

**STANDARDS FOR INCINERATION OF MSW PROPOSED IN THE FINAL DRAFT OF THE
MUNICIPAL SOLID WASTES (MANAGEMENT AND HANDLING) RULES, 2015
[At schedule II A (11) (c)]**

The incinerators shall meet the following standards, namely:-

Emission standards

The stack emission standards for Incinerator/Thermal technologies in Solid Waste treatment/disposal facility:-

Parameter	Emission standard	
Particulates	50 mg/Nm ³	Standard refers to half hourly average value
HCl	50 mg/Nm ³	Standard refers to half hourly average value
SO₂	200 mg/Nm ³	Standard refers to half hourly average value
CO	100 mg/Nm ³	Standard refers to half hourly average value
	50 mg/Nm ³	Standard refers to daily average value
Total Organic Carbon	20 mg/Nm ³	Standard refers to half hourly average value
HF	4 mg/Nm ³	Standard refers to half hourly average value
NO_x (NO and NO₂ expressed as NO₂)	400 mg/Nm ³	Standard refers to half hourly average value
Total dioxins and furans	0.1 ng TEQ/Nm ³	Standard refers to 6-8 hours sampling. Please refer guidelines for 17 concerned congeners for toxic equivalence values to arrive at total toxic equivalence.
Cd + Th + their compounds	0.05 mg/Nm ³	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
Hg and its compounds	0.05 mg/Nm ³	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
Sb + As + Pb + Cr + Co + Cu + Mn + Ni + V + their compounds	0.5 mg/Nm ³	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
Note: All values corrected to 11% oxygen on a dry basis.		

Note:

- (i) Suitably designed pollution control devices shall be installed or retrofitted with the incinerator to achieve the above emission limits, if necessary.
- (ii) Waste to be incinerated shall not be chemically treated with any chlorinated disinfectants.
- (iii) Chlorinated plastics shall not be incinerated.
- (iv) Toxic metals in incineration ash shall be limited within the regulatory quantities as specified in the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules, 2008, as amended from time to time.
- (v) Only low sulphur fuel like LDO or LSHS or Diesel shall be used as fuel in the incinerator.
- (vi) The CO₂ concentration in tail gas shall not be less than 7%.
- (vii) All the facilities in twin chamber incinerators shall be designed to achieve a minimum temperature of 950°C in secondary combustion chamber and with a gas residence time in secondary combustion chamber not less than 2 (two) seconds.
- (viii) Incineration plants shall be operated (combustion chambers) with such temperature, retention time and turbulence, as to achieve total Organic Carbon (TOC) content in the slag and bottom ashes less than 3%, or their loss on ignition is less than 5% of the dry weight.

18	Fluoride (as F), mg/l, max	2.0	1.5	-
19	Phenolic compounds (as C ₆ H ₅ OH) mg/l, max.	1.0	5.0	-

Note : While discharging treated leachates into inland surface waters, quantity of leachates being discharged and the quantity of dilution water available in the receiving water body shall be given due consideration.

C. Standards for incineration:

The incinerators shall meet the following standards, namely:-

Emission standards

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