

## Introduction

3M™ Novec™ Contact Cleaner uses an advanced 3M solvent technology that effectively removes light oils, greases, silicones, dust and particulates from sensitive electrical equipment, including connectors, printed circuit boards, electromechanical devices, scales, relays and circuit breakers. Novec Contact Cleaner also effectively cleans fiber optic connectors during and after processing; prior to inspection; or during field installations. The product is compatible with plastics and other materials of construction.

Novec Contact Cleaner is based on a non-flammable, high-performance proprietary hydrofluoroether formulation that is non-ozone depleting and does not contain any Hydrochlorofluorocarbons (HCFCs), Hydrofluorocarbons (HFCs), Hazardous Air Pollutants (HAPs) or n-propyl bromide (nPB). This results in an effective, affordable contact cleaner providing a wide margin of workplace safety and a favorable environmental profile.

## Features

The proprietary hydrofluoroether chemistry in Novec Contact Cleaner offers a number of significant advantages over typical conventional spray cleaners, including:

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

Novec Contact Cleaner features a favorable environmental profile. The product is non-ozone depleting, is exempt from the U.S. EPA's volatile organic compound (VOC) regulations and contains no HCFCs, HFCs, nPB or HAPs. Carbon dioxide is used as the propellant rather than a flammable hydrocarbon or an HFC greenhouse gas.

## Environmental, Health and Safety Information

Properties	Novec Contact Cleaner	HCFC-141b
Ozone Depletion Potential - ODP <sup>1</sup>	0.00	0.10
Global Warming Potential - GWP <sup>2</sup>	320	700
Atmospheric Lifetime -ALT (years)	4.1	9.2
Flashpoint	None	None
Flammability Range in Air	None	7.6 - 17.7 <sup>3</sup>
Exposure Guideline (ppmV, 8 hr time weighted average)	750	500

<sup>1</sup>CFC-11 = 1.0

<sup>2</sup>GWP-100 year integration time horizon, CO<sub>2</sub> = 1.0

<sup>3</sup>Vol% by ASTM E681-94 @ 100°C

## Safety and Handling

3M™ Novec™ Contact Cleaner is nonflammable. When used as directed in its intended applications, there is a wide margin of safety between anticipated exposures and the exposure guideline. This fluid is highly resistant to thermal breakdown and hydrolysis in storage and during use. 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.

## More 3M™ Novec™ Aerosol Cleaners

3M™ Novec™ Electronic Degreaser  
3M™ Novec™ Flux Remover

## 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 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/electronics](http://www.3M.com/electronics)**

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### 3M Electronics

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