

VULKAN INOX GmbH



Abrasive Technology

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VULKAN INOX  
**Stainless Steel Abrasives**

**CHRONITAL<sup>®</sup>**



**GRITTAL<sup>®</sup>**



## The Company

Founded in 1985, VULKAN INOX GmbH is a worldwide recognized manufacturer of cast stainless steel blasting abrasives as well as specialty granules. VULKAN INOX GmbH, with its headquarter in Germany, employs more than 70 people worldwide and is represented abroad by over 30 distributors. Export sales currently account for more than 70 % of its total sales.

As a dependable partner, VULKAN INOX GmbH offers their customers:

- **A modern production facility**
- **Application-based product development**
- **Assured quality**
- **Supported application development**
- **Stable delivery**
- **Free-of-charge service**
- **An ISO 9001:2008 quality management program**
- **An ISO 14001:2004 environment management program**



## The Manufacturing Process:

CHRONITAL and GRITTAL are manufactured by melting selected scrap and stainless steel scrap in induction ovens, each with 6 ton capacity. The desired chemical composition is reached by adding additional alloys, for CHRONITAL such as chrome and nickel, for GRITTAL especially chrome. The molten metal is then subjected to an atomizing process. The resulting spherical CHRONITAL is dried, screened and packaged. The resulting granules for the patented GRITTAL are heat-treated under an inert gas and crushed. The rustfree angular abrasive is also screened and packaged.

The use of our products is not subject to any health restrictions.



## Quality and Service

It is our company's philosophy to advise and support our customer's blasting process. We gladly advise you regarding the selection of the suitable blast media as well as the machine parameters. In our production technology center in Germany, we have several shot blast machines available to our customers for testing. These include:

- A spinner hanger wheel machine
- An air blast hand cabinet
- A mobile air blast container
- A wet blasting cabinet

In addition, our qualified sales engineers offer free-of-charge on-site service. This includes:

- Sieve analysis
- Inspection of your blast system.
- Adjustments to the air wash system
- Blast wheel efficiency evaluation

It is our goal to optimize your blast process with regard to costs and efficiency.





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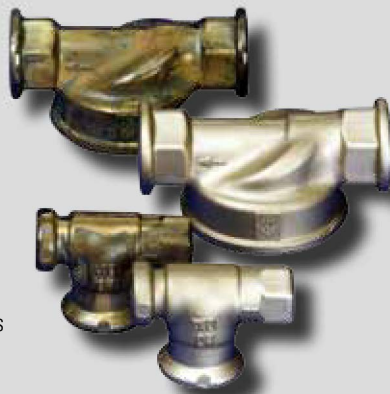
# Stainless Steel Abrasives

## CHRONITAL®

### Main fields of application:

Blast cleaning, deburring, surface finishing, surface-improvement

- All types of aluminium castings and forgings
- Zinc pressure die castings
- Non-ferrous metals and special alloys
- Stainless steel castings and forgings
- Apparatus and welded structures in stainless steel
- Concrete and natural stones



### CHRONITAL offers the following advantages:

- Great durability
- Short blasting times
- Bright appearance
- Rust-free surfaces
- Reduced wear of blast cleaning equipment
- Low waste disposal costs
- Dust-free blasting process



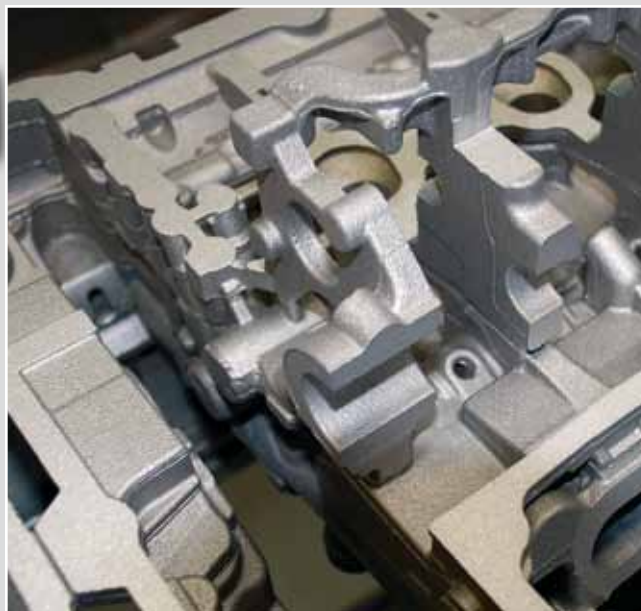
### Blasting of metals ...

