

- Name and identification code: (AF)-0/4-T-A
- Name and contact address of the manufacturer: SIDENOR ACEROS ESPECIALES S.L. Barrio Ugarte s/n 48970- Basauri (BIZKAIA)
- Intended use: Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas
- System of assessment and verification of constancy of performance: SISTEMA 2+.
- Notified body:
Name and no: TECNALIA R&I CERTIFICACIÓN, no 1239
Task performed: CONTINUOUS ASSESSMENT OF FACTORY PRODUCTION CONTROL
Assessment system: SISTEMA 2+
Document issued: FPC CERTIFICATE no 1239/CPR/0821201
Date of issue: 18/01/2019
- Certified standard: EN 13043:2002+AC:2004
- Declared performances:

ESSENTIAL CHARACTERISTICS	PERFORMANCE
Particle shape, size and density	
Particle size.....	0/4 (d/D)
Granulometry.....	G _F 85 / G _T 20
Particle shape	NPD
Particle density.....	3.9 ± 0.2 Mg/m ³
Cleanliness:	
Fines content.....	f ₃
Sand equivalent	>80
Methylene blue.....	MB _F NT
Percentage of crushed or broken coarse aggregate particles	NPD
Affinity to bituminous binders	NPD
Resistance to coarse aggregate fragmentation / crushing	NPD
Resistance to coarse aggregate polishing, abrasion, wear:	
Resistance to coarse aggregate polishing for wearing courses	NPD
Resistance to surface abrasion.....	NPD
Resistance to coarse aggregate wear.....	NPD
Resistance to thermal shock	NPD
Volume stability	
Disintegration of air-cooled blast furnace slag dicalcium silicate.....	NPD
Disintegration of air-cooled blast furnace slag iron.....	NPD
Steelmaking slag aggregate volume stability.....	V _{3.5}
Composition/ Content:	
Heavy metal leaching.....	Complies*
Freeze-thaw resistance	NPD
Durability against weathering	NPD
Durability against studded tyres	NPD
Durability against thermal shock	NPD

* Limit values for heavy metal leaching (mg/kg), in accordance with Point 1 of Annex II to Decree 64/2019. Bound applications (type 1)

The product performances identified in point 1 are in conformity with the declared performances in point 7.
This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 2.



Emilio Hidalgo Perez
Environment and Energy Manager

Basauri, April 30th, 2019

Other use-relevant results relevant not included in EN 13043:2002+/AC:2004 standard:

Expansivity.....	≤ 0.5%
Free lime content.....	≤ 0.5%
Magnesium oxide content.....	≤ 7.5%
Total sulphur	< 1%
Water-soluble sulphates.....	< 0.2%
Humus content.....	Negative
Lightweight pollutants.....	< 0%
Water Absorption.....	2%

- Name and identification code: (AG)-4/8-T-A
- Name and contact address of the manufacturer: SIDENOR ACEROS ESPECIALES S.L. Barrio Ugarte s/n 48970- Basauri (BIZKAIA)
- Intended use: Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas
- System of assessment and verification of constancy of performance: SISTEMA 2+.
- Notified body:
Name and no: TECNALIA R&I CERTIFICACIÓN, no 1239
Task performed: CONTINUOUS ASSESSMENT OF FACTORY PRODUCTION CONTROL
Assessment system: SISTEMA 2+
Document issued: FPC CERTIFICATE no 1239/CPR/0821201
Date of issue: 18/01/2019
- Certified standard: EN 13043:2002+AC:2004
- Declared performances:

