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***SURFACTANTS FOR TEXTILE***

## AEO Type ( C12-14 Fatty Alcohol Ethoxylates)

Product	DP (EO)	Appearance (25 °C)	Color (Pt-Co)	Content (%)	Cloud point (°C)	Surface tension (mN/m)	HLB	Hydroxyl No. (mg KOH/g)	Wetting (s)	Foam height (mm)	Emulsify (s)
AEO 2403	3	Liquid	≤ 30	≥ 99.9	61.5 <sup>B</sup>	25.1	8.0	169±5	130	165	530
AEO 2405	5	Liquid	≤ 30	≥ 99.7	72.0 <sup>B</sup>	26.4	10.5	137±4	75	171	1050
AEO 2406	6	Liquid	≤ 30	≥ 99.7	76.0 <sup>B</sup>	27.4	11.5	122±4	60	173	1107
AEO 2407	7	Liquid	≤ 30	≥ 99.7	56.5 <sup>A</sup>	27.8	12.0	111±3	93	174	1115
AEO 2409	9	Paste/Liquid	≤ 30	≥ 99.7	79.5 <sup>A</sup>	30.1	13.5	97±3	178	175	1230
AEO 24079	7	Liquid	≤ 30	~ 90.0	56.5 <sup>A</sup>	27.8	12.0	111±3	93	174	1115

## IT Type (C13-Oxo Alcohol Ethoxylates)

Product	DP (EO)	Appearance (25 °C)	Color (Pt-Co)	Content (%)	Cloud point (°C)	Surface tension (mN/m)	HLB	Hydroxyl No. (mg KOH/g)	Wetting (s)	Foam height (mm)	Emulsify (s)
IT 1303	3	Liquid	≤ 40	≥ 99.9	50.5 <sup>B</sup>	26.7	9.0	167±5	>300	90	650
IT 1305	5	Liquid	≤ 40	≥ 99.7	65.0 <sup>B</sup>	27.0	10.5	130±5	21	103	990
IT 1306	6	Liquid	≤ 40	≥ 99.7	70.0 <sup>B</sup>	27.0	11.0	120±5	16	166	1345
IT 1307	7	Liquid	≤ 40	≥ 99.7	75.5 <sup>B</sup>	27.1	12.0	110±5	13	160	1355
IT 1308	8	Liquid	≤ 40	≥ 99.7	48.5 <sup>A</sup>	27.9	13.0	100±5	16	163	1410
IT 1309	9	Liquid	≤ 40	≥ 99.7	56.0 <sup>A</sup>	28.4	13.5	95±4	18	172	1225
IT 1310	10	Liquid	≤ 40	≥ 99.7	75.0 <sup>A</sup>	28.8	14.0	90±4	22	169	1155
IT 13109	10	Liquid	≤ 40	~ 90.0	75.0 <sup>A</sup>	28.8	14.0	90±4	22	169	1155
IT 1312	12	Paste	≤ 40	≥ 99.7	88.0 <sup>A</sup>	30.7	14.5	82±4	56	173	1125
IT 1330	30	Solid	≤ 40	≥ 99.7	>90.0 <sup>A</sup>	38.9	17.0	37±2	>300	174	530
IT 1340	40	Solid	≤ 40	≥ 99.7	>90.0 <sup>A</sup>	41.0	18.0	30±2	>300	174	430

## IP Type (C10-Guerbet Alcohol Ethoxylates)

Product	DP (EO)	Appearance (25 °C)	Color (Pt-Co)	Content (%)	Cloud point (°C)	Surface tension (mN/m)	HLB	Hydroxyl No. (mg KOH/g)	Wetting (s)	Foam height (mm)	Emulsify (s)
IP 1003	3	Liquid	≤ 40	≥ 99.7	43.0 <sup>B</sup>	28.2	9.0	200±5	15	57	370
IP 1005	5	Liquid	≤ 40	≥ 99.7	62.0 <sup>B</sup>	26.9	11.5	150±5	14	72	700
IP 1007	7	Liquid	≤ 40	≥ 99.7	71.5 <sup>B</sup>	27.6	13.0	122±5	27	114	670
IP 1008	8	Liquid	≤ 40	≥ 99.7	55.5 <sup>A</sup>	27.8	14.0	111±5	65	127	750
IP 1009	9	Liquid	≤ 40	≥ 99.7	68.5 <sup>A</sup>	28.5	14.5	100±5	124	137	680
IP 10079	7	Liquid	≤ 30	~ 85.0	71.5 <sup>B</sup>	27.6	13.0	122±5	27	114	670
IP 10089	8	Liquid	≤ 30	~ 85.0	55.5 <sup>A</sup>	27.8	14.0	111±5	65	127	750

## IPL Type (C10-Guerbet Alcohol Alkoxylates)

Product	Appearance (25 °C)	Color (Pt-Co)	Content (%)	Cloud point (°C)	Surface tension (mN/m)	HLB	Wetting (s)	Foam height (mm)	Emulsify (s)
IPL 1004	Liquid	≤ 40	≥ 99.7	52.0 <sup>B</sup>	27.4	10.5	14	85	660
IPL 1005	Liquid	≤ 40	≥ 99.7	63.5 <sup>B</sup>	27.0	11.5	13	116	870
IPL 1007	Liquid	≤ 40	≥ 99.7	71.5 <sup>B</sup>	27.6	13.0	16	143	940
IPL 1008	Liquid	≤ 40	≥ 99.7	55.5 <sup>A</sup>	27.3	14.0	19	150	720
IPL 1009	Liquid	≤ 40	≥ 99.7	68.5 <sup>A</sup>	27.6	14.5	26	170	700

## EFA Type (Isomeric Alcohol Alkoxylates)

Product	Appearance (25 °C)	Color (Pt-Co)	Content (%)	Cloud point (°C)	Surface tension (mN/m)	HLB	Wetting (s)	Foam height (mm)	Emulsify (s)
EFA 105	Liquid	≤ 40	≥ 99.7	61.0 <sup>D</sup>	29.1	10.5	17	110	940
EFA 120	Liquid	≤ 40	≥ 99.7	42.0 <sup>E</sup>	29.5	12.0	15	150	1100
EFA 130	Liquid	≤ 40	≥ 99.7	53.0 <sup>E</sup>	29.8	13.0	16	155	1150

## IN Type (C10-Oxo Alcohol Ethoxylates)

Product	Appearance (25 °C)	Color (Pt-Co)	Content (%)	Cloud point (°C)	Surface tension (mN/m)	HLB	Wetting (s)
IN 1003	Liquid	≤ 40	≥ 99.7	53.0 <sup>D</sup>	26.0	9.0	72
IN 1005	Liquid	≤ 40	≥ 99.7	67.0 <sup>D</sup>	26.2	11.5	50
IN 1006	Liquid	≤ 40	≥ 99.7	36.0 <sup>A</sup>	27.0	12.0	57
IN 1007	Liquid	≤ 40	≥ 99.7	60.0 <sup>A</sup>	27.4	13.0	67

## CEO Type (Bio-based Surfactants)

Product	Appearance (25 °C)	Color Gardner	Content (%)	Cloud point (°C)	Surface tension (mN/m)	Foam height (mm)	Emulsify (s)
CEO 2105	Liquid	≤ 6	≥ 99.6	70.0 <sup>B</sup>	36.0	150	400
CEO 2108	Liquid	≤ 6	≥ 99.6	76.0 <sup>B</sup>	35.1	171	465
CEO 2110	Liquid	≤ 6	≥ 99.6	79.5 <sup>B</sup>	34.6	172	850
CEO 2113	Liquid	≤ 6	≥ 99.6	78.0 <sup>A</sup>	34.8	175	905
CEO 2116	Liquid	≤ 6	≥ 99.6	67.0 <sup>C</sup>	33.6	174	800

## EL Type (Castor Oil Ethoxylates)

Product	DP (EO)	Appearance (25 °C)	Color Gardner	Content (%)	Surface tension (mN/m)	HLB	Spaonification No.	Emulsify (s)
EL 10	10	Liquid	≤ 6	≥ 99.7	—	6.0	119±4	—
EL 20	20	Liquid	≤ 6	≥ 99.7	38.6	10.0	90±5	560
EL 36	36	Liquid	≤ 6	≥ 99.7	39.6	13.5	65±3	588
EL 40	40	Liquid	≤ 6	≥ 99.7	39.5	13.5	62±3	580

## UPA Type (Fatty Alcohol Alkoxylates)

Product	Appearance (25 °C)	Color (Pt-Co)	Content (%)	Cloud point (°C)	Surface tension (mN/m)	HLB	Emulsify (s)
UPA 145	Liquid	≤ 50	≥ 99.5	78.0 <sup>A</sup>	36.3	13.5	1205

## FCB Type (Low Foaming Surfactants)

Product	Appearance (25 °C)	Color (Pt-Co)	Content (%)	Cloud point (°C)	Surface tension (mN/m)	Wetting (s)	Foam height (mm)	Emulsify (s)
FCB 100	Liquid	≤ 40	≥ 99.7	39.0 <sup>D</sup>	30.2	51	50	590
FCB 101	Liquid	≤ 40	≥ 99.7	41.0 <sup>A</sup>	29.6	32	85	675
FCB 342	Liquid	≤ 40	≥ 99.7	51.0 <sup>B</sup>	29.7	24	83	650
FCB 245	Liquid	≤ 40	≥ 99.7	24.5 <sup>A</sup>	30.0	66	83	820
FCB 254	Liquid	≤ 40	≥ 99.7	29.0 <sup>A</sup>	30.4	25	95	765

## TIE Type (Multi-functional Surfactants)

Product	Appearance (25 °C)	Color Gardner	Content (%)	Cloud point (°C)	Surface tension (mN/m)	Wetting (s)	Foam height (mm)	Emulsify (s)
TIE 4067	Liquid	≤ 4	≥ 67.0	≥ 90 <sup>A</sup>	33.5	97	175	1050
TIE 5067	Liquid	≤ 4	≥ 67.0	≥ 90 <sup>A</sup>	37.0	262	175	980

## BL Type (EO/PO/EO Copolymer)

Product	Appearance (25 °C)	Color (Pt-Co)	Content (%)	Cloud point (°C)	Surface tension (mN/m)	Foam height (mm)
BL 6100	Liquid	≤ 40	≥ 99.7	21.0 <sup>A</sup>	37.0	52
BL 6200	Liquid	≤ 40	≥ 99.7	30.0 <sup>A</sup>	40.8	154
BL 6400	Liquid	≤ 40	≥ 99.7	60.0 <sup>A</sup>	41.9	157
BL 10100	Liquid	≤ 40	≥ 99.7	40.0 <sup>B</sup>	—	50
BL 10400	Solid	≤ 80	≥ 99.5	81.5 <sup>B</sup>	—	—
BL 10500	Solid	≤ 80	≥ 99.5	≥ 90.0 <sup>A</sup>	—	—

## SES Type (Isomeric Alcohol Ethoxylate Sulfonate)

Product	Appearance (25 °C)	Color (Pt-Co)	Content (%)	pH value	Surface tension (mN/m)
SES 301	Viscous Liquid	≤ 60	≥ 70.0	7.0-10.0	44.5

## Special Surfactants

Product	Appearance (25 °C)	Color (Pt-Co)	Content (%)	Cloud point (°C)	Surface tension (mN/m)	Wetting (s)	Foam height (mm)
TE 3030	Liquid	≤ 120	≥ 99.6	67.5 <sup>A</sup>	35.3	119	174

## Stearyl Acrylate

Product	Appearance (25 °C)	Color (Pt-Co)	Content (%)	Hydroxyl No. (mg KOH/g)
LAE 1800	Solid	≤ 150	≥ 99.5	≤ 3

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### Test Methods

#### Cloud Point

A: 1% Aqueous

B: 5g Surfactant + 45g 25%BDG

C: 1wt% in 10% NaCl Aqueous

D: 5g Surfactant + 25g 25%BDG

E: 10% Aqueous

Color Pt-Co GB/T 9282.1-2008

Gardner GB/T 22295-2008

pH GB/T 6368-2008

Mositure GB/T 6283-2008

Surface Tension 1 g/L Surfactant, 25 °C

HLB Water Number

Viscosity:

Brookfield LVDV-II+ Pro, Spindle: LV1 or LV2, Speed: 6-60 rpm.

25wt% surfactant aqueous was tested when it is solid at R.T.

Saponification: GB/T 5534-2008

Amine Value: QB/T 2853-2007

Hydroxyl No.: GB/T 7383-2007

Wetting: GB/T 11983-2008

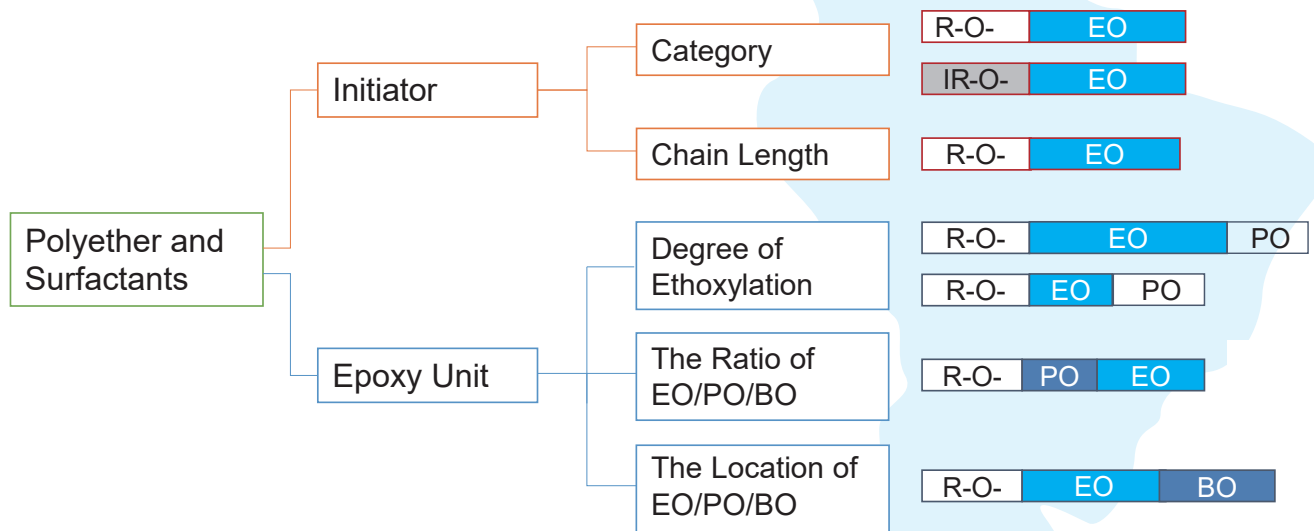
Foam Height:

Krüss DFA 100, 60 mL 1g/L surfactant aqueous, gas speed: 0.3L/min, pump time: 30s, 30 °C

Emulsify:

40 mL 1g/L surfactant aqueous and 40 mL 5# mineral oil was homogenized at 1,000 rpm for 60s, then recorded the spent time as 10 mL water was seperated

## Main Surfactant Types



The standard products are listed below. Other products can be available on request. Levima has extensive experience in product customization, we can customize products according to your requirements.





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