

THE SURFACE FINISHING EQUIPMENT GROUP

SALES – SERVICE - HIRE
TRAINING – INSTALLATION

NORTH EAST BRANCH

**Hogg Blasting
& Finishing Equipment Ltd**
Washington. UK. NE37 1PR

Tel. 0191 415 3030
info@hoggblasting.com

NORTH WEST BRANCH

**Abraclean Ltd and
Jedtec Finishing Equipment**
Manchester. UK. M11 2QA

Tel: 0161 480 8087
info@sfeq.co.uk

- Shot Blasting Equipment
- Paint Spraying Equipment
- Powder Coating Equipment
- Fixed Extraction Booths
- Mobile Dust Extraction
- Personal Protection Equipment
- Shot Blasting Abrasives
- Spares and Consumables
- Plural Component Systems

Complete Finishing Systems
Tipton. UK. DY4 7TR

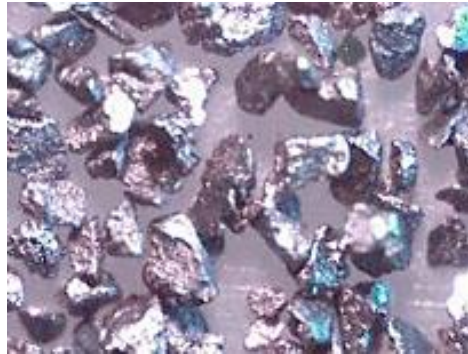
Tel. 01902 601 312
info@sfeq.co.uk

- Complete Finishing Plants
- Spray Booths
- Design engineers and CAD
- Industrial Ovens
- Conveyors
- Pre-treatment systems
- Electroplating Systems



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Profilium Reusable Steel Abrasive



Profilium is a reusable steel abrasive that can be used as a high performance alternative to chilled iron or steel grit. It can also be used as an alternative to expendable abrasives.

BENEFITS and FEATURES compared to standard Expendable or Metallic Abrasives :

- A premium product designed for shot blasting surface preparation.
- Specially developed to provide optimum efficiency and quality in air blasting, surface preparation and descaling.
- Stable operation over almost the entire operating mix size grading.
- Angular shape
- High cleaning efficiency
- Used by top companies in the shipbuilding industry, and proven best solution for major companies such as Hyundai Heavy Industries, Samsung Heavy Industries and Daewoo Shipbuilding & Marine Engineering.
- Can achieve an optimum surface profile prior to painting
- Minimum cost of the blasting process
- Improved working conditions.

COMPARED to existing metallic abrasives, customers have found :-

- Work Quality - surface cleanliness improved and achieved more quickly.
- Better surface profile ensuring improved adhesion of coating.
- Cost - high performance, low consumption, and reduced wear of equipment.
- Optimum roughness, providing improved adhesion of coating and reduced paint consumption

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Profilium Reusable Steel Abrasive

COMPARISON OF PROFILIUM TO CHILLED IRON :

Property	Profilium	Chilled Iron	Benefit
Hardness	> 770 HV > 64 HRC	>650 HV > 57 HRC	Profilium is Harder = higher efficiency
Density	> 7.6 g/cm ³	> 7 g/cm ³	Profilium is Denser = more kinetic energy
Chemical Composition	C : 0.85-1.20 wt% Si : ≥0.4 wt% Mn : 0.6-1.2 wt% S : ≤ 0.05 wt% P : ≤ 0.05 wt%	C : 2.80-3.20 wt% Si : 1.4 – 2.0 wt% Mn : 0.2- 0.6 wt% S : ≤ 0.10 wt% P : ≤ 0.10 wt%	Profilium has lower S & P = higher lifetime
Microstructure	Fine and homogenous martensite	Martensite and cementite	Profilium has a more resilient microstructure = lower machine wear
Conductivity	< 30 μS/cm	< 150 μS/cm	Profilium has Lower salt contamination = less risk of corrosion

EQUIVALENT GRADE CONVERSION OF PROFILIUM TO CHILLED IRON :

The most suitable Profilium Grade should be based on the roughness requirement.

Chilled Iron	Approx. Roughness Required (μm)	Profilium
G05	20 – 40	No equivalent. Use GH120 Steel Grit
G07	30 – 50	PR085
G12	50 – 70	PR058
G17	70 – 95	PR045
G24	70 – 95	PR045
G34	90 – 110	PR030

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TECHNICAL & MATERIAL

SAFETY DATA SHEET

PROFILIUM ABRASIVE

Profilium is a high performance, fast cleaning and re-usable angular blasting abrasive.