ESSENTIAL CHARACTERISTICS	PERFORMANCE
Particle shape, size and density	
Particle size.....	4/8 (d/D)
Granulometry.....	G _c 85/20 / G _{25/15}
Particle shape.....	Fl ₁₀
Particle density.....	3.9 ± 0.2 Mg/m ³
Cleanliness:	
Fines content.....	f ₁
Sand equivalent	NPD
Methylene blue.....	NPD
Percentage of crushed or broken coarse aggregate particles	C _{100/0}
Affinity to bituminous binders	NPD
Resistance to coarse aggregate fragmentation / crushing	LA ₂₀
Resistance to coarse aggregate polishing, abrasion, wear:	
Resistance to coarse aggregate polishing for wearing courses	PSV ₅₆
Resistance to surface abrasion.....	NPD
Resistance to coarse aggregate wear	NPD
Resistance to thermal shock	NPD
Volume stability	
Disintegration of air-cooled blast furnace slag dicalcium silicate	NPD
Disintegration of air-cooled blast furnace slag iron	NPD
Steelmaking aggregate slag volume stability.....	V _{3.5}
Composition/ Content:	
Heavy metal leaching.....	Complies*
Freeze-thaw resistance	MS ₁₈
Durability against weathering	NPD
Durability against studded tyres	NPD
Durability against thermal shock	NPD

* Limit values for heavy metal leaching (mg/kg), in accordance with Point 1 of Annex II to Decree 64/2019. Bound applications (type 1)

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Environment and Energy Manager

Basauri, April 30th, 2019

Other use-relevant results relevant not included in EN 13043:2002+/AC:2004 standard:

Expansivity.....	≤ 0.5%
Free lime content.....	≤ 0.5%
Magnesium oxide content.....	≤ 7.5%
Aging index result.....	< 1%
Total sulphur	< 1%
Water-soluble sulphates.....	< 0.2%
Humus content	Negative
Lightweight pollutants.....	< 0%
Water Absorption.....	2%

- Name and identification code: (AG)-8/16-T-A
- Name and contact address of the manufacturer: SIDENOR ACEROS ESPECIALES S.L. Barrio Ugarte s/n 48970- Basauri (BIZKAIA)
- Intended use: Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas
- System of assessment and verification of constancy of performance: SISTEMA 2+.
- Notified body:
Name and no: TECNALIA R&I CERTIFICACIÓN, no 1239
Task performed: CONTINUOUS ASSESSMENT OF FACTORY PRODUCTION CONTROL
Assessment system: SISTEMA 2+
Document issued: FPC CERTIFICATE no 1239/CPR/0821201
Date of issue: 18/01/2019
- Certified standard: EN 13043:2002+AC:2004
- Declared performances:

ESSENTIAL CHARACTERISTICS	PERFORMANCE
Particle shape, size and density	
Particle size.....	8/16 (d/D)
Granulometry.....	G _c 85/20 / G _{25/15}
Particle shape.....	Fl ₁₀
Particle density	3.9 ± 0.2 Mg/m ³
Cleanliness:	
Fines content.....	f ₁
Sand equivalent	NPD
Methylene blue.....	NPD
Percentage of crushed or broken coarse aggregate particles	C _{100/0}
Affinity to bituminous binders	NPD
Resistance to coarse aggregate fragmentation / crushing	LA ₂₀
Resistance to coarse aggregate polishing, abrasion, wear:	
Resistance to coarse aggregate polishing for wearing courses	PSV ₅₆
Resistance to surface abrasion.....	NPD
Resistance to coarse aggregate wear	NPD
Resistance to thermal shock.....	NPD
Volume stability	
Disintegration of air-cooled blast furnace slag dicalcium silicate	NPD
Disintegration of air-cooled blast furnace slag iron	NPD
Steelmaking aggregate slag volume stability.....	V _{3.5}
Composition/ Content:	
Heavy metal leaching.....	Complies*
Freeze-thaw resistance.....	MS ₁₈
Durability against weathering.....	NPD
Durability against studded tyres.....	NPD
Durability against thermal shock.....	NPD

* Limit values for heavy metal leaching (mg/kg), in accordance with Point 1 of Annex II to Decree 64/2019. Bound applications (type 1)

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Free lime content.....	≤ 0.5%
Magnesium oxide content.....	≤ 7.5%
Aging index result.....	< 1%
Total sulphur.....	< 1%
Water-soluble sulphates.....	< 0.2%
Humus content	Negative
Lightweight pollutants	< 0%
Water Absorption.....	2%