- for efficient deburring
- for bright appearance
- for surface preparation prior to coating



### Stone blasting ...

- for smooth and textured surfaces
- for non-slip surfaces
- for fascinating optics



## Stainless Steel Abrasives

### GRITTAL®

#### Main fields of application:

Blast cleaning, deburring, surface preparation prior to coating, stone cutting in gang saws

- All types of aluminium castings and forgings
- Zinc pressure die castings
- Non-ferrous metals and special alloys
- Stainless steel castings and forgings
- Apparatus and welded structures in stainless steel
- Hot dip galvanized material
- Concrete and natural stones

#### GRITTAL offers the following advantages:

- Great durability
- Short blasting times
- Bright appearance
- Rust-free surfaces
- Can be used in centrifugal wheel machines as well as air blast systems
- Low waste disposal costs
- Dust-free blasting process

#### Blasting of metals ...

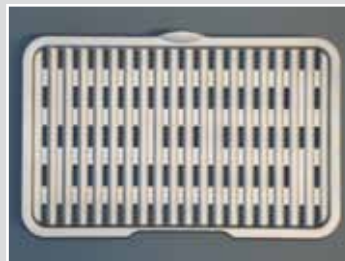
- for efficient deburring
- for bright appearance
- for surface preparation prior to coating
- effective descaling

#### Stone blasting ...

- for smooth and textured surfaces
- for non-slip surfaces
- for fascinating optics

#### Cutting ...

- for precise cuts



# CHRONITAL®

CHRONITAL is used in all applications where non-rusting materials such as aluminum, zinc, stainless steel, brass, bronze, etc. are blasted.

CHRONITAL's large spectrum of grain sizes makes it well suited to cleaning, de-burring, hardening and surface finishing of all types of castings, forgings, profiles, wire and welded structural parts, without the possibility that rust could discolor the bright surface due to ferritic dust.

CHRONITAL distinguishes itself by having a high percentage of spherical grains and by its compactness. The end result is low consumption, high performance and low machine wear.

The danger of developing ugly rust spots on the surface of blasted concrete and granite stones due to the remains of ferritic particles is ruled out. Using CHRONITAL on smooth and textured pavers brings out the stones fascinating optics in a favorable way.

## Stainless Steel Shot, rust-proof, spherical

Chemical composition: C ~ 0,17%, Cr ~ 18%, Ni ~ 10%

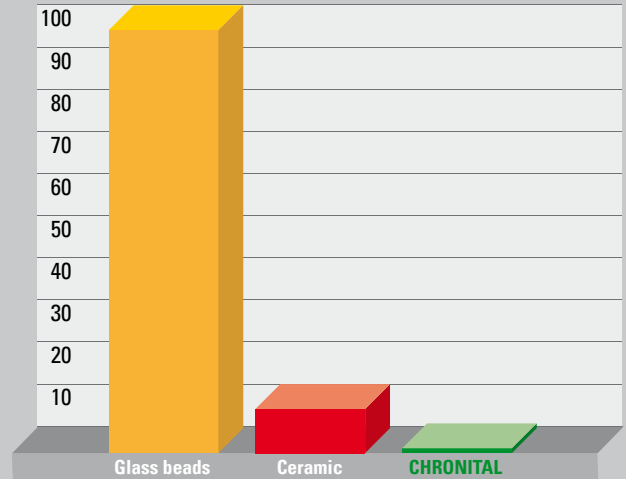
Apparent density: ~ 4,7 g/cm<sup>3</sup> (~ 293 lb/ft<sup>3</sup>)

Hardness: on delivery ~ 300 HV (~ 30 HRC),  
as operating mix ~ 475 HV (~ 47 HRC)

Microstructure: austenitic



## Relative consumption and quantity of waste CHRONITAL®



## Packaging:

25 kg (55 lbs) PE-bags, 500 kg (1100 lbs) per pallet, in protective cardboard and shrinkwrapped. 1000 kg (2200 lbs) big bags, 750 kg (1650 lbs) drum or 25 kg (55 lbs) canister.