GRADES :

Profilium	Approx. Roughness Required (μm)	Comparable Chilled Iron
No equivalent. Use GH120 Steel Grit	20 – 40	G05
PR085	30 – 50	G07
PR058	50 – 70	G12
PR045	70 – 95	G17
PR045	70 – 95	G24
PR030	90 – 110	G34
PR030	90 – 110	G39
PR023	100- 125	G47

CHEMICAL COMPOSITION

Chemical Composition		085		058		045		030		023	
Element	Symbol	min	max	min	max	min	max	min	max	min	max
Carbon	C	0.80	1.00	0.80	1.00	0.80	1.00	0.80	1.20	0.80	1.00
Silicon	Si	0.40	1.00	0.50	1.00	0.50	1.00	0.40	1.20	0.50	1.00
Manganese	Mn	0.60	1.00	0.60	1.00	0.60	1.00	0.60	1.20	0.60	1.00
Sulphur	S		0.05		0.04		0.04	0.04	0.05		0.04
Phosphorus	P		0.05		0.04		0.04		0.04		0.04
Density	gr/cm ³	7.60 Min									
Hardness	HV ₁	840.0		840.0		840.0		770.0		840.0	
Hardness	HRC	65.2		65.2		65.2		62.9		65.2	

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GRADING SIZES

Sieves Specifications		085		058		045		030		023	
No.	Opening (mm)	min	max	min	max	min	max	min	max	min	max
12	1.700										TP
14	1.400								TP		5
16	1.180						TP				
18	1.000						5			50	70
20	0.850				TP						
25	0.710				5			55	70	85	
30	0.600				20	55	70			90	
35	0.500		TP					97			
40	0.425		5	40	60						
45	0.355					90					
50	0.300			75							
80	0.180	40		90							
120	0.125	60	90								
200	0.075										
325	0.045										



HEALTH AND SAFETY DATA SHEET

PROFILIUM ABRASIVE

Product and Reference: Profilium Abrasive

Date of Issue: 01/06/2015

1. IDENTIFICATION OF THE PREPARATION AND COMPANY

Company: WINOA S.A 528 Avenue de Savoie – 38570 LE CHEYLAS – France

Product Code: PR023, PR030, PR045, PR058, PR085

Intended Use: Abrasive blasting media

Name and full address: Manufacturer :-

WINOA S.A 528 Avenue de Savoie – 38570 LE CHEYLAS – France

Distributor :-

The Surface Finishing Equipment Group Ltd

Comprising :

Hogg Blasting & Finishing Equipment Ltd
Unit 10 Armstrong Road, Armstrong Industrial Estate, Washington,
Tyne & Wear, United Kingdom, NE37 1PR.
Tel. (0191) 415 3030 Fax (0191) 415 5345

AND

Abraclean Ltd

Ann Street, Stockport, Cheshire. SK5 7PP

Tel: (0161) 480 8087 Fax: (0161) 480 4424

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2. IDENTIFICATION OF HAZARDS

2.1. Connected with the product itself:

- According to the article 3.3 of REACH Regulation (EC) N° 1907/2006, steel Shots and Grits are considered as articles. **They are thus exempted from registration.**
- Classification and labelling according to Regulation (EC) No. 1272/2008 [CLP]: This substance/mixture does not meet the criteria for classification according to “CLP” Regulation. Steel Shots and Grits **are not considered as hazardous.**

2.2. Connected with the use of the product:

2.2.1. *Intoxication:*

- Health risks are linked to the exposure to dust. Dust is produced by the fragmentation of the abrasives and particles removed from the blasted parts.

2.2.2. *Fire - Explosion:*

Particles liable to produce a fire hazard are the following:

- Metal dust.
- Plastic dust.
- Dust produced when blasting metals coated with paint, rubber, etc...

2.2.3. *Other risks:*

The projection of abrasives exposes the operator to possible skin and eye lesions if no protection is worn.

- Noise.
- Risk of falling due to the presence of abrasives on the floor.

3. COMPOSITION / INFORMATION ON COMPONENTS

Typical chemical analysis, with substances with a concentration higher than 0.1% weight by weight :

Substances	Chemical Symbol	EINECS N°	CAS N°
Aluminium	Al	231-072-3	7429-90-5
Carbon	C	231-153-3	7440-44-0
Chromium	Cr	231-157-5	7440-47-3
Copper	Cu	231-159-6	7440-50-8
Iron	Fe	231-096-4	7439-89-6
Manganese	Mn	231-105-1	7439-96-5
Nickel	Ni	231-111-4	7440-02-0
Silicium	Si	231-130-8	7440-21-3

All the chemical elements in our abrasives come in an alloyed form and not in a free form.

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4. FIRST AID

In the event of contact with the eyes:

- Do not rub.
- Rinse thoroughly with water.
- Consult an ophthalmologist if the irritation persists.
- The user must determine for himself what appropriate measures should be taken, depending on the type of dust produced by his industrial process.

