

Tarmac Cement
 National Laboratory
 Yelsway Lane
 Waterhouses
 Staffordshire
 ST10 3AZ

28/04/2026

Composition of Fly Ash

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

Based on the **February 2026** monthly composite sample: 0705

Property			Value	BS EN 450-1 Limit
Fineness (Residue)	45µm	%	9.8	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 – Jan sample		%	79	>75%
90 Day Activity Index – Dec sample		%	90	>85%
Sulfate	SO ₃	%	0.95	≤ 3.0%
Loss on Ignition	LOI	%	5.84	≤ 7.0%
Chloride	Cl ⁻	%	0.01	≤ 0.1%
Calcium Oxide	CaO	%	7.29	≤ 10.0%
SiO ₂ + Al ₂ O ₃ + Fe ₂ O ₃	-	%	78.69	≥ 70.0%
Free Lime	-	%	0.26	≤ 1.5%
Alkalis	Na ₂ Oeq	%	0.74	≤ 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 – Technical Commercial Manager
 Tarmac Cement**

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 Registered address for all companies: T3 Trinity Park, Bickenhill Lane, Birmingham, B37 7ES

T3 Trinity Park, Bickenhill Lane,
 Birmingham, B37 7ES
0345 812 6232 info-cement@tarmac.com

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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: February 2026

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)	21.9
28 Day Strength (MPa)	45.3

Based on equivalent results obtained for the last 4 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	43
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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Based on the composite samples for the month of: February 2026

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

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)	19.1
28 Day Strength (MPa)	47.8

Based on equivalent results obtained for the last 8 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	46
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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Based on the composite samples for the month of: February 2026

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)	23.4
28 Day Strength (MPa)	49.8

Based on equivalent results obtained for the last 9 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	45
42,5N	6	32

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

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Based on the composite samples for the month of: February 2026

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)	21.6
28 Day Strength (MPa)	46.5

Based on equivalent results obtained for the last 8 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	30

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

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