

# AMOLEA™ AS-300



AMOLEA™ AS-300 is a next generation HCFO neat solvent developed by AGC. AMOLEA AS-300 has a GWP < 1 and has excellent solvency (Kb value 44).

## Typical Applications

- Degreasing (cutting oils, press oils, silicone oils), greases, waxes, asphalt pitches
- Defluxing of printed wiring assemblies
- Carrier solvent for silicone oils, fluorinated greases, and others
- Replacement for nPB, TCE, PCE, DCM, 3M™ Novec™, Chemours Vertrel™, Honeywell Solstice® PF

## Benefits

- Non-flammable
- Global warming potential (GWP) is <1
- Zero ozone depletion potential (ODP)
- Excellent solvency for processing oils
- Thermally stable
- No additional stabilizers or surfactants required
- Can be used with ultrasonics
- High AEL (Acceptable Exposure Limit) 250ppm
- Recoverable by simple distillation
- Optimum boiling point (54°C) to use in cleaning applications
- Excellent solvency (Kb value 44) without trans-1,2-dichloroethylene

## Physical Properties

Property	AMOLEA AS-300
Boiling Point	54 °C (129.2 °F)
Density (g/cm <sup>3</sup> , 25 °C)	1.39
Viscosity (cST, 25 °C)	0.57
Surface Tension (mN/m, 25 °C)	21.7
Specific Heat (kJ/kg C)	1.34
Latent Heat of Vaporization (kJ/kg@boiling point)	213
Relative Evaporation Rate (Ether=100)	64
Flash Point (Open/Closed cup)	None
KB Value	44

## Solvency for Oils

Type of Oil	AMOLEA AS-300
Cutting Oil	50%
Tool Oil	50%
Quenching Oil	50%
Rolling Oil	50%
Anti-rust Oil	50%
Silicone Oil	50%



## Typical Applications

AMOLEA AS-300 is compatible with common metals, for example, steel (SSPC- SB), stainless steel (SS- 304), magnesium, aluminum, copper, and brass. AMOLEA AS-300 is compatible with many common materials under typical cleaning conditions. However, certain plastics and elastomers are affected by AMOLEA AS-300. It is recommended that material compatibility be tested prior to use. Table below is the effect on plastics and elastomers of AMOLEA AS-300, respectively. Test coupons were immersed into AMOLEA AS-300 for five minutes and three days at boiling point.

### Material Compatibility for Plastics

Material	At boiling for 5min			At boiling for 3 days		
	Weight Change (%)	Linear Swell (%)	Extractables (%)	Weight Change (%)	Linear Swell (%)	Extractables (%)
Polyvinyl chloride (rigid)	1.6	0.2	<0.1	37.8	7.2	3.2
Polyvinyl chloride (plasticized)	12.1	1.4	4.8	-2.3	-6.3	31.6
Polyethylene (HP)	0.1	0.2	<0.1	3.5	0.9	<0.1
Polyethylene (LP)	0.7	0.6	<0.1	6.3	1.6	0.1
Polypropylene	0.1	0.2	<0.1	7.7	1.7	0.2
Polystyrene	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved
Acrylic	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved
Polycarbonate	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved
ABS	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved
PTFE	<0.1	0.4	<0.1	0.3	0.3	<0.1
Epoxy (FR)	<0.1	<0.1	<0.1	0.2	0.2	<0.1
Nylon6	<0.1	0.2	<0.1	-0.2	-0.2	<0.1
Nylon66	<0.1	0.3	<0.1	0.3	0.3	<0.1
Polyethylene telephtarate	2.5	0.2	0.4	2.3	2.3	<0.1
Polyphenylene sulfide	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

### Material Compatibility for Elastomers

Material	At boiling for 3 days		
	Weight Change (%)	Linear Swell (%)	Extractables (%)
Natural rubber	13.9	2.4	10.8
Urethane rubber	197.4	36.1	0.3
Isobutylene isoprene rubber	2.8	-1.1	13.2
Polychloroprene	33.4	7.2	11.9
Fluoroelastomer	113.1	31.3	3.2
Chlorosulfonated polyethylene	29.0	5.7	12.0
Silicone rubber	132.3	25.4	2.4
Ethylene propylene diene terpolymer (EPDM)	14.3	1.8	12.2

### Environmental Health and Safety

Please read the Safety Data Sheet available through your AGCCA technical service representative and the precautionary statement on the product package prior to use. Follow all applicable precautions and directions.

AMOLEA AS-300 is nonflammable, and AEL is 250ppm 8 hours TWA. Please refer to the SDS (Safety Data Sheet) concerning other safety items.

### Environmental Properties

Property	AMOLEA AS-300
Ozone Depletion Potential (ODP), CFC-11 = 1.0	0.00002 (Measured by the AIST)
Global Warming Potential (GWP), CO <sub>2</sub> = 1.0, 100yr ITH	<1 (Measured by the AIST)
Acceptable Exposure Limit (AEL) 8h-TWA, [ppm]	250 (Set by AGC, Inc.)



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