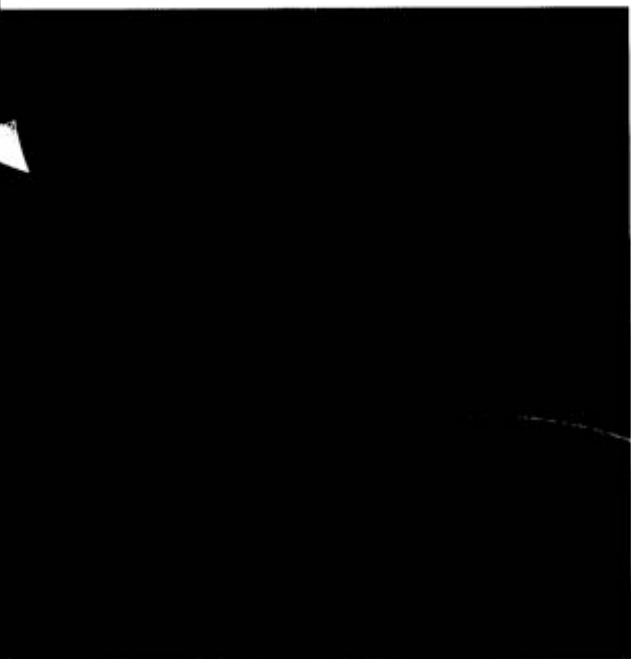


OPTISOLV

Precision Cleaning Solutions



YZEN



Name your contaminant...

Polycarbonate monomer, grinding dust, finger oils, electrostatic
charging particles... No soil or contaminant is out of the ordinary

Name your cleaning application, your cleaning process...

The Kyzen Optisolv product line consists of solvent and
aqueous chemistries for cleaning monomer from optical molds and
monomer flash, grinding dust, and fingerprints from optical lenses.

*Kyzen's innovative Optisolv, Lonox, Ionox,
Aquanox and Metalnox product lines provide
solutions for electronics cleaning, metal and
precision parts cleaning, and other specialized
cleaning applications in a wide range of high
technology industries.*

*At Kyzen, we think precision cleaning is
about process. Cleaning chemistries, cleaning
machines, and water treatment, all coming
together in an integrated solution.*

*And we think it's about people. Expert
technical support working with you to
formulate the best possible solution for your
cleaning job.*

*Our reputation and success are based on
selling solutions, not chemicals.*

*Kyzen Corporation. A solution-driven,
process company.*

The superior solvency, rinsability, and low
volatile organics (VOC's) make them suitable
for a wide range of polycarbonate or glass
cleaning processes and applications.

Whatever process or processes you are
running, there's a Kyzen Optisolv formulation
matched to your procedure: dip ultrasonics,
in-line spray-in-air, or spray-under-immersion.
And for whatever cleaning application, there's
a Kyzen Optisolv formulation for the job:
optical molds, optical lenses, flat panel displays,
prisms, and specialized glass products.

Most Optisolv lens cleaning products are
designed to be diluted with water. The mold
cleaning products are generally used at full
concentration. The non-silicated, non-car-
bonated nature of these products ensures
clean running equipment and no white scale
buildup. Optisolv products clean by utilizing a
combination of Kyzen alcohol and specialized

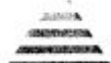
surfactants, and are produced with the highest cleaning quality
standards available.

Like all Kyzen products, the Optisolv product line is backed
by our Cleaning Applications & Evaluation Centers in Nashville, TN
and Manchester, NH. With in-line spray, spray-under-immersion,
ultrasonics, and traditional dip console cleaning machines in our
Centers, you can evaluate your complete cleaning process in our
facility and select the Kyzen chemistry that is most effective for
your cleaning application. The Optisolv product line and Kyzen
demonstration facilities are augmented and strengthened by
our ability to custom-formulate to your specific needs.



