

## Product Application

TechniStrip NI555 is a stripper dedicated to achieve complete dissolution of positive photoresists and negatives films such as AZ15nXT, AZ nLoF 2020 AZ40xT, AZ4999, P-CRS1000 WM ... utilized in far back end applications (TSV, Cu pillar, 3D patterning, metal lift off etc..).

TechniStrip NI555 is the utterly efficient at completely dissolving the Novolak melamine crosslinked resist such as AZ15nXt and AZnLoF compared to standard DMSO/amine strippers.

TechniStrip™ NI555 was developed to address fast and complete resist dissolution thus avoiding filter clogging and subsequent insoluble resin debris deposition encountered with most of standard stripping solutions.

TechniStrip® NI555 is based on a non hazardous mixture of water soluble organic solvents and special dissolution activators that can be tuned to meet customer process specifications (temperature, time, metal compatibility, surface roughness, fast lift off, high dissolution rate, etc...).

## Physico-Chemical properties

State: Uncolored Liquid blend

Water Solubility: Totally miscible

Odor: fruity odor

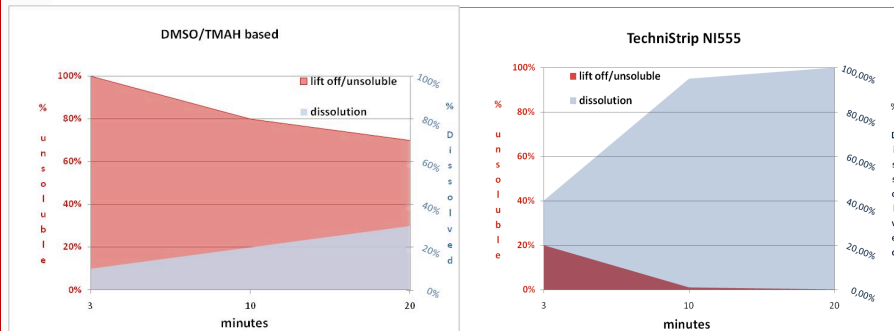
Safety: not labeled

T°C boiling: 190°C

Density : 0,97g/ml

T°C Flash point (Closed cup): 89°C

Impurity level: < 500ppb

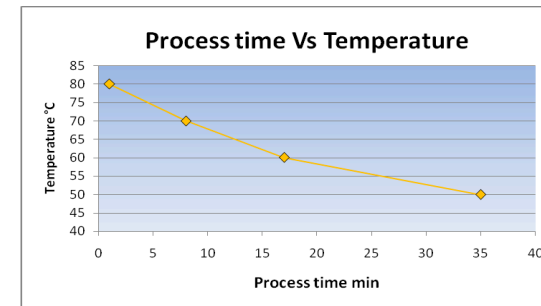


Graph showing the Lift off-insoluble debris / resin dissolution balance @ 60°C btw standard DMSO/TMAH solution and novel TechniStrip™ NI555 for AZ15nXT photoresist type.

Its tremendous cleaning performance and high dissolution kinetics make it suitable for applications ranging from batch, spray to single wafer tool platforms.

## General Process information

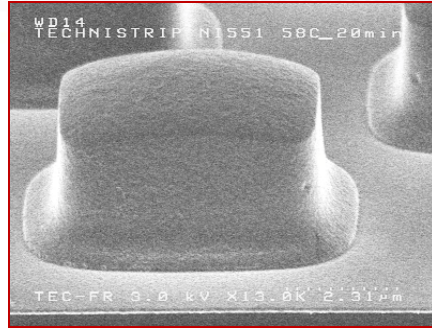
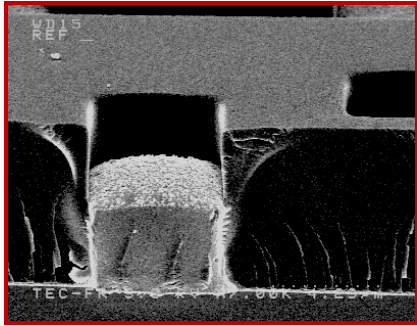
Stripping efficiency vs temperature



Change in time to clear AZ 15nXT (7µm) photoresist with temperature in Technistrip NI555.

Bath life: 24H @ 65°C or 25x 8" wafers with 7µm resin thick/liter

## SEM Micrographs on Copper features



Before and After stripping of 7µm AZ 15nXT in TechniStrip®NI555 @ 65°C for 10min, immersion with no agitation.

Complete dissolution of AZ15nXT achieved for all feature density, aspect ratio and geometry design (pillar, plug, line, trench, etc...) tested up to date.

## Material compatibility

ER in A/min @ 60°C	Static Immersion
Al(X%Cu)	<1
Cu (PVD)	<1
Ni, Sn	<1
Ta/TaN	<1
Ti/TiN/TiW	<1
Au	<1
Ag, Pd	<1
Undoped Si	<1

\* 4points probe measurement on blanket wafers.

\*\* Spectroscopic ellipsometer on blanket wafers.

\*\*\*Solution ICPMS after 48 hrs immersion of Cz 100 (p doped) 5 cm silicon sample.

## Equipment material compatibility

Immersion tests at 60°C for 1 week

COMPATIBILITY TechniStrip® NI series			
Viton	D	PP	D
PVDF	D	NBR	D
HDPE	B	Silicone	A
PTFE	A	VITON	D
PFA	A	SS-316i	A
LDPE	C	Kalrez	A
HDPE	B	Teflon	A

Ratings -- Chemical Effect

A = Excellent.

B = Good -- Minor Effect, slight corrosion or discoloration.

C = Fair -- Softening, Moderate effect continuou swelling may occur,.

D = Severe Effect, not recommended for ANY use.

Note: PP filter core attacked after 90 days

Incompatible with GaAs

## Quality

Technic' solutions are formulated using high purity and quality raw materials to ensure low ppb metal levels and particulate count. The

full manufacturing process is in accordance with the company quality policy (ISO9001-2008).

## Health, Safety and Environment

To obtain comprehensive information on the safe use and handling of the TechniStrip® NI555, a material safety data sheet is available on request.

**Technic' safety policy is to optimize and promote safer chemical to the industry in accordance to latest European regulation and Customer' chemical banned substance list.**

## Contact details

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