Subpart CC-Standards of Performance for Glass Manufacturing Plants

Applicability and designation of affected facility - §60.290

General	1.) Glass melting furnace facilities. 2.) Facility commences construction or modification after June 15, 1979. 3.) This subpart does not apply to hand glass melting furnaces, glass melting furnaces designed to produce less than 4,550 kilograms of glass per day and all-electric melters.

Standards for particulate matter - §60.292

Source	Emission Standards
General	1.) Conversion of a glass melting furnace to the use of liquid fuel is not considered a modification for the purposes of §60.14. 2.) Rebricking and the cost of rebricking is not considered a reconstruction for the purposes of §60.15. 3.) An owner or operator of an experimental furnace is not subject to the requirements of §60.292.
Glass melting furnace fired exclusively with gaseous fuel	Facility shall not cause to be discharged into the atmosphere particulate matter at emission rates exceeding: 1.) Container glass — 0.1 g of particulate/Kg of glass produced 2.) Pressed and blown glass a.) Borosilicate Recipes — 0.5 g of particulate/Kg of glass produced b.) Soda-Lime and Lead Recipes — 0.1 g of particulate/Kg of glass produced c.) Other-Than Borosilicate Soda-Lime, and LeadRecipes (including opal, fluoride, and other recipes) = — 0.25 g of particulate/Kg of glass produced 3.) Wool fiberglass = — 0.25 g of particulate/Kg of glass produced 4.) Flat glass = — 0.225 g of particulate/Kg of glass produced
Glass melting furnace fired exclusively with liquid fuel	Facility shall not cause to be discharged into the atmosphereparticulate matter at emission rates exceeding 1.) Container glass — 0.13 g of particulate/Kg of glass produced 2.) Pressed and blown glass a.) Borosilicate Recipes — 0.65 g of particulate/Kg of glass produced b.) Soda-Lime and Lead Recipes — 0.13 g of particulate/Kg of glass produced c.) Other-Than Borosilicate Soda-Lime, and LeadRecipes (including opal, fluoride, and other recipes) — 0.325 g of particulate/Kg of glass produced 3.) Wool fiberglass — 0.325 g of particulate/Kg of glass produced 4.) Flat glass — 0.225 g of particulate/Kg of glass produced
Glass melting furnace, fired simultaneously with gaseous and liquid fuels	Facility shall not cause to be discharged into the atmosphere particulate matter at emission rates exceeding STD as specified by the following equation: STD=X [1.3(Y)+(Z)] For variables and units se section §60.292 (a) (2)

Standards for particulate matter from glass melting furnace with modified-processes - §60.293

Source	Emissions
General	1.) Facilities not subject to the provisions of §60.292 if the affected facility complies with the provisions of this section. 2.) Test methods and procedures as specified in §60.296 shall be used to determine compliance. See §60.293 (e) for exceptions.
Container glass, flat glass, and pressed and blown glass with a soda-lime recipe melting furnaces	1.) Facility shall not discharge into the atmosphere particulate matter at emission rates exceeding 0.5 gram of particulate per kilogram of glass produced (g/kg) as measured according to §60.293 (e) 2.) Facility shall install, calibrate, maintain, and operate a continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the affected facility. See §60.293 (c) for monitoring requirements, opacity averages and (d) additional requirements.
Pressed and blown glass with a borosilicate recipe melting furnace.	1.) Facility shall not discharge into the atmosphere particulate matter at emission rates exceeding 1.0 g/kg as measured according to paragraph §60.293 (e). 2.) Facility shall install, calibrate, maintain, and operate a continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the affected facility. See §60.293 (c) for monitoring requirements, opacity averages and (d) additional requirements.
Textile fiberglass and wool fiberglass melting furnaces	1.) Facility shall not discharge into the atmosphere particulate matter at emission rates exceeding 0.5 g/kg as measured according to paragraph §60.293 (e) of this section. 2.) Facility shall install, calibrate, maintain, and operate a continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the affected facility. See §60.293 (c) for monitoring requirements, opacity averages and (d) additional requirements.
Glass melting furnace using modified processes and fired with either a gaseous fuel or a liquid fuel containing less than 0.50 weight percent sulfur,	Method 5 shall be used with the probe and filter holder heating system in the sampling train set to provide a gas temperature of 120±14 °C.

Test methods and procedures - §60.296

Source	Methods and procedures
General	1.) Facility shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). 2.) Facility shall determine compliance with the particulate matter standards in §§60.292 and 60.293 as stated in §60.296 (d) (1-4). a.) The emission rate (E) of particulate matter shall be computed for each run using the following equation: E=(csQsd-A)/P b.) Method 5 shall be used to determine the particulate matter concentration (cs) and volumetric flow rate (Qsd) of the effluent gas. c.) Method 9 and the procedures in §60.11 shall be used to determine opacity.
Glass melting furnace with modified processes is changed to one without modified processes or if a glass melting furnace without modified processes is changed to one with modified processes	Facility shall notify the Administrator at least 60 days before the change is scheduled to occur
Gaseous and liquid fuels are fired simultaneously in a glass melting furnace	Facility shall determine the applicable standard as follows: 1.) The ratio (Y) of liquid fuel heating value to total (gaseous and liquid) fuel heating value fired in the glass melting furnaces shall be computed for each run using the following equation: Y=(Hl L)/(Hl L+Hg G) 2.) Suitable methods shall be used to determine the rates (L and G) of fuels burned during each test period and a material balance over the glass melting furnace shall be used to confirm the rates. 3.) American Society of Testing and Materials (ASTM) Method D 240-76 (liquid fuels) and D 1826-77 (gaseous fuels) (incorporated by reference-see §60.17), as applicable, shall be used to determine the gross calorific values.