa]^{½}$	*Non-Polar*	7.3 [14.9]
	Polar	5.1 [10.3]
	Hydrogen Bonding	3.3 [6.8]

a) Hansen parameters calculate using component literature values and volume fraction composition.

Compatibility

Substrate Compatibility: The 435 *Thinner* is compatible with most substrate materials found on printed circuit assemblies. Its etching action can remove the need for surface preparation steps for plastics. The high solvent power can also cut through residual contaminants.

ATTENTION! Use with care on thin plastics or parts that are chemically sensitive. If this diluents is too active, dilute or substitute it with a diluents with less solvent power.

Solvent Miscibility: The 435 is highly miscible with other common organic solvent. It can be mixed with

- Water
- Alcohols
- Aldehydes
- Aromatic and Aliphatic Hydrocarbons
- Ethers
- Glycols
- Glycol Ethers
- Ketones

Health, Safety, and Environmental Awareness

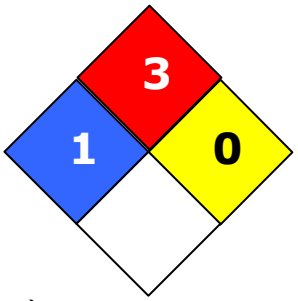
Please see the 435 **Material Safety Data Sheet** (MSDS) for more details on transportation, storage, handling and other security guidelines.

Health and Safety: This liquid is highly flammable and should be kept away from flames and other ignition sources. Avoid breathing in fumes or direct contact with the material.

HMIS® RATING

HEALTH:	**1**
FLAMMABILITY:	**4**
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)

Environmental Impact: The 435 has volatile organic content of 7.5% (w/w) [or 59 g/L]. It is RoHS compliant.

Thinning Instructions

Make necessary adjustments according to your paint and spray gun equipment usage instructions. A 1.0 (paint):1.0 (thinner) dilution is a common starting point. If sagging is observed, reduce the thinner ratio.

ATTENTION! It is preferable to use this thinner system in a temperature controlled environment. Avoid high temperatures or humidity, which can lead to dry spray and blushing respectively.

Packaging and Supporting Products

Cat. No.	*Form*	*Net Volume*		*Net Weight*		*Shipping Weight*	
435-1L	Liquid	950 mL	32 fl oz	0.77 kg	1.7 lb	5.5 kg	11.5 lb (×5) [a)]
435-4L	Liquid	3.8 L	1 gal	3.10 kg	6.8 lb	3.8 kg	8.3 lb
Contact MG Chemicals if custom packaging or sizes are required							

a) Pack of five bottles

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

Phone: 1-800-340-0772 Ext. 30 (Canada, Mexico & USA)
1-905-331-1396 Ext. 30 (International)
Fax: 1-905-331-2862 or 1-800-340-0773

Mailing address:

Manufacturing & Support
1210 Corporate Drive
Burlington, Ontario, Canada
L7L 5R6

Head Office
9347–193rd Street
Surrey, British Columbia, Canada
V4N 4E7

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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