## Technical sales service:

The use of VULKAN-Abrasives is supported by our technical sales services. The application of VULKAN-Abrasives is environmentally friendly. VULKAN-Abrasives are fully recyclable.





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## GRITTAL®

GRITTAL is the economic alternative to mineral grit abrasives and fulfills all requirements concerning blasting performance and a corrosion-free surface finish.

GRITTAL offers additional clear economical and environmental advantages. The extremely high durability of this rust-free stainless steel grit reduces the amount of abrasive consumption by a factor of 30 – 100 and thereby also minimizes the amount of waste that is generated.

The durability of GRITTAL results in a consistent work mix, constant roughness values and guarantees a quality adhesion for an ensuing coating.

GRITTAL's dust-free characteristic allows for excellent vision while blasting and helps to better control the blast process.

GRITTAL is successfully used in blast rooms and also in centrifugal wheel blast machines.

### Stainless Steel Grit, rust-proof, angular

Chemical composition: C ~ 2%, Cr 30 - 33 %

Apparent density: ~ 4,1 g/cm<sup>3</sup> (~ 256 lb/ft<sup>3</sup>)

#### GRITTAL GH (patented fabrication)

Hardness: ~ 800 HV (~ 64 HRC), hardened and crushed

Microstructure: Martensitic with Chromium Carbides

#### GRITTAL GM

Hardness: ~ 660 HV (~ 58 HRC), crushed

Microstructure: Δ-Ferrite with Chromium Carbides



No dust when using GRITTAL

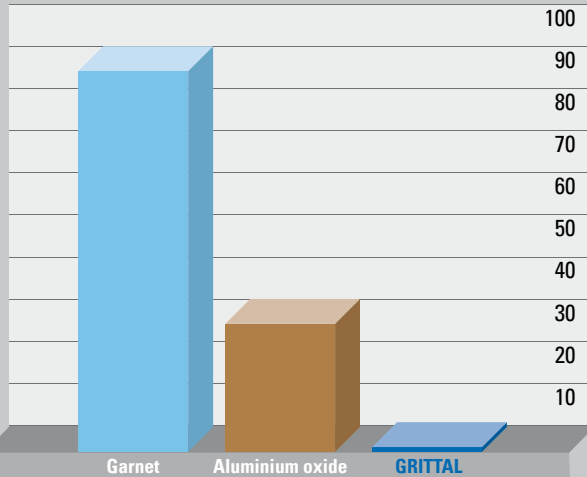


Dust development with al-oxide

### Success with GRITTAL: Blasting of Tank Containers

	Aluminium oxide	GRITTAL
Initial Charge	6000 kg	9000 kg
Consumption per anno	175000 kg	5000 kg
Container produced	3530 per anno	3530 per anno
Consumption	~ 50 kg / container	~ 1,4 kg / container
Price factor	1	10
Cost factor	3	1
Waste disposal costs		82 % less
Maintenance costs		72 % less
Blasting time	70 min. / container	50 min. / container
Nozzle life time	~ 1 month	~ 4 month

### Relative consumption and quantity of waste GRITTAL®



### Available grain sizes

CHRONITAL	GRITTAL GH	GRITTAL GM	mm
S 10	GH 10	GM 10	0,05 - 0,20
S 20	GH 20	GM 20	0,09 - 0,32
S 30	GH 30	GM 30	0,14 - 0,50
S 40	GH 40	GM 40	0,40 - 0,80
S 50	GH 50	GM 50	0,60 - 1,00
S 60	GH 60	GM 60	0,70 - 1,25
S 100	GH 100	GM 100	1,00 - 1,40
S 150	GH 150	GM 150	1,25 - 1,70
S 200	GH 200	GM 200	1,40 - 2,00
S 300	GH 300	GM 300	1,70 - 3,00

Special screenings are available on request.





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**Worldwide partnerships**

VULKAN INOX maintains with its customers intensive, long term oriented partnerships. The cooperation also includes the assistance with the commissioning of blasting units, as well as regular support and on-site training. For this VULKAN INOX has built up a global presence with more than 30 distributors.



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