Bonded Abrasives

Precise cutting and grinding discs for many materials

sia ABRASIVES

sia Abrasives – Your key to a perfect surface

Many materials hide a secret. They keep their real beauty hidden. Only a professional finish can reveal what is inside. sia Abrasives has devoted itself to achieving perfectly finished surfaces for more than 135 years.

"Finished by sia Abrasives" – the final touch makes all the difference to a wide variety of materials: wood acquires its expressive colour, astounding grain or striking colour contrasts, leather captivates with its subtle nuances, contact lenses ensure the very best acuity of vision, metal glows at the peak of its perfection, marble develops its variety of effects, both robust and intricate, and plastics or the most sophisticated of coatings become the embodiment of functionality and aesthetic appeal.

With our tried and tested surface solutions using top-quality sia products, we would be pleased to help with your specific applications.

www.sia-abrasives.com

sia
ABRASIVES

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Company
sia Abrasives, with its headquarters in Frauenfeld, Switzerland, is one of the world's leading suppliers of innovative abrasives. The company develops, manufactures and markets complete abrasive systems, tailored to specific requirements and applications, for the surface treatment of every type of workpiece.These products turn sanding and grinding into surface technology.

sia Abrasives employs about 1310 people worldwide and is represented through local partners in more than 80 countries.

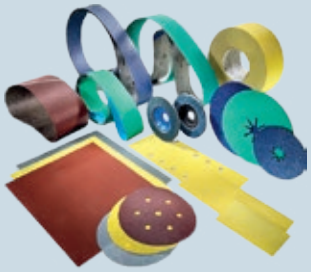
Top-quality products from Switzerland
Our careful choice of premium materials, the latest production and manufacturing equipment, and sophisticated production technologies enable us to provide abrasive products at the highest level.

Abrasive materials from sia undergo continuous development based on demanding customer requirements and our detailed analysis of production materials. They thus represent the finest examples of Swiss precision and quality with one goal: a commitment to the perfect surface.

Over 135 years

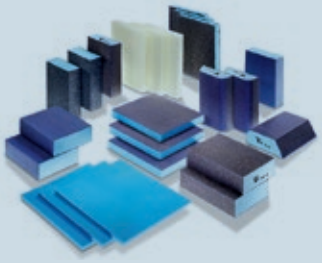
Innovative abrasives

Bonded abrasives
Precision cutting discs for optimum cutting performance and efficient grinding discs for a wide variety of metalworking applications.



Coated abrasives
Classic coated abrasives and abrasive systems for advanced surface treatment of all types of material.

Nonwoven abrasives
Nonwoven products for preparation and cleaning tasks and for structuring, especially on metal.



Foam abrasives
Foam sanding pads in the widest possible range of shapes and grades for precision sanding on wood, fillers, paintwork and varnish.

of abrasives expertise

Disc information

A **Product description**

1. Letter	Grit: A = Aluminium Oxide C = Silicon Carbide ZA = Zirconia Alumina / Aluminium Oxide
2. Number	Grit size according to standard: FEPA 42-1:2006 16–24 = Coarse 30–60 = Medium 80–100 = Fine
3. Letter	Hardness: K–P = Soft Q–S = Medium T–X = Hard
4. Letter	Bonding: B = Synthetic resin F = Glass fibre reinforcement
5. Disc shape	41 = Straight cutting disc 42 = Cutting disc with depressed centre 27 = Grinding disc with depressed centre 29 = Semi-flexible grinding disc

B **Dimensions**
Diameter x thickness x hole size
in millimetres and inches

C **Colour coding by material**

D **Part number**
You will find all articles on page 10 onwards

E **Identification for free of iron, sulphur and chlorine**
(< 0.1%)

Disc use

F

Maximum speeds

The maximum permitted working speeds according to EN 12413 in m/s and rpm:

