

New! 3M™ Novec™ Contact Cleaner Plus

Introduction

New 3M™ Novec™ Contact Cleaner Plus is formulated with extra cleaning power to remove stubborn oils, greases and silicones, as well as fluorinated oils and greases, dust and particulates, from sensitive electrical and electronic equipment. This includes connectors, printed circuit boards, electromechanical devices, scales, relays and circuit breakers. Novec Contact Cleaner Plus is compatible with plastics and other materials of construction. Novec Contact Cleaner Plus is nonflammable, non ozone-depleting, has low global warming potential and contains no HCFCs, HFCs, nPB or HAPs. This product is formulated with 3M™ Novec™ 7200 Engineered Fluid, which is VOC-exempt under California Air Resources Board (CARB) regulations. Novec Contact Cleaner Plus is optimized for both compliance with the CARB VOC limits and high performance because it does not resort to increased use of inert propellants (dilution) in order to achieve compliance.

- Fast drying, low odor
- Excellent plastics compatibility
- No rinsing and no residues
- Non-corrosive, non-conductive
- Non-flammable
- Low toxicity
- Low Global Warming Potential

Plastics Compatibility

Material	Compatibility	Material	Compatibility
ABS	Excellent	PMMA	Excellent
Nylon	Excellent	POM	Excellent
Lexan®/Polycarbonate	Excellent	PP	Excellent
HDPE	Excellent	PS	Excellent
CDPE	Excellent	PTFE	Excellent
C.E. Phenolic	Excellent	PVC	Excellent



3M™ Novec™ Contact Cleaner Plus provides more cleaning power – while maintaining excellent plastics compatibility.

Environmental, Health and Safety Information

Properties	Novec Contact Cleaner Plus	HCFC-141b
Ozone Depletion Potential ¹ (ODP)	0	0.1
Global Warming Potential ² (GWP)	71	725
Atmospheric Lifetime - ALT (years)	3.8	9.3
Flashpoint	None	None
Exposure Guideline (ppmV, 8 hr time weighted average)	200	500

¹CFC-11 = 1.0

²GWP-100 year integration time horizon, CO₂ = 1.0

Regulatory Information

RoHS/WEEE Compliant	Yes
NSF Registration	Not yet registered
Meets CA VOC Limits	Yes – Electrical Cleaner
Meets OTC VOC Limits	Yes – Electrical Cleaner
NSN (National Stock Number)	Not yet assigned

Physical Properties

Evaporation Rate (relative to n-Butyl Acetate)	0.10
Surface Tension (dynes/cm ²)	16*
Specific Gravity (g/ml)	1.40
Dielectric Strength	>25 kV
Shelf Life	5 years

*Initial estimate; measurement is pending.

More 3M™ Novec™ Aerosol Cleaners

3M™ Novec™
Contact Cleaner

3M™ Novec™
Electronic Degreaser

3M™ Novec™
Flux Remover

Safety and Handling

3M™ Novec™ Contact Cleaner Plus is nonflammable. When used as directed, in its intended applications, The product has a wide margin of safety between anticipated exposures and the exposure guideline. Before using this product, be sure to read and follow all precautions and directions for use contained in the product label and Material Safety Data Sheet, which is available from your local 3M representative upon request.

Transportation Classification

Ground: Consumer Commodity ORM-D **Air:** Aerosols, Nonflammable, 2.2, UN1950

Resources

3M™ Novec™ Aerosol Cleaners are supported by global sales, technical and customer service resources, with fully-staffed technical service laboratories in the U.S., Europe, Japan, Latin America and Southeast Asia. Users benefit from 3M's broad technology base and continuing attention to product development, performance, safety and environmental issues.

For additional technical information on Novec Contact Cleaner Plus in the United States, call 3M Customer Service, 800 810 8513.

For information on additional 3M fluids, coatings and other chemical products for the electronics industry, visit our web site at: www.3M.com/novec

The 3M™ Novec™ Brand Family

The Novec brand is the hallmark for a variety of patented 3M products. Although each has its own unique formula and performance properties, all Novec products are designed in common to address the need for safe, effective, sustainable solutions in industry-specific applications. These include precision and electronics cleaning, heat transfer, fire protection, lubricant deposition and several specialty chemical applications.

3M™ Novec™ Engineered Fluids • 3M™ Novec™ Aerosol Cleaners • 3M™ Novec™ 1230 Fire Protection Fluid • 3M™ Novec™ Electronic Coatings • 3M™ Novec™ Electronic Surfactants

United States	China	Europe	Japan	Korea	Singapore	Taiwan
3M Electronics Markets Materials Division 800 810 8513	3M China Ltd. 86 21 6275 3535	3M Belgium N.V. 32 3 250 7521	Sumitomo 3M Limited 813 3709 8250	3M Korea Limited 82 2 3771 4114	3M Singapore Pte. Ltd. 65 454 8611	3M Taiwan Limited 886 2 2704 9011

Product Use: All statements, technical information and recommendations contained in this document are based on tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

Warranty and Limited Remedy: Unless stated otherwise in 3M's product literature, packaging inserts or product packaging for individual products, 3M warrants that each 3M product meets the applicable specifications at the time 3M ships the product. Individual products may have additional or different warranties as stated on product literature, package inserts or product packages. 3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's application. If the 3M product is defective within the warranty period, your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace the product or refund the purchase price.

Limitation Of Liability: Except where prohibited by law, 3M and seller will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental, or consequential regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.



Electronics Markets Materials Division

3M Center, Building 224-3N-11
St. Paul, MN 55144-1000
www.3M.com/novec

Please recycle. Printed in USA.
Issued: 9/08 © 3M 2008.
All rights reserved. 6359HB
60-5002-0348-8

Lexan is a registered trademark of SABIC Innovative Plastics.
3M and Novec are trademarks of 3M.
Used under license by 3M subsidiaries and affiliates.