



SALES SPECIFICATION OF ULTRA-S BASE OILS

Item	Method	Ultra-S 2		Ultra-S 3		Ultra-S 4		Ultra-S 8	
		Specification	Typical	Specification	Typical	Specification	Typical	Specification	Typical
Appearance (Room Temp)	Visual	B & C	B & C	B & C	B & C	B & C	B & C	B & C	B & C
API @60°F	ASTM D-1298	Report	40.1	Report	39.0	Report	37.7	Report	35.5
Specific Gravity @15/4°C	ASTM D-1298	Report	0.825	Report	0.830	Report	0.836	Report	0.847
Color, Saybolt	ASTM D-156	Min +25	+30	Min +25	+30	Min +25	+30	Min +25	+30
Kinematic Viscosity @40°C, cSt	ASTM D-445	Report	7.269	Report	13.20	Report	19.64	Report	43.89
Kinematic Viscosity @100°C, cSt	ASTM D-445	1.9~2.4	2.201	3.0~3.5	3.260	4.0~4.4	4.250	7.0~7.5	7.234
Viscosity Index	ASTM D-2270	Min 100	109	Min 100	116	Min 120	123	Min 120	132
Pour Point, °C	ASTM D-97	Max -25	-37.5	Max -20	-25	Max -15	-20	Max -10	-15
Flash Point, COC, °C	ASTM D-92	Min 150	164	Min 170	204	Min 200	220	Min 240	256
Sulfur, ppm	ASTM D-129	Max 10	L1.0	Max 10	L1.0	Max 10	L1.0	Max 10	L1.0
Copper Corrosion	ASTM D-130	Max 1	1a	Max 1	1a	Max 1	1a	Max 1	1a
Total Acid No., mg KOH/g	ASTM D-974	Report	L0.01	Report	L0.01	Report	L0.01	Report	L0.01
Con. Carbon Residue, wt%	ASTM D-189	Max 0.05	L0.01	Max 0.05	L0.01	Max 0.05	L0.01	Max 0.05	L0.01
Noack Volatility, wt%	ASTM D-5800	—	—	Report	30.3	Max 15.5	14.6~15.1	—	—
CCS Viscosity @-25°C, cP	ASTM D-5293	—	—	-	600 @-30 °C	Report	1,380~1,520	—	—