5. FIRE-FIGHTING MEASURES

Extinction Method:

- In the event of Class A fires (packaging): ABC powder, water, foam.
- In the event of Class D fires (metal fire): powders, CO₂.

Avoid scattering fine particles close to an ignition source.

6. MEASURES TO BE TAKEN IN CASE OF ACCIDENTAL SCATTERING

Quickly clean the area with a vacuum cleaner or a magnetic brush to reduce the risk of falling.

7. HANDLING AND STORAGE

7.1. Prevention of worker exposure:

- Blasting can be carried out in automatic booths, with the operator outside.
- Whenever technically possible, this solution is always preferable to having the operator inside the booth.
- Ventilation arrangements must be such that the booth environment is protected and the booth cleaned as quickly as possible after blasting operations cease.
- During air blasting operations, the operator must wear his personal protective equipment.

7.2. Prevention of fire and explosion risks:

- When there is a possible risk of fire or explosion, special precautions must be taken in the design and construction of the blasting installation.
- Furthermore, some procedures must be followed when operating the installation and during maintenance operations.

7.3. Precautions when handling the product:

- Not applicable.

7.4. Recommendations for use:

- Metal spraying: blasting and metal spraying operations must not be carried out in the same booth, as this increases the risk of fire.
- Lighting: lighting for blasting booths must be carefully studied.
To check the quality of blasting, the operator must be able to make an accurate visual assessment of the efficiency of his work.

7.5. Storage:

- Store in a dry place.
- WINOA knows of no incompatible substance.
- It is advisable to keep the product in the WINOA packaging, which is designed to provide watertightness.

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8. EXPOSURE CONTROL/INDIVIDUAL PROTECTION

8.1. Exposure control:

The user must know the exact nature of the dust produced during the industrial process for which the abrasive is used, and must take the necessary measures to protect his workers. A metrological study is necessary for blasted parts that may contain any substance with an exposure limit.

8.2. Personal protective equipment:

For lack of collective protective equipment, during air blasting, the plant manager must provide each exposed worker with the following:

- A hood with its own air supply.
- An overall with draw strings at the neck, wrists and ankles.
- Safety shoes.
- Ear protection.
- Gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state: solid
- Flash point: not applicable
- Colour: grey-black
- Explosiveness: not applicable
- Odour: none
- Melting point: ~ 1500 °C
- Density: 3 - 5 t/m³
- Solubility: insoluble in water

10. STABILITY AND REACTIVITY

- **Known decomposition product:** none.
- **Stability during storage:** No safety risk but of oxidation and aggregation in the presence of moisture.
Dangerous reaction: iron oxide dust mixed with some metal dusts can produce an aluminothermy reaction.

11. TOXICOLOGICAL INFORMATION

- Known severe toxicity: none.
- Known local effects: none.

12. ECO-TOXICOLOGICAL INFORMATION

- Lixiviation tests have been carried out on abrasives' samples. The analytical results recorded do not show the presence of specific pollutants or toxins.

13. CONSIDERATIONS RELATING TO WASTE DISPOSAL

- **Operating Waste:** dust and used abrasives may contain pollutants resulting from the industrial process. Each user must study the problem of waste in relation to his specific activity, in contact with specialized organisations.
- **Packaging:** WINOA packaging is completely recyclable.

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14. TRANSPORT

- International regulations (ADR, IMDG, OACI): not concerned.
- Transport outside storage areas: protect against moisture.
- Weight: for pallets and drums: 750 - 1500 kg, for big bags: 1000, 1500 or 2000 kg.

15. REGULATION

WINOA's abrasives are subject to National and European laws in effect.

- According to existing European Regulations N° No. 1272/2008 [CLP], steel abrasives are not considered as hazardous mixtures.
- According to European Regulation N° 1907/2006/CE (REACH), steel abrasives are considered as articles.
- The substances contained in steel abrasive (in the form of alloys), are not intended to be released intentionally under normal or reasonably foreseeable conditions of use.
- In accordance with articles 3.3; 7.1; 7.2; 7.3; 33;57; 59 and all related documents to the present regulation, and in order to exclude all possibility of human and environmental exposure to these substances under normal or reasonably foreseeable conditions of use including waste elimination, WINOA writes up this technical data sheet containing appropriate instructions.
- Consequently, WINOA considers that the substances contained in the steel abrasives are not subject to registration according to REACH regulation.

16. OTHER INFORMATION

The information contained in this file is based on our level of knowledge to date. Consequently, any person or organisation wishing to make any comments should inform us. Moreover, the information provided is not exhaustive. The user must therefore be fully acquainted.