

**METAL**

**Abrasives for  
perfect surfaces**



# VSM – More than just three letters

## **VSM stands for competence, quality and customer orientation**

Very few others understand grinding processes like we do. Not only do we grind every surface to precision, we also analyse the specific grinding applications of our customers so that we can always find the best, long-term solution. Process-related expertise is one of the distinguishing features of VSM.

## **We know abrasives**

Because we understand them. VSM develops and produces all the main preliminary products such as backing fabrics, resinoid bonds and abrasive grains at its Hanover site. By doing so, we fulfil our high, self-imposed requirements in industry, the commercial and trade sector. The continuous development of further grain compositions, their refinement and processing ensures that VSM remains one of the most experienced manufacturers of ceramic grain worldwide.

## **Application-based expertise**

We see the entire grinding processes of our customers as a challenge. A global network of VSM specialists provides expert advice wherever it is

needed irrespective of whether your company is large or small. Thanks to our close collaboration with machine manufacturers, cutting fluid experts and research institutes, we ensure that our customers can benefit from technological trends as soon as possible.

## **We make our expertise available for you**

The VSM Technical Center (TC) in Hanover provides an opportunity for product training, seminars and extensive application tests. Customer applications can be adjusted and results reviewed. This service from VSM reduces downtimes and productivity losses for our customers.

## **Certified and recognized worldwide**

VSM has been certified to ISO standard 9001:2008 as its basis for quality assurance for many years. In addition, it is a member of FEPA, oSa and the German Abrasives Association (VDS).



More than **150** years

Company founded in 1864 in Hanover-Hainholz

More than 150 years' experience in the production of coated abrasives.

More than

**800**



employees

More than 800 employees are working on behalf of our customers worldwide each day.



VSM worldwide

VSM is operating in more than 70 countries with international subsidiaries and numerous partners.



**Certified and  
recognized worldwide**



**Extremely high level of safety**

All VSM abrasives have been certified by internationally recognized testing bodies for many years and therefore conform to the highest safety standards.



**Internal research  
and development**

**High vertical integration**

VSM has its own internal grain and cloth production and develops almost all of its preliminary products itself. This enables us to achieve a consistently high quality of abrasives.



Made in  
**Germany**

**Headquarters in Hanover**

VSM stands for competence, quality and customer orientation.

Our global sales network with **numerous subsidiaries** and **expert sales partners** ensures proximity to our customers. Further addresses and details can be found on our website at [www.vsmabrasives.com](http://www.vsmabrasives.com)



# Our products

## For almost every application

From welding seams to sheet metal working, vehicle bodywork and cast materials: VSM produces more than 200 different product ranges that can be worked into rolls, discs, belts and sheets on a range of different backing materials and in various shapes. Furthermore, we supply high-quality preliminary products to specialist customizers. This means that virtually any requirement can be met by VSM abrasives.

**You can always rely on the high level of advisory expertise of our applications engineers and VSM consultants and the extensive product range for a wide variety of technical challenges.**

### You can rely on the following:

- > High-performance products made in Germany
- > On-site application-based advice
- > Reliable delivery performance
- > Analyses of problems and preliminary tests in the VSM Technical Center
- > Expertise based on co-operating with more than 60 machine manufacturers worldwide
- > A global distribution network with subsidiaries and partners in more than 70 countries

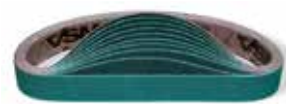


*Jumbos*



*Wide belts*

*Rolls*



*Narrow belts*



*Discs*

# VSM – Your specialist for metalworking

## Benefit from efficient VSM abrasives

Whether you want a high stock removal rate or the perfect surface, VSM can offer the appropriate abrasive for every requirement in metalworking. Be