	Diameter:	Speed:
80 m/s	76 mm / 3"	20 100 rpm
	100 mm / 4"	15 300 rpm
	115 mm / 4.5"	13 300 rpm
	125 mm / 5"	12 250 rpm
	150 mm / 6"	10 200 rpm
	180 mm / 7"	8 500 rpm
	230 mm / 9"	6 650 rpm
	300 mm / 12"	5 100 rpm
	350 mm / 14"	4 400 rpm
	400 mm / 16"	3 850 rpm
100 m/s	76 mm / 3"	25 100 rpm
	100 mm / 4"	19 100 rpm
	115 mm / 4.5"	16 650 rpm
	125 mm / 5"	15 300 rpm
	150 mm / 6"	12 700 rpm
	180 mm / 7"	10 650 rpm
	230 mm / 9"	8 350 rpm
	300 mm / 12"	6 400 rpm
	350 mm / 14"	5 500 rpm
	400 mm / 16"	4 800 rpm

G

Use-by date

To be used by production date + 3 years

1. Letter V	Use-by date
2. Number	01 = 1st quarter 04 = 2nd quarter 07 = 3rd quarter 10 = 4th quarter
3. Number	Year of production

H

Safety recommendations


Read the instructions


Wear hearing protection


Wear eye protection


Wear a respirator


Wear gloves


Wear safety apron


Not permitted for face grinding


Do not use if damaged

Disc testing

I

Identification of applicable standards

EN 12413	European standard Information about EN safety test in our test centre can be found on page 14 onwards
ANSI B7.1:2000	American National Standards Institute
oSa	Organisation for the Safety of Abrasives

Series overview

Material	**siacut**	Quality	**siagrind**	Quality
Metal / steel	8912	blue line	8913	yellow line
INOX and metal / steel	8932 8933	blue line yellow line	8932 8933	blue line yellow line
Cast iron	8943	yellow line		
Aluminium	8953	yellow line		
Stone	8962	blue line		

Serial number

1. Number **Product line**
8 = Bonded Abrasives

2. Number **Grit type**
9 = Aluminium Oxide

3. Number **Material**

1 = Metal / steel

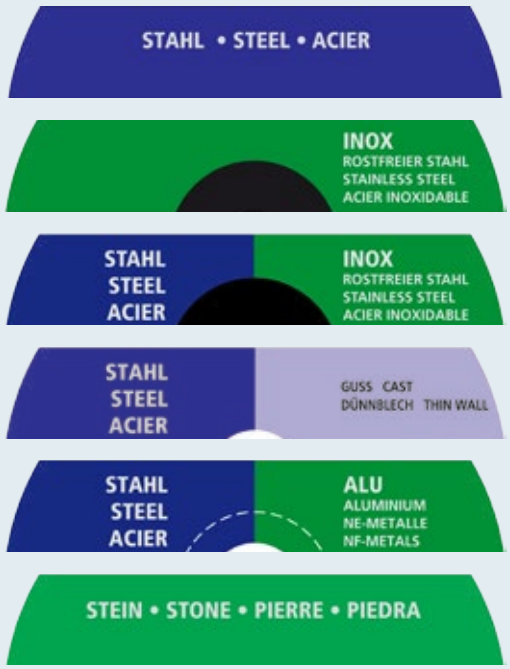
2 = INOX

3 = INOX and metal / steel

4 = Cast iron

5 = Aluminium

6 = Stone



4. Number **Quality grade**

2 = blue line
Professional quality

3 = yellow line
Industrial quality

siacut – Precise cutting discs with the best cutting performance

The siacut cutting discs excel due to their long lifetime and precise cutting properties. Their made-to-measure composition (grit, bonding, structure and shape) in combination with their production in modern manufacturing plants are the cornerstones of our comprehensive selection of products for all application ranges.

