



OptiClear™

- Non-Toxic
- Electro-Optical Grade
- Biodegradable
- Non-Ozone Depleting

F2

Applications

Dissolves:

Wax, pitch, flux, grease, tar, oil, resin and polystyrene.

Will not affect:

Metal and metal alloy, glass and ceramic, inorganic crystal, phenolics, epoxy, melamine, alkyls, and fiberglass.

Will moderately affect:

Polyethylene (swells on long exposure but will not dissolve).

OptiClear is National Diagnostics' original, award winning, nontoxic, nonflammable, biodegradable solvent. OptiClear is intended for the removal of wax, pitch, flux, grease, resin and solvent soluble resists from optical and electronic components of glass, ceramic, or metal.

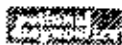
OptiClear may be substituted directly for toluene, xylene or chlorinated hydrocarbons, such as trichloroethylene (TCE), in batch-type or ultrasonic cleaners with no alteration in protocol. OptiClear removes wax adhered to lenses, optical components, polished wafers or printed circuit boards.

OptiClear has high solvency power, yet it will not affect metal or metal alloy. OptiClear also has a neutral pH, so it will not stain glass. OptiClear's water content is less than 50 ppm. It is miscible in all proportions with acetone, ethanol, and isopropanol, any of which may be used as a post wash. Since OptiClear is 100% natural, food grade material, it is biodegradable and not categorized as a hazardous waste.

METHOD

1. Use undiluted.
2. Set up an OptiClear bath at room temperature. Soak components for 15 minutes to 1 hour. For lighter cleaning applications, OptiClear can be used as a spray.
3. Remove components from bath and allow OptiClear to evaporate.
4. If excessive residue remains, rinse in OptiClear R.

OptiClear
Order No. OE-101
16 oz. spray bottle, 1 gallon, 5 gallon drum, 55
gallon drum



[National Diagnostics Home](http://www.nationaldiagnostics.com)

Electro-Optical Grade Solvents

There has been an increased awareness of the environmental impact and occupational health and safety hazards associated with the use of toxic, low flash point cleaners in the laboratory and in industry. In response to this increased awareness, National Diagnostics developed its original, award-winning OptiClear cleaning solvent. Subsequently, as a result of ever growing demand for safer products for cleaning optical and electronic components, we expanded the OptiClear product line to include an array of low hazard solvents.



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Applications of the OptiClear Solvents

Removes	OptiClear	OptiClear R	OptiClear E	OptiClear S	OptiClear SZ	OptiClear W
Waxes	☒	☐	☐	☐	☐	☐
Pitch	☒	☐	☒	☒	☒	☐
Flux	☒	☐	☒	☒	☒	☒
Grease	☒	☒	☒	☒	☒	☒
Oil	☒	☒	☒	☒	☒	☒
Resin	☒	☐	☐	☐	☐	☐
Resist	☒	☐	☐	☐	☐	☐
Lapping Compounds	☐	☐	☐	☐	☐	☒

	OptiClear Original OS-101	OptiClear R OS-102	OptiClear E OS-103	OptiClear S OS-104	OptiClear SZ OS-105	OptiClear W OS-106
Flash Point	147°F	147°F	46°F	147°F	177°F	200°F
Non-Toxic	☒	☒	☒	☒	☒	☒
Biodegradable	☒	☒	☒	☒	☒	☒
Food Grade	☒	☐	☐	☐	☐	☐
Evaporation Rate (ASTM D-155 - 9)	2.4	2.5	1.8	0.84	0.5	0.88
No Residue	☐	☒	☒	☒	☒	☐
Water Miscible	☐	☒	☐	☐	☐	☒
Low Odor	None	☒	☒	☒	☒	☒
Res-Resistive	< 5 pS/cm	< 5 pS/cm	< 5 pS/cm	< 5 pS/cm	< 5 pS/cm	< 5 pS/cm
pH (aqueous solution)	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
Water Content (ppm)	< 50	N/A	< 100	< 100	< 100	< 500
Heat of Vaporization	83.7	8	28	27	27	> 200
Odor (ppm)	< 50	< 50	< 50	< 50	< 50	< 50
Boiling Point	200°F	100°F	204-204°F	204-204°F	204-204°F	200°C
Refractive Index	1.47	1.34	1.4061	1.4270	1.4272	1.400
Vapor Pressure (mm Hg)	1.6	60 @ 20°C	60 @ 20°F	1.0 @ 20°F	0.1 @ 20°F	0.20 @ 20°C
Specific Gravity	0.84 @ 20°C	0.84 @ 20°C	0.72 @ 20°F	0.77 @ 20°F	0.75 @ 20°F	1.20 @ 20°C
Viscosity (cP)	4 @ 20°C	0.5 @ 20°C	0 @ 20°C	2.0 @ 20°C	2.4 @ 20°C	1.5 @ 20°C
Solids > 0.3µm	0	0	0	0	0	0
Abrasives	None	None	None	None	None	None