CLEANING AGENTS

cleaning application	contaminants removed	operating concentration	operating temp range	flash point
Optical mold/production hardware cleaning products				
Optically OP7020 spray or dip tank cleaning	monomer residue from molds & hardware; high index monomer; shop residues, oils	full	150-160°F (high index) 110-120°F (lower index)	none to boiling
Optically OP7031 spray wash low to mid index monomers cleaning (CR-39, CR-387, CR-424)	monomer residue from molds	10-20%	130-170°F	none to boiling
Optically OP7040 high index dip tank/dip process (CR-39, CR-387, CR-424 monomers)	monomer from molds and mold hardware	10-30%	140-180°F	none to boiling
Optically OP7090 spray wash cleaning (CR-387 & CR-424)	low to mid-index monomer residue; edge flash from lenses	3-15% (lenses) 15-20% (molds)	120-150°F (lenses) 140-165°F (molds)	none to boiling
Optical lens/glass cleaning products				
Optically OP7100 UPC bar-code safe; spray washing	finger oils, dust & shop particles	5-10%	100-160°F	none to boiling
Optically OP7101 UPC bar-code safe; spray washing	finger oils, shop particles & edge grinding particulate	5-10%	100-160°F	none to boiling
Optically OP7104 cleaning & etching prior to coating	finger oils, dust & shop particles	5-10% (spray) 3-5% (ultrasonics)	150°F 140-150°F	none to boiling
Optically OP7150 general purpose; to clean spray, spray solution immersion, & spray scrubbers	fingerprints, edge grinding dust, & airborne particles	5-10%	110-150°F	none to boiling
Optically OP7160 general purpose; electronic dip & precoat prior to etching	fingerprints, edge grinding dust, & airborne particles	8-12%	110-150°F	none to boiling
Optically OP7166 general purpose; extra strength dip tank cleaner, use prior to etching & for tough cleaning jobs.	fingerprints, excess monomer flash & airborne particles	5-20%	130-160°F	none to boiling



Our expert technical support staff will validate and implement a solution for your cleaning problem. And they'll help you accelerate the implementation cycle by testing and getting things right in our Applications Center, before reaching your facility and your machinery.

CLEANING SOLUTIONS

Optical mold/production hardware cleaning products

Optisolv OP7020

Very aggressive, high pH, mold cleaner designed to clean "high refractive index" monomer from molds and mold hardware. OP7020 can be used in either spray or dip type cleaning equipment. Due to its highly alkaline nature, normal safe-handling precautions must be taken when using OP7020.

Optisolv OP703 I

In-line spray wash formula designed to clean "low to mid-index" monomers such as CR-39, CR-307 and CR-424. Superior cleaning and rinsing allow for thorough cleaning and maximum throughput in a fast-paced production environment.

Optisolv OP7040

Similar characteristics as OP703 I for dip tank/batch applications. Designed to clean "low to mid-index" monomers.

Optisolv OP7090

OP7090 is a unique dual-use formulation designed to clean CR-307 & CR-424 monomer from molds, and also to clean lenses manufactured of the same material without damaging the substrate. OP7090 is used in spray applications to clean excess monomer from molds, and can be used to clean monomer flash from the edges of lenses without attacking the lens. Ideal product for customers desiring a single product to clean molds, mold flash on lenses, and general purpose lens cleaning.



Optisolv OP7100

A very mild, neutral pH, cleaner designed to clean without damaging UPC Bar Code information screen printed on optical lenses. A light duty cleaner capable of removing light oils and process residues in spray wash applications.

Optisolv OP7101

Higher pH version of OP7100. OP7101 is a more aggressive cleaner than OP7100 while still being safe on UPC Bar Code information. OP7101 is used in spray applications and can clean fingerprints and airborne contaminants from lenses.

Optisolv OP7104

A slightly acidic spray wash formula designed to clean and prepare lenses for coating in an in-line cleaning environment. Light duty cleaner for contaminant removal and mild etchant for surface preparation prior to lens hard coating. Also effective in dip tank ultrasonics applications.

Optisolv OP7150

General purpose in-line spray wash formula. OP7150 is an excellent product for cleaning fingerprints, edge grinding dust and airborne contaminants from lenses. Superior rinsing assures no ionic residue which may cause problems with coating adhesion. OP7150 is compatible with in-line spray-in-air, spray-under-immersion, and spray/scrubbing brush equipment.

Optisolv OP7160

Light to medium-duty dip tank lens cleaning formula. OP7160 works well with ultrasonic dip, straight dip with no sonics, and as a pre-soak prior to cleaning. Neutral pH provides excellent cleaning with no degradation to lens surface.

Optisolv OP7166

More aggressive, higher pH dip tank cleaner designed to handle tough cleaning jobs. OP7166 is particularly effective for cleaning lenses prior to coating process steps.

