

n_e 1.615192	v_e 58.09	$n_{F'} - n_{C'}$ 0.010591
n_d 1.612694	v_d 58.35	$n_F - n_C$ 0.010500

Class of bubbles	Viscosity temperature				
	η [Poise]	$10^{14.5}$	10^{13}	10^{10}	10^8
1	t [°C]	635	660	720	770

Relative partial dispersion deviations from the 'Normal Line'				
	$i - F'$	$g - F'$	$F' - e$	$F' - r$
ΔP	-0.015	+0.0007	+0.0007	-0.0024
Δv_e	-1.6	+0.5	+1.1	+3.3
	$i - F$	$g - F$	$F - e$	$F - r$
ΔP	-0.013	+0.0012	+0.0008	-0.0018
Δv_d	-1.3	+0.7	+1.4	+3.3

Stress optical coefficient B [$\text{nm} \cdot \text{cm}^{-1} / \text{kp} \cdot \text{cm}^{-2}$], $\lambda=550\text{nm}$	Thermal conductivity			
	-50°C	0°C	+20°C	+50°C
1.85	0.68	0.71	0.72	0.74

Young's modulus E [$\text{kp} \cdot \text{mm}^{-2}$]	Shear modulus G [$\text{kp} \cdot \text{mm}^{-2}$]	Coefficient of linear thermal expansion $\alpha_{20/t} \cdot 10^7$ [°C]	Chemical resistance		
			Stain resistance	Group	
8180	3228			III	
Poisson's ratio μ	Density ρ [$\text{g} \cdot \text{cm}^{-3}$]	+20 ÷ -60°C	+20 ÷ +120°C	Weather resistance	
		66	73	Group	A
0.267	3.56				

Optical density increment on irradiation		
Initial density D_0 [cm^{-1}]	Radiation dose [R]	Optical density increment ΔD [cm^{-1}]
0.050	$1 \cdot 10^4$	0.040
	$1 \cdot 10^5$	0.29

Refractive indices		
λ [nm]	n	
312.6	-	-
334.1	-	-
365.0	i	1.63862
404.66	h	1.63049
435.83	g	1.625734
479.99	F'	1.620598
486.13	F	1.619999
546.07	e	1.615192
587.56	d	1.612694
589.29	D	1.612600
643.85	C'	1.610007
656.27	C	1.609499
706.52	r	1.60769
768.2	-	1.60587
852.1	-	1.60389
1013.9	-	1.60101
1128.6	-	1.59937
1395.1	-	1.59605
1529.6	-	1.59445
1813.1	-	1.59097
1970.1	-	1.58890
2249.3	-	1.58485
2325.4	-	1.58366

Dispersion coefficients	
$v_h = \frac{n_h - 1}{n_i - n_g}$	48.9
$v_e = \frac{n_e - 1}{n_{F'} - n_{C'}}$	58.09
$v_d = \frac{n_d - 1}{n_F - n_C}$	58.35
$v_D = \frac{n_D - 1}{n_F - n_C}$	58.34
$v_{1529.6} = \frac{n_{1529.6} - 1}{n_{1013.9} - n_{2249.3}}$	36.8

Relative partial dispersions		
Δn	$\frac{\Delta n}{n_{F'} - n_{C'}}$	$\frac{\Delta n}{n_F - n_C}$
312.6 - 334.1	-	-
334.1 - i	-	-
i - h	0.768	0.774
h - g	0.4490	0.4529
g - F	0.5415	0.5462
g - F'	0.4849	0.4891
F - e	0.4539	0.4578
F - D	0.6986	0.7047
F' - e	0.5104	0.5149
d - D	0.0089	0.0090
D - C	0.2928	0.2953
e - C'	0.4896	0.4938
e - C	0.5375	0.5422
C' - r	0.219	0.221
C - r	0.171	0.173
r - 852.1	0.358	0.361
852.1 - 1013.9	0.272	0.274
1013.9 - 1128.6	0.155	0.156
1128.6 - 1395.1	0.313	0.316
1395.1 - 1529.6	0.151	0.152
1529.6 - 1813.1	0.329	0.332
1813.1 - 1970.1	0.196	0.197
1970.1 - 2249.3	0.382	0.385
2249.3 - 2325.4	0.112	0.113

Internal transmittance		
λ [nm]	τ_i (s=10mm)	τ_i (s=25mm)
280	-	-
300	-	-
320	-	-
340	0.360	0.078
360	0.754	0.494
380	0.912	0.794
400	0.964	0.913
420	0.980	0.951
440	0.983	0.958
460	0.987	0.968
480	0.990	0.975
500	0.993	0.983
520	0.995	0.987
540	0.996	0.990
560	0.996	0.990
580	0.995	0.987
600	0.995	0.987
620	0.994	0.985
640	0.993	0.983
660	0.993	0.983
680	0.993	0.983
700	0.993	0.983
750	0.994	0.985
800	0.991	0.978
900	0.988	0.971
1000	0.986	0.966
1050	0.986	0.966
1100	0.986	0.966
1200	0.987	0.968
1300	0.988	0.971
1400	0.984	0.960
1500	0.985	0.963

Refractive indices at laser wavelengths	
λ [nm]	n
350.7	-
356.4	-
488.0	1.61983
514.0	1.61756
520.8	1.61702
530.0	1.61633
568.2	1.61379
632.8	1.61048
647.1	1.60987
694.3	1.60810
890.0	1.60313
1060.0	1.60032

Radiation resistant analogue glass type-

TK116