

Tarmac Cement
 National Laboratory
 Yelsway Lane
 Waterhouses
 Staffordshire
 ST10 3AZ

10/03/2026

Composition of Fly Ash

Tudela Fly Ash EN 450-1 LOI Cat. B, Fineness Cat.N 0086-CPR-756089

Based on the **December 2025** monthly composite sample: 5751

Property			Value	BS EN 450-1 Limit
Fineness (Residue)	45µm	%	9.5	Declared Value 15% ± 10% (Tested in accordance with BS EN 450-1 cl. 5.3.1)
APD		g/cm ³	2.49	< 200kg/m ³ from declared value
28 Day Activity Index – Nov sample		%	76	>75%
90 Day Activity Index – Oct sample		%	93	>85%
Sulfate	SO ₃	%	1.03	≤ 3.0%
Loss on Ignition	LOI	%	6.03	≤ 7.0%
Chloride	Cl ⁻	%	0.01	≤ 0.1%
Calcium Oxide	CaO	%	7.82	≤ 10.0%
SiO ₂ + Al ₂ O ₃ + Fe ₂ O ₃	-	%	78.18	≥ 70.0%
Free Lime	-	%	0.28	≤ 1.5%
Alkalis	Na ₂ Oeq	%	0.67	≤ 5.0%
Declared Mean Alkali Content	Na ₂ Oeq	%	1.50	-
Declared Maximum Chloride Content	Cl ⁻	%	0.05	-

*BS EN 933-10:2009 method replacing the 63 µm sieve with a 45 µm sieve

For and on behalf of Tarmac Cement:



Cristiana Morariu

Senior Manager – Technical Commercial – Tarmac Cement

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Conformity of Fly Ash to BS 8500-2: Annex B
Tudela EN 450-1 Fly Ash
0086-CPR-756089

Based on the composite samples for the month of: December 2025

Constituent	Source
EN 450-1 Fly Ash	Tudela
EN 197-1 CEM II A-L	Cauldon

The results of compressive strength testing (in accordance with BS EN 196-1)
on a 70:30 blend of CEM II A-L with fly ash were:

2 Day Strength (MPa)	22.3
28 Day Strength (MPa)	47.6

Based on equivalent results obtained for the last 2 months, the permitted proportions of combinations
conforming to the requirements of Annex B of BS 8500-2 are:

Strength Class of Combination	Fly Ash Content (%)	
	Min	Max
32,5N	22	44
42,5N	6	31

BS 8500-2 Combination Designation	Fly Ash Content (%)	
	Min	Max
CIIB-M	6	29
CIIC-M	16	44

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Conformity of Fly Ash to BS 8500-2: Annex B
Tudela EN 450-1 Fly Ash
0086-CPR-756089

Based on the composite samples for the month of: December 2025

Constituent	Source
EN 450-1 Fly Ash	Tudela
EN 197-1 CEM I	Lagerdorf

The results of compressive strength testing (in accordance with BS EN 196-1)
on a 70:30 blend of CEM I with fly ash were:

2 Day Strength (MPa)	18.3
28 Day Strength (MPa)	47.6

Based on equivalent results obtained for the last 6 months, the permitted proportions of combinations
conforming to the requirements of Annex B of BS 8500-2 are:

Strength Class of Combination	Fly Ash Content (%)	
	Min	Max
32,5N	20	45
42,5N	6	30

BS 8500-2 Combination Designation	Fly Ash Content (%)	
	Min	Max
CIIB-M	6	29
CIIC-M	16	44

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Conformity of Fly Ash to BS 8500-2: Annex B
Tudela EN 450-1 Fly Ash
0086-CPR-756089

Based on the composite samples for the month of: December 2025

Constituent	Source
EN 450-1 Fly Ash	Tudela
EN 197-1 CEM I	Lemona

The results of compressive strength testing (in accordance with BS EN 196-1)
on a 70:30 blend of CEM I with fly ash were:

2 Day Strength (MPa)	22.6
28 Day Strength (MPa)	49.3

Based on equivalent results obtained for the last 7 months, the permitted proportions of combinations
conforming to the requirements of Annex B of BS 8500-2 are:

Strength Class of Combination	Fly Ash Content (%)	
	Min	Max
32,5N	23	46
42,5N	6	33

BS 8500-2 Combination Designation	Fly Ash Content (%)	
	Min	Max
CIIB-M	6	29
CIIC-M	16	44

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Conformity of Fly Ash to BS 8500-2: Annex B
Tudela EN 450-1 Fly Ash
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Based on the composite samples for the month of: December 2025

Constituent	Source
EN 450-1 Fly Ash	Tudela
EN 197-1 CEM I	Oggaz

The results of compressive strength testing (in accordance with BS EN 196-1)
on a 70:30 blend of CEM I with fly ash were:

2 Day Strength (MPa)	20.8
28 Day Strength (MPa)	47.2

Based on equivalent results obtained for the last 6 months, the permitted proportions of combinations
conforming to the requirements of Annex B of BS 8500-2 are:

Strength Class of Combination	Fly Ash Content (%)	
	Min	Max
32,5N	21	44
42,5N	6	29

BS 8500-2 Combination Designation	Fly Ash Content (%)	
	Min	Max
CIIB-M	6	29
CIIC-M	16	44

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