

- 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 concrete.
- 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 12620:2003+A1
- Declared performances:

ESSENTIAL CHARACTERISTICS	PERFORMANCE
Particle shape, size and density	
Particle size.....	0/4 (d/D)
Granulometry	G _F 85
Particle shape.....	NPD
Particle density.....	3.9 ± 0.2 Mg/m ³
Water absorption.....	≤ 2
Cleanliness:	
Fines content.....	f ₃
Sand equivalent.....	NPD
Methylene blue.....	NPD
Wear resistance:	
Resistance to coarse aggregate fragmentation	NPD
Resistance to coarse aggregate polishing, abrasion, wear:	
Resistance to coarse aggregate wear.....	NPD
Resistance to coarse aggregate polishing for wearing courses.....	NPD
Resistance to surface abrasion.....	NPD
Abrasion resistance of studded tyres.....	NPD
Carbonate content of fine aggregates for the surface layers of concrete pavements.....	NPD
Composition/ Content:	
Chlorides.....	NPD
Acid-soluble sulphates.....	AS _{0.2}
Total sulphur.....	S ₁
Components that change the setting and hardening speed of hydraulically bound mixtures.....	NPD
Influence on initial cement setting time (recycled aggregates)	NPD
Humus content.....	Negative
Lightweight organic pollutants	0%
Volume stability	
Stability in volume. Drying shrinkage.....	NPD
Components influencing the volume stability of air-cooled blast furnace slags.....	NPD
Hazardous substances:	
Heavy metal leaching.....	Complies*
Durability against freezing and thawing	NPD
Durability against alkali-silica reaction	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, November 4th, 2020

Other use-relevant results relevant not included in EN 12620:2003+A1 standard:

Expansivity.....	≤ 0.5%
Free lime content.....	≤ 0.5%
Magnesium oxide content.....	≤ 7.5%

- 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 concrete.
- 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 12620:2003+A1
- Declared performances:

ESSENTIAL CHARACTERISTICS	PERFORMANCE
Particle shape, size and density	
Particle size.....	4/8 (d/D)
Granulometry	G _c 85/20 / G _r 15
Particle shape	Fl ₁₅
Particle density	3.9 ± 0.2 Mg/m ³
Water absorption.....	≤ 2
Cleanliness:	
Fines content.....	f _{1.5}
Sand equivalent	NPD
Methylene blue.....	NPD
Wear resistance:	
Resistance to coarse aggregate fragmentation	LA ₂₀
Resistance to coarse aggregate polishing, abrasion, wear:	
Resistance to coarse aggregate wear.....	CPA ₅₆
Resistance to coarse aggregate polishing for wearing courses.....	NPD
Resistance to surface abrasion.....	NPD
Abrasion resistance of studded tyres.....	NPD
Carbonate content of fine aggregates for the surface layers of concrete pavements.....	NPD
Composition/ Content:	
Chlorides.....	NPD
Acid-soluble sulphates.....	AS _{0.2}
Total sulphur.....	S ₁
Components that change the setting and hardening speed of hydraulically bound mixtures.....	NPD
Influence on initial cement setting time (recycled aggregates)	NPD
Humus content.....	Negative
Lightweight organic pollutants	0%
Volume stability	
Stability in volume. Drying shrinkage.....	NPD
Components influencing the volume stability of air-cooled blast furnace slags.....	NPD
Hazardous substances:	
Heavy metal leaching	Complies*
Durability against freezing and thawing	MS ₁₈
Durability against alkali-silica reaction	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, November 4th, 2020

Other use-relevant results relevant not included in EN 12620:2003+A1 standard:

Expansivity.....	≤ 0.5%
Free lime content.....	≤ 0.5%
Magnesium oxide content.....	≤ 7.5%

- 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 concrete.
- 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 12620:2003+A1
- Declared performances:

ESSENTIAL CHARACTERISTICS	PERFORMANCE
Particle shape, size and density	
Particle size.....	8/16 (d/D)
Granulometry.....	G _c 85/20 / G _r 15
Particle shape.....	Fl ₁₅
Particle density.....	3.9 ± 0.2 Mg/m ³
Water absorption.....	≤ 2
Cleanliness:	
Fines content.....	f _{1.5}
Sand equivalent	NPD
Methylene blue.....	NPD
Wear resistance:	
Resistance to coarse aggregate fragmentation	LA ₂₀
Resistance to coarse aggregate polishing, abrasion, wear:	
Resistance to coarse aggregate wear.....	CPA ₅₆
Resistance to coarse aggregate polishing for wearing courses.....	NPD
Resistance to surface abrasion.....	NPD
Abrasion resistance of studded tyres.....	NPD
Carbonate content of fine aggregates for the surface layers of concrete pavements.....	NPD
Composition/ Content:	
Chlorides.....	NPD
Acid-soluble sulphates.....	AS _{0.2}
Total sulphur.....	S ₁
Components that change the setting and hardening speed of hydraulically bound mixtures.....	NPD
Influence on initial cement setting time (recycled aggregates)	NPD
Humus content.....	Negative
Lightweight organic pollutants	0%
Volume stability	
Stability in volume. Drying shrinkage.....	NPD
Components influencing the volume stability of air-cooled blast furnace slags.....	NPD
Hazardous substances:	
Heavy metal leaching	Complies*
Durability against freezing and thawing	MS ₁₈
Durability against alkali-silica reaction	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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Expansivity.....	≤ 0.5%
Free lime content.....	≤ 0.5%
Magnesium oxide content.....	≤ 7.5%