

Cargille Immersion Oil Specifications

Standard Oils

Type of Oil:		Type A	Type B	Type 300
Catalog No.:		19552	19556	19563
Refractive Index @ 23° C:				
F Line (4861 Å)		1.5239	1.5236	1.5238
e Line (5461 Å)		1.5180	1.5180	1.5180
D Line (5893 Å)		1.5150	1.5150	1.5150
C Line (6563 Å)		1.5114	1.5115	1.5116
Dispersion:				
	$n_F - n_C$:	0.0125	0.0119	0.0123
	Abbe V_D :	41.3	43.2	41.8
	Abbe V_e :	41.0	42.8	41.5
Temperature Coefficient: (15-35°C)				
		-0.00033	-0.00031	-0.00033
Stability: (change in $n_D^{25^\circ C}$ after 24 hrs. @ temp.)				
	60°C:	0	0	0
	100°C:	0	0	0
Fluorescence (1): (Ultra-Violet)				
	Short Wave:	low	low	low
	Long Wave:	low	low	low
Color: (Gardner)				
		1	1	1
Viscosity: (centistokes)				
	$cSt \pm 10\% @ 23^\circ C$:	150 low	1250 high	300 medium
Density: @ 23° C				
	g/cc:	0.923	0.923	0.923
	(US) lb/gal:	7.70	7.70	7.70
Cloud Point:				
		<-13°C	<-13°C	<-13°C
Flash Point: (Cleveland Open Cup)				
		325°F	325°F	325°F
Neutralization No.:				
	(mg KOH/g)	0.01 max	0.01 max	0.01 max

(1) Relative to Cedarwood Oil

Cargille Immersion Oil Specifications

Special Immersion Oils

Type of Oil:		Type NVH	Type OVH	Type 37**
Catalog No.:		19562	19558	19559
Refractive Index @ 23° C:				
F Line (4861 Å)		1.5230	1.5230	1.5238
e Line (5461 Å)		1.5178	1.5178	1.5180
D Line (5893 Å)		1.5150	1.5150	1.5150
C Line (6563 Å)		1.5118	1.5118	1.5115
Dispersion:				
	$n_F - n_C$:	0.0113	0.0111	0.0123
	Abbe V_D :	45.7	46.3	42.0
	Abbe V_e :	45.4	46.0	41.7
Temperature Coefficient: (15-35°C)				
		-0.00034	-0.00034	-0.00035
Stability: (change in $n_D^{25^\circ C}$ after 24 hrs. @ temp.)				
	60°C:	0	0	0
	100°C:	0	0	0
Fluorescence (1): (Ultra-Violet)				
	Short Wave:	low	low	low
	Long Wave:	low	low	low
Color: (Gardner)				
		1	<3	1
Viscosity: (centistokes)				
	cSt \pm 10% @ 23°C:	21000 very high	46000 very high	1250 high
Density: @ 23° C				
	g/cc:	0.919	0.918	0.917
	(US) lb/gal:	7.67	7.66	7.73
Cloud Point:				
		<-13°C	<-13°C	<-13°C
Flash Point: (Cleveland Open Cup)				
		325°F	325°F	325°F
Neutralization No.: (mg KOH/g)				
		0.01 max	0.04 max	0.01 max

(1) Relative to Cedarwood Oil

** All values standardized at 37°C

Cargille Immersion Oil Specifications

Fluorescence Microscopy Immersion Oils

Type of Oil:		Type LDF	Type HF	Type FF
Catalog No.:		19564	19565	19566
Refractive Index @ 23° C:				
F Line (4861 Å)		1.5239	1.5234	1.4850
e Line (5461 Å)		1.5181	1.5180	1.4811
D Line (5893 Å)		1.5150	1.5150	1.4790
C Line (6563 Å)		1.5115	1.5117	1.4766
Dispersion:				
	$n_F - n_C$:	0.0125	0.0118	0.0084
	Abbe V_D :	41.3	43.8	57.0
	Abbe V_e :	41.0	43.6	56.5
Temperature Coefficient: (15-35°C)				
		-0.00036	-0.00038	-0.00037
Stability: (change in $n_D^{25^\circ C}$ after 24 hrs. @ temp.)				
	60°C:	-0.0004	+0.0001	0
	100°C:	-0.0043	+0.0006	0
Fluorescence (1): (Ultra-Violet)				
	Short Wave:	very low	very low	none
	Long Wave:	very low	very low	none
Color: (Gardner)				
		<1	<1	<1
Viscosity: (centistokes)				
	cSt \pm 10% @ 23°C:	500 medium	700 medium	170 low
Density: @ 23° C				
	g/cc:	0.984	.9306	0.877
	(US) lb/gal:	8.21	7.77	7.32
Cloud Point:				
		<-14°C	<2°C	<-6°C
Flash Point: (Cleveland Open Cup)				
		171°F	>340°F	420°F
Neutralization No.:				
	(mg KOH/g)	<0.01 max	0.03 max	0.01 max