

1. Introduction

AMOLEA™ AS-300 is a next generation fluorinated solvent developed by AGC. AMOLEA™ AS-300 is environmentally friendly and has excellent solvency.

2. Features

- 1) Non-flammable
- 2) Excellent solvency for processing oils
- 3) Thermally stable
- 4) Recyclable with distillation
- 5) Very low GWP (Global Warming Potential)

3. Physical Properties

Physical properties of AMOLEA™ AS-300 are shown in Table 1.

Table 1 Physical properties of AMOLEA™ AS-300

	Unit	AMOLEA™ AS-300
Boiling Point	[°C]	54
Density (25°C)	[kg/m ³]	1,390
Viscosity (25°C)	mPa·s	0.57
Surface tension (25°C)	[mN/m]	21.7
Specific heat(25°C)	[kJ/(kg·K)]	1.34
Latent heat of vaporization	[kJ/kg]	213
Relative evaporation rate (25°C)	Ether=100	64
KB value	[-]	44
Ozone Depletion Potential (ODP)	CFC-11=1	0.00002* ¹
Global Warming Potential (GWP)	CO ₂ =1, 100yr ITH	<1* ¹
Acceptable Exposure Limit (AEL)	8h-TWA, [ppm]	250* ²

*1 Measured by National Institute of Advanced Industrial Science and Technology (AIST)

*2 Set by AGC

4. Solvency for Oils

Solvency for oils of AMOLEA™ AS-300 is shown in Table 2. AMOLEA™ AS-300 has good solvency for various kind of oils.

Table 2 Solvency for oils of AMOLEA™ AS-300

Type of oils	AMOLEA™ AS-300
Cutting oil	50%
Tool oil	50%
Quenching oil	50%
Rolling oil	50%
Anti-rust oil	50%
Silicon oil	50%

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5. Material Compatibility

AMOLEA™ AS-300 is compatible with common metals, for example, steel (SPCC-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 3 is effect on plastics, and Table 4 is effect on elastomers of AMOLEA™ AS-300, respectively. Test coupons were immersed into AMOLEA™ AS-300 for 5 minutes at boiling point.

Table3 Effect on Plastics of AMOLEA™ AS-300

	Weight Change [%]	Linear Change [%]	Extractables [%]
Polyvinyl chloride (rigid)	1.6	0.2	<0.1
Polyvinyl chloride (plasticized)	12.1	1.4	4.8
High density Polyethylene	0.1	0.2	<0.1
Low density Polyethylene	0.7	0.6	<0.1
Polypropylene	0.1	0.2	<0.1
Polystyrene	Dissolved		
Polymethyl methacrylate (Acrylic)	Dissolved		
Polycarbonate	Dissolved		
Acrylonitrile-Butadiene-Styrene (ABS)	Dissolved		
PTFE	<0.1	0.4	<0.1
Epoxy	<0.1	<0.1	<0.1
Nylon 66	<0.1	0.3	<0.1
Polyethylene telephtarate	2.5	0.2	0.4
Polyphenylene sulfide	<0.1	<0.1	<0.1

Table4 Effect on Elastomers of AMOLEA™ AS-300

	Weight Change [%]	Linear Change [%]	Extractables [%]
Natural rubber	13.9	2.4	10.8
Urethane rubber	26.6	3.8	<0.1
Isobutylene isoprene rubber	2.4	0.4	1.0
Polychloroprene	7.9	1.6	1.6
Fluoroelastomer	15.9	4.8	0.4
Chlorosulfonated polyethylene	6.7	1.4	1.4
Silicone rubber	32.4	6.4	0.3
EPDM	5.3	1.4	1.1

*The data in this brochure were measured or taken from literature, and not guaranteed.

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