Disc thickness	Advantages	Applications
1.0 to 2.0 mm	• Highest cutting speed • Comfortable to use with little contact pressure • Little burr formation • Cool cut, little heat discolouration • Long lifetime	• Pipe, profile and sheet metal, thin-walled • Bar • Solid material • Flat iron
2.5 to 3.2 mm	• Longest lifetime • Highest stability • High cutting speed	• Solid material • Flat iron • Pipe • Profile • Sheet metal • Bar

siagrind – Efficient grinding discs for different metal applications

The siagrind grinding discs excel due to their very high removal rate, long lifetime and comfortable handling.

Disc thickness	Advantages	Applications
4.0 to 7.0 mm	• High removal rate • Long lifetime • Comfortable to use • For universal use in metal and INOX	• Deburring • Welded seam preparation • Welded seam treatment • Fillet weld treatment • Surface grinding • Edge grinding

siacut – Precise cutting discs with the best cutting performance

Metal / steel

8912 siacut		Diameter mm	Diameter inch	Thickness mm	Thickness inch	Bore mm	Bore inch	Specification	Part number	Packing unit
	**Quality:** blue line **Type:** Medium **Shape:** Straight **Application:** Cut-off grinder	**350**	14	**2.6**	3/32	25.40	1	A 36 S-BF41	0.0020.5528	25
		400	16	**3.2**	1/8	25.40	1	A 36 S-BF41	.5529	25

INOX and metal / steel

8932 siacut		Diameter mm	Diameter inch	Thickness mm	Thickness inch	Bore mm	Bore inch	Specification	Part number	Packing unit
	**Quality:** blue line **Type:** Medium **Shape:** Straight **Application:** 90° angle grinder	**76**	3	**1.0**	3/64	10.00	3/8	A 46 S-BF41	0.0020.4825	100
		100	4	**1.0**	3/64	16.00	5/8	A 60 S-BF41	.6532	25
		115	4 1/2	**1.0**	3/64	22.23	7/8	A 60 S-BF41	.4697	25
				2.5	3/32			A 24/30 S-BF41	.4698	25
		125	5	**1.0**	3/64	22.23	7/8	A 60 S-BF41	.4699	25
				1.6	1/16			A 46 T-BF41	.4702	25
				2.5	3/32			A 24/30 S-BF41	.4733	25
		150	6	**1.6**	1/16	22.23	7/8	A 46 T-BF41	.5908	25
		180	7	**1.6**	1/16	22.23	7/8	A 46 T-BF41	.5882	25
		230	9	**1.8**	1/16	22.23	7/8	A 46 T-BF41	.4734	25

INOX and metal / steel

8933 siacut		Diameter mm	Diameter inch	Thickness mm	Thickness inch	Bore mm	Bore inch	Specification	Part number	Packing unit
	**Quality:** yellow line **Type:** Hard **Shape:** Straight **Application:** 90° angle grinder	**100**	4	**1.0**	3/64	16.00	5/8	A 60 X-BF41	0020.5527	25
		115	4 1/2	**1.0**	3/64	22.23	7/8	A 60 X-BF41	.4735	25
				1.6	1/16			A 46 X-BF41	.4736	25
				2.5	3/32			A 30 U-BF41	.4737	25
		125	5	**1.0**	3/64	22.23	7/8	A 60 X-BF41	.4700	25
				1.6	1/16			A 46 X-BF41	.4701	25
				2.5	3/32			A 30 U-BF41	.4703	25
				3.2	1/8			A 30 U-BF41	.4751	25
		150	6	**1.6**	1/16	22.23	7/8	A 46 X-BF41	.5909	25
				2.0	5/64			A 36 U-BF41	.5910	25
		230	9	**2.0**	5/64	22.23	7/8	A 36 U-BF41	.4704	25
				2.5	3/32			A 30 U-BF41	.6320	25
				3.0	1/8			A 30 U-BF41	.4705	25
	**Quality:** yellow line **Type:** Hard **Shape:** Depressed centre **Application:** 90° angle grinder	**115**	4 1/2	**1.0**	3/64	22.23	7/8	A 60 X-BF42	0020.6554	25
				2.5	3/32			A 30 U-BF42	.4826	25
		125	5	**1.0**	3/64	22.23	7/8	A 60 X-BF42	.6555	25
				2.5	3/32			A 30 U-BF42	.4827	25
		180	7	**1.6**	1/16	22.23	7/8	A 46 X-BF42	.6556	25
		230	9	**3.0**	1/8	22.23	7/8	A 30 U-BF42	.4828	25

