

Specification

Rawmaterials for high transmittant ultra white glass

(Typical data)

Low Iron quartz-sand

Chemical composition

SiO_2 > 99,7 %
 Fe_2O_3 \leq 0,01 %
 Cr_2O_3 < 2 ppm

Grain size on sieve mesh size

> 0,7 mm 0 %
> 0,5 mm max. 2 %
> 0,355 mm 3 - 19 %
> 0,25 mm 25 - 60 %
> 0,125 mm 20 - 60 %
< 0,125 mm max. 4 %

Humidity

4,5 - 5,5 %

Soda ash

Chemical composition

Na_2CO_3 $99,6 \pm 0,2\%$
 NaCl < 0,15 %
 Na_2SO_4 < 0,2 %
 Fe_2O_3 < 0,001 %

Grain size on sieve mesh size

> 2 mm 0 %
> 1 mm max. 5 %
> 0,125 mm Rest
< 0,125 mm max. 5 %
< 0,063 mm max. 1 %

Humidity

< 0,2 %

Low Iron Dolomite

Chemical composition
(Average value has to be even)

CaO	30,7 ± 0,5 %
MgO	21,5 ± 0,5 %
Fe ₂ O ₃	< 0,01 %
Al ₂ O ₃	0,01 %
SiO ₂	0,02 %

Grain size on sieve mesh size

> 2 mm	< 1 %
> 1 mm	< 25 %
> 0,5 mm	< 50 %
> 0,25 mm	60 – 85 %
< 0,063 mm	< 5 %

Humidity

< 0,1 %

Lime

Chemical composition
(Average value has to be even)

CaO	55 ± 0,2 %
MgO	0,5 ± 0,1 %
Fe ₂ O ₃	< 0,10 %
Al ₂ O ₃	0,1 ± 0,05 %
SiO ₂	0,5 ± 0,1 %

Grain size on sieve mesh size

> 2,0 mm	max. 0,5 %
> 1,0 mm	max. 35 %
> 0,1 mm	Rest
< 0,1 mm	max. 25 %

Humidity

< 0,1 %

Sulfate

Chemical composition

Na ₂ SO ₄	> 99,0%
NaCl	< 1,0 %
Heavy minerals	max. 50 ppm

Grain size on sieve mesh size

> 0,5 mm	max. 0,25 %
> 0,35 mm	max. 3 %
> 0,25 mm	max. 25 %
> 0,125 mm	Rest
< 0,125 mm	max. 20 %
< 0,063 mm	max. 1 %

Humidity

< 0,5 %

Feldspa

Chemical Composition (Average value has to be even)

SiO ₂	88,0 ± 0,1 %
Al ₂ O ₃	6,2 ± 0,1 %
K ₂ O	5,2 ± 0,1 %
Fe ₂ O ₃	0,15 ± 0,2 %
TiO ₂	< 0,025 %

Grain size on sieve mesh size

> 0,5 mm	0 %
> 0,355 mm	max. 20 %
> 0,25 mm	max. 45 %
> 0,125 mm	Rest
< 0,125 mm	max. 5 %
< 0,063 mm	0 %

Humidity

4,5 - 5,5 %

Lost on ignition

< 0,3 %

Coal-powder

Chemical Composition

C	88 - 98 %
S	< 1.0 %
N ₂	< 0.2 %
MnO	< 0.2 %
Cr ₂ O ₃	< 1 %
Loss on ignition	< 12 %

Grain size on sieve mesh size

> 0,500 mm	max. 1 %
> 0,350 mm	max. 20 %
> 0,125 mm	Rest
< 0,063 mm	max. 2 %

Humidity

< 1,0 %

Ruge (Fe₂O₃)

Chemical Composition

Fe ₂ O ₃	96 - 98,5 %
SiO ₂	< 2,0 %
Al ₂ O ₃	< 1,5 %
MnO	< 0,2 %
Cr ₂ O ₃	< 0,02 %

Grain size on sieve mesh size

> 90 μm	0 %
> 64 μm	max. 7 %
> 16 μm	> 50 %
< 5 μm	max. 20 %

Humidity

< 0,2 %

Filter dust

The chemical composition of filter dust from the waste gas cleaning depends on the adsorbents being used. By use of $\text{Ca}(\text{OH})_2$ the filter dust mainly consists of CaSO_3 / CaSO_4 .. If Na_2CO_3 is used, the resulting products will be Na_2SO_3 / Na_2SO_4 .

Filter dust will mainly be generated as a fine powder $< 100 \mu\text{m}$.

General demands on raw materials

Inclusions as concrete, tiny stones, metal, wooden particles, etc. will influence the glass melting process and will cause defects. Therefore these particles are to be avoided. Contamination with chromium, spinels and other heavy non metallic minerals bigger than 0,2 mm should also be avoided.

