

Philips Lighting Components

H.M.Brouwerstraat 1, 9672 AG Winschoten, The Netherlands

Philips colour pellets

Type: **PH2501 ... PH2524 Colour pellets**

Application: Studio glass, art work

Code: See table for standard 200kg drums.
Other packing quantities (1000kg BigBags) are also available

Type	Name	Code (200 kg drums)	
PH2501	Saphir blue	4322 112 74391	
PH2502	Green	4322 112 74431	
PH2503	Turquoise green	4322 112 74651	
PH2504	Aquamarin blue	4322 112 74161	
PH2505	Emerald green	4322 112 74541	
PH2506	Moss green	4322 112 74681	
PH2507	Mine blue	4322 112 74481	
PH2508	Smoke topaz	4322 112 74421	
PH2509	Yellow	4322 112 74491	
PH2510	Copper ruby	4322 112 74661	
PH2511	Dark green	4322 112 74691	
PH2512	Amethyst	4322 112 74171	
PH2513	Olive	4322 112 74601	
PH2514	Black	4322 112 74591	
PH2524	Opal	4322 112 74771	

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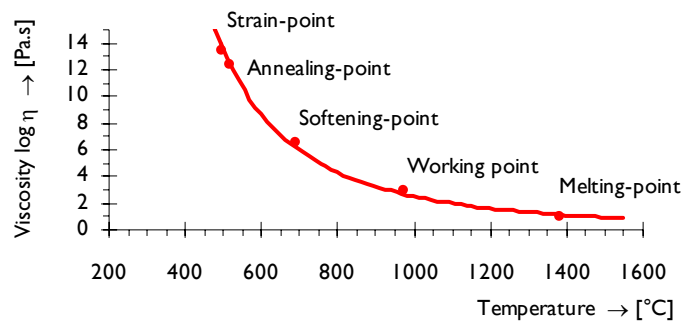
Technical data

(typical values for PH2501-2508 and PH2510-2514, for PH2509 and PH2524 see separate sheets)

Thermal properties

Coefficient of expansion	25-300 °C	10,0	°C ⁻¹ (x10 ⁻⁶)
	25-400 °C	10,5	°C ⁻¹ (x10 ⁻⁶)
Conductivity	20 °C		W.m ⁻¹ .°C ⁻¹
Viscosity data			
Strain point	10 ^{13,5} Pa.s	496	°C
Annealing point	10 ^{12,4} Pa.s	514	°C
Softening point	10 ^{6,6} Pa.s	686	°C
Working point	10 ³ Pa.s	971	°C
Melting point	10 ¹ Pa.s	1376	°C

Viscosity curve



Mechanical Properties

Density	20 °C	2,640	kg.m ⁻³ (x10 ³)
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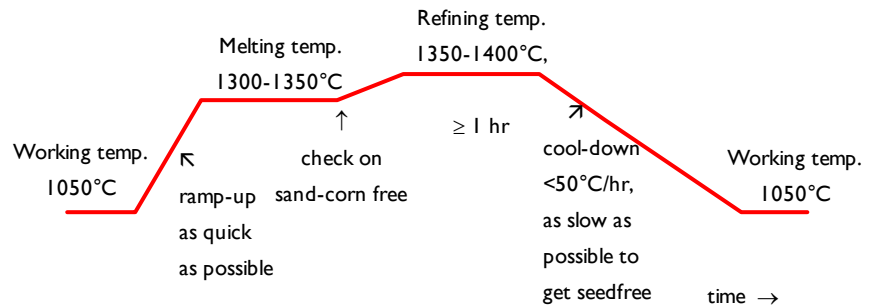
Composition (main components)

SiO ₂	65	%
Al ₂ O ₃	1	%
Na ₂ O	12	%
K ₂ O	4	%
CaO	7	%
BaO	7	%
ZnO	3	%

For using colour pellets we suggest the following working method;

Melting:

Suggested melting diagram

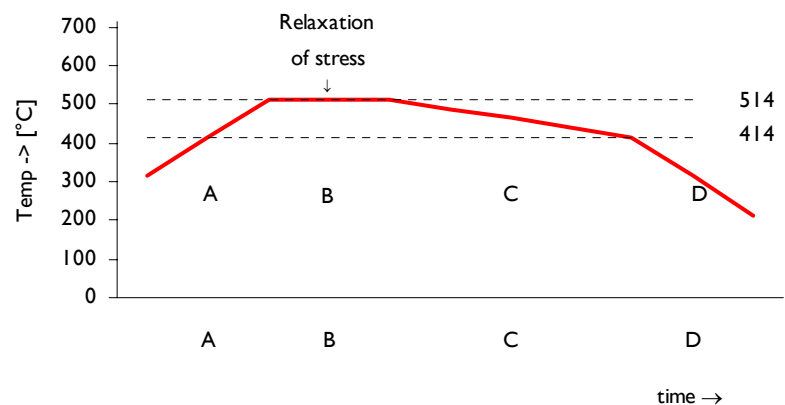


For starting we suggest to start charging with 10% of the pot content at each half hour. Later on you can optimize for your own production process.

Note; the melting and refining may differ due to melting-pot size and heating system. Since all systems have their own typical benefits, these instructions are only meant as directives. In case of problems we can support you with Technological assistance.

Annealing:

Annealing curve



The annealing rate largely depends on glass thickness;

thickness	0,5	1	5	10	15	cm
Stage A	400	100	4	1	0.5	°C/min
Stage B	15	15	15	15	15	minutes
Stage C	5	2.5	0.5	0.25	0.15	°C/min
Stage D	400	100	4	1	0.5	°C/min