siacut – Precise cutting discs with the best cutting performance

Cast iron

8943 siacut		Diameter mm	Diameter inch	Thickness mm	Thickness inch	Bore mm	Bore inch	Specification	Part number	Packing unit
	**Quality:** yellow line **Type:** Hard **Shape:** Straight **Application:** 90° angle grinder	**115**	4 1/2	**1.0**	3/64	22.23	7/8	A 60 X-BF41	0020.5856	25
				1.6	1/16			A 46 X-BF41	.5858	25
		125	5	**1.0**	3/64	22.23	7/8	A 60 X-BF41	.5857	25
				1.6	1/16			A 46 X-BF41	.5860	25

Aluminium

8953 siacut		Diameter mm	Diameter inch	Thickness mm	Thickness inch	Bore mm	Bore inch	Specification	Part number	Packing unit
	**Quality:** yellow line **Type:** Soft **Shape:** Straight **Application:** 90° angle grinder	**125**	5	**1.0**	3/64	22.23	7/8	A 60 N-BF41	0020.5983	25

Stone

8962 siacut		Diameter mm	Diameter inch	Thickness mm	Thickness inch	Bore mm	Bore inch	Specification	Part number	Packing unit
	**Quality:** blue line **Type:** Medium **Shape:** Straight **Application:** 90° angle grinder	**115**	4 /12	**2.5**	3/32	22.23	7/8	C 30 S-BF41	0020.6016	25
		230	9	**3.0**	1/8	22.23	7/8	C 30 S-BF41	.6017	25

siagrind – Efficient grinding discs for different metal applications

Metal / steel

8913 siagrind		Diameter mm	Diameter inch	Thickness mm	Thickness inch	Bore mm	Bore inch	Specification	Part number	Packing unit
	**Quality:** yellow line **Type:** Hard **Shape:** Depressed centre **Application:** 30° angle grinder	**125**	5	**4.0**	5/32	22.23	7/8	A 24 X-BF27	0020.7207	20
		125	5	**7.0**	1/4	22.23	7/8	A 24 X-BF27	.7206	10

INOX and metal / steel

8932 siagrind		Diameter mm	Diameter inch	Thickness mm	Thickness inch	Bore mm	Bore inch	Specification	Part number	Packing unit
	**Quality:** blue line **Type:** Medium **Shape:** Depressed centre **Application:** 30° angle grinder	**100**	4	**6.0**	1/4	16.00	5/8	A 24/30 S-BF27	0020.5530	10
		115	4 1/2	**6.0**	1/4	22.23	7/8	A 24/30 S-BF27	.4706	10
		125	5	**6.0**	1/4	22.23	7/8	A 24/30 S-BF27	.4707	10
		150	6	**6.4**	1/4	22.23	7/8	A 24/30 S-BF27	.5911	10
		180	7	**7.0**	1/4	22.23	7/8	A 24/30 S-BF27	.4738	10
		230	9	**6.5**	1/4	22.23	7/8	A 24/30 S-BF27	.4708	10

8933 siagrind		Diameter mm	Diameter inch	Thickness mm	Thickness inch	Bore mm	Bore inch	Specification	Part number	Packing unit
	**Quality:** yellow line **Type:** Hard **Shape:** Depressed centre **Application:** 30° angle grinder	**125**	5	**4.0**	5/32	22.23	7/8	A 24 V-BF27	0020.7198	20
		230	9	**4.0**	5/32	22.23	7/8	A 24 V-BF27	.7199	20

Test centre

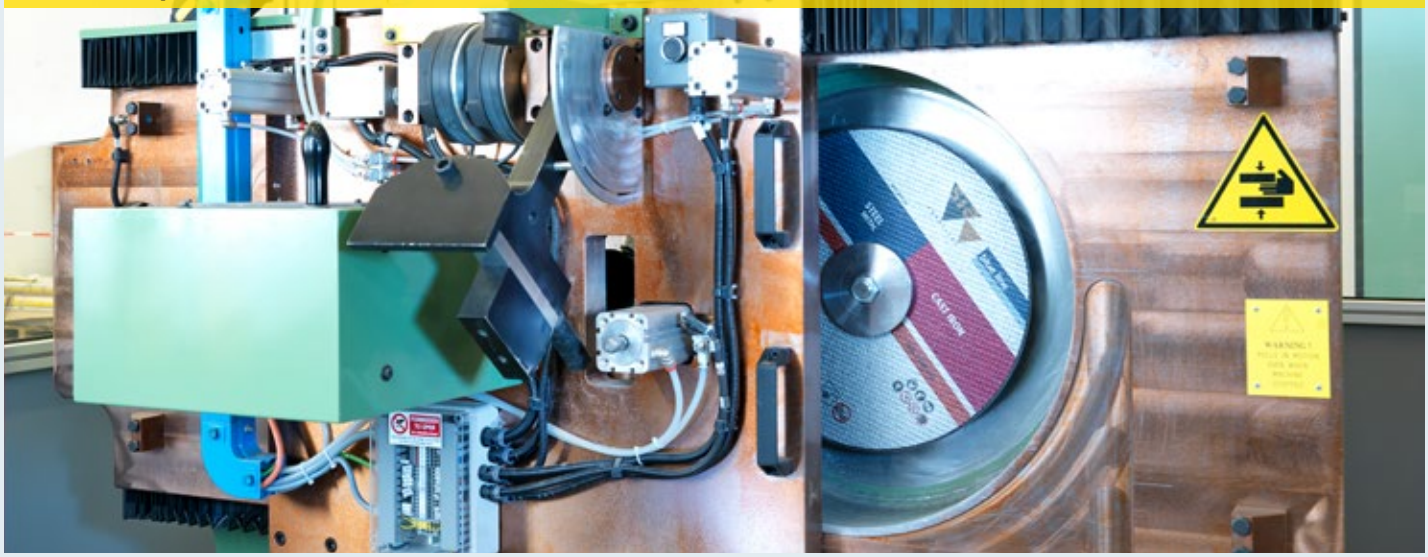
Product quality is continually tested in research and development at sia Abrasives. This enables us to guarantee a consistently high level of safety and competitiveness of our cutting and grinding discs.

Why do we test cutting and grinding discs?
- To ensure compliance with safety standards
- To ensure consistent production batches
- To check series production
- To evaluate competitors in comparison tests

Safety tests according to EN 12413

Bursttest

One / three point side load test



In order to be able to guarantee the safety of a cutting or grinding disc, it undergoes various individual test procedures. In the bursting test, the respective discs have to withstand a diameter-related burst factor higher than the maximum working speed.

Cutting and grinding discs from sia Abrasives meet the highest quality and safety standards in accordance with standard EN 12413. In addition, we also abide by the safety measures specified by the oSa. All cutting and grinding discs have oSa certification.

Performance tests

The performance of a cutting disc is checked by means of a hand-held test with an angle grinder on stainless steel, carbon steel, aluminium, stone or cast iron.

Three different measuring instruments record the disc wear and cutting speed. This test is then repeated with the same test specimens and statistically evaluated.

Cutting

Grinding

The performance of a grinding disc is tested using a semi-automatic robot on stainless steel and carbon steel.

The weight of the grinding disc and the material are measured before and after the test, in order to evaluate the removal rate and the disc loss.

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