

**Customer:** HENRY HIRSCHEN CIA  
**Sales Order:** 2137026  
**Invoice #:** 13664  
**Customer PO:** 00024647  
**Oxiteno Product Name:** ALKEST TW 20  
**Lot:** 240414Z016658  
**Status:** Approved  
**Amount:** 3.15T  
**Manufacture Date:** 04/14/2024  
**Expiration Date:** 04/14/2026

Tests	Analytical Method	Minimum Limit	Maximum Limit	Results
Identification (IR)	MA-1188	---	---	Pass
C10 Capric, %	MA-1296		10.0	5.4
C12 Lauric, %	MA-1296	40.0	60.0	51.6
C14 Myristic, %	MA-1296	14.0	25.0	21.5
C16 Palmitic, %	MA-1296	7.0	15.0	11.5
C18 Stearic, %	MA-1296		11.0	2.8
C18:1 Oleic, %	MA-1296		11.0	2.2
C18:2 Linoleic, %	MA-1296		3.0	0.0
C6 Caproic, %	MA-1296		1.0	0.0
C8 Caprylic, %	MA-1296		10.0	4.8
Identification FCC	MA-1297	---	---	pass
Lauric Acid (C12) content, g/100g	MA-1298	15.0	17.0	16.8
Acid Value (C12), mgKOH/g	MA-1298	250.0	275.0	264.8
Oxyethylene Content, %	MA-1327	70.0	74.0	71.3

1,4 Dioxane, ppm	MA-1602		10	1
Ethylene Oxide, ppm	MA-1602		1	0
Hydroxyl value, mgKOH/g	MA-525	96.0	108.0	102.8
Sulphated Ashes, %p	MA-612		0.250	0.224
Acidity Index, mgKOH/g	MA-638		2.0	1.9
Viscosity, 25°C, BKF, cP	MA-664	275.0	480.0	395.6
Arsenic, as As, ppm	MA-705		1.0	< 0.0
Lead, as Pb, ppm	MA-705		1.0	0.3
Heavy metals, ppm	MA-724		10	1
pH, 5wt% aqueous solution, 25°C	MA-729	5.0	7.0	6.3
Peroxide value, mEq/1000g	MA-780		10.0	4.6
Density, 25°C, g/cm <sup>3</sup>	MA-798	1.080	1.120	1.097
Saponification value, mgKOH/g (w)	MA-810	40.00	50.00	47.76
Water, %p	MA-875		3.0	2.6
Gardner color, 25°C	MA-881		3.0	1.9

---