

3M™ Novec™ Flux Remover

Introduction

3M™ Novec™ Flux Remover uses advanced 3M solvent technology to remove a wide variety of solder fluxes used in electronics manufacturing and repair – including rosin-based and many no-clean and lead-free fluxes. Novec Flux Remover evaporates quickly, and leaves no residue. This industrial-strength cleaner is non-corrosive and compatible with most plastics, with the exception of acrylics, polycarbonates, ABS and PS.

Novec Flux Remover is non-flammable, non-ozone depleting, has low global warming potential and does not contain any hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs), hazardous air pollutants (HAPs) or n-propyl bromide (nPB). This product is formulated with 3M™ Novec™ 7200 Engineered Fluid, which is VOC-exempt under California Air Resources Board (CARB) regulations. Novec Flux Remover 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.

- Non-corrosive
- Non-flammable
- Low toxicity
- Fast drying, no residue
- Non-ozone depleting
- Low Global Warming Potential
- Low odor

Plastics Compatibility

Material	Compatibility	Material	Compatibility
ABS	Not Compatible	PMMA	Not Compatible
Nylon	Excellent	POM	Excellent
Lexan®/Polycarbonate	Not Compatible	PP	Excellent
HDPE	Excellent	PS	Not Compatible
CDPE	Excellent	PTFE	Excellent
C.E. Phenolic	Excellent	PVC	Excellent

Environmental, Health and Safety Information

Properties	Novec Flux Remover	HCFC-141b	HCFC-225 ca	nPB	TCE
Ozone Depletion Potential ¹ (ODP)	0.0	0.1	0.03	0.013-.01	0.0
Global Warming Potential ² (GWP)	30	725	122	Low	Low
Flashpoint	None	None	None	None	None
Hazardous Air Pollutant ³	No	No	No	No	Yes
Exposure Guidelines (ppmV, TWA)	200	500	50	10	10
Margin of Safety ⁴ (MOS)	10	25	2.5	0.5	0.5

¹CFC-11 = 1.0

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

³As defined by the U.S. EPA in the Clean Air Act of 1990

⁴MOS in use = $\frac{\text{Exposure Guideline}}{\text{Assumed 20 ppmV 8hr TWA exposure}}$

Regulatory Information

RoHS/WEEE Compliant	Yes
NSF Registration	Nonfood Compound Program Listed K2 Reg. #137247
Meets CA VOC Limits	Yes – Electronic Cleaner
Meets OTC VOC Limits	Yes – Electronic Cleaner
NSN (National Stock Number)	6850-01-534-2943



Physical Properties

Evaporation Rate (relative to n-Butyl Acetate)	0.11
Surface Tension (dynes/cm ²)	18
Specific Gravity (g/ml)	1.30
Dielectric Strength	>25 kV
Shelf Life	5 Years

More 3M™ Novec™ Aerosol Cleaners

3M™ Novec™
Contact Cleaner
3M™ Novec™
Contact Cleaner Plus
3M™ Novec™
Electronic Degreaser

Safety and Handling

3M™ Novec™ Flux Remover is nonflammable. When used as directed, in its intended applications, Novec Flux Remover 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 3M™ Novec™ Flux Remover 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. 6362HB
60-5002-0093-0

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