Lab Advisor Advanced

Number	Analysis	Method	Min. sample vol [ml]
1	Acid number	ASTM D664	25
2	Acid number, manually	ASTM D974	25
3	Air release (50°C or 75°C)	ASTM D3427/ISO 9120	180
4	Antioxidant	RULER	10
5	Appearance	Visual	10
6	Bacteria, Fungus, Yeast	Dip slide	10
7	Base number	ASTM D 2896	125
8	Biocide levels	UV/VIS	10
9	Booster, l/m3 (including XRF)	In-house	20
10	Colour	ASTM D1500	50
11	Concentration by acid split	SST 107	100
12	Concentration by refractometer	ASTM D1218	10
13	Conductivity	In-house	50
14	Corrosion - Copper (3h/100 °C)	ASTM D130	200
15	Corrosion test	DIN 51360/2	500
16	Density at 15°C	ASTM D4052	10
17	Element analysis (ICP)	ICP	25
18	Element analysis (XRF)	DIN 51399/ASTM D6443	20
19	Emulsion stability	SST 124	10
20	Ester by acid split (FTIR)	SST 114	100
21	Evaporative loss (Noack)	CEC L-40-A-93	85
22	Filterability (1,2µ filter)	CETOP	1000
23	Filterability SKF (12µ filter)	SKF / Fuchs	100
24	Flash point, COC	ASTM D92	75
25	Flash point, PM	ASTM D93	75
26	Foam for emulsions	SST 118	100
27	Foaming tendency/stability (50°C)	ASTM D892, mod	200
28	Foaming tendency/stability (only one seq)	ASTM D892	200
29	Foaming tendency/stability (seq I-III)	ASTM D892	400
30	FTIR, antioxidant rel. reference	In-house	10
31	FTIR, ester rel. reference	In-house	10
32	FTIR, identification rel. reference	In-house	10
33	Hydrolytic stability at 90°C after 120h and/or 190h	RR 1006	250
34	Nitration, metal processing	In-house	10
35	Particle count, microscope	ISO 4407 or DIN 51455	40

36	Particle count, optical	ISO 4406 acc. to ISO 11171	100
37	pH	DIN 51369	25
38	Polymer content, metal processing	In-house	100
39	Pour Point	ASTM D7346	10
40	Quench test	ASTM D6200	1000
41	Refractive index	BRIX	10
42	RPVOT (RBOT), single sample	ASTM D2272	120
43	Rust prevention	ASTM D665A	300
44	Rust prevention (sea water)	ASTM D665B	300
45	Solid contaminants	SST 101	10
46	Stability test (miscibility tests)	In-house	50
47	Total amine titration (TA)	In-house	50
48	Varnish potential	MPC	100
49	Water content, distillation	ASTM D95	100
50	Water content, KF (coulometric)	ASTM D6304 mod.	10
51	Water hardness, dH	In-house	10
52	Water separability (54°C or 82°C)	ASTM D1401	40
53	Viscosity at -20°C or -40°C	ASTM D445	200
54	Viscosity at 40°C or 100°C (HVM)	ASTM D445	60
55	Viscosity at 40°C or 100°C (Stabinger)	ASTM D7042	10
56	Viscosity index (req. visc at 40°C and 100°C)	ASTM D2270	See visc.
57	Viscosity, Brookfield (16 h)	ASTM D2983	200
58	Viscosity, Brookfield (3 h)	DIN 51398	200
59	Viscosity, CCS	ASTM D5293	120
60	Viscosity, MRV	ASTM D4684	200

Analysis - Miscibility test	Method	Min. Sample Vol. [ml]
Air release (50°C or 75°C)	ASTM D3427/DIN 51381	180
Appearance	Visual	10
Water Separability (54°C or 82°C)	ASTM D1401	40
Filterability (12 µ filter)	SKF	100
Foaming tendency/stability (seq I-III)	ASTM D892	400
Stability test	In-house	50

Standard analysis for water based metal processing fluids - 3 packages

MPF 1 - Standard (Solubles & Synthetics)	Method	Min. Sample Vol. [ml]
Bacteria, Fungus, Yeast	Dip slide	250 ml
pH	DIN 51369	
Concentration*	ASTM D1218/SST 107	
Total amine titration (TA)	In-house	

MPF 2 - Extended (Solubles & Synthetics)	Method	Min. Sample Vol. [ml]
Bacteria, Fungus, Yeast	Dip slide	250 ml
pH	DIN 51369	
Concentration*	ASTM D1218/SST 107	
Total amine titration (TA)	In-house	
Water hardness, dH	In-house	
Nitration, metal processing	In-house	
Conductivity	In-house	

MPF 3 - Synthetics extended	Method	Min. Sample Vol. [ml]
Bacteria, Fungus, Yeast	Dip slide	250 ml
pH	DIN 51369	
Concentration by refractometer	ASTM D1218	
Total amine titration (TA)	In-house	
Water hardness, dH	In-house	
Nitration, metal working	In-house	
Conductivity	In-house	
Polymer content, metal processing	In-house	

*Concentration is measured with two different methods depending on the fluid; by acid split (SST 107) for Solubles and by refractometer (ASTM D1218) for Synthetics.

Lead times (working days)

Water based metal processing fluids 3 days | Miscibility tests 15 days | Other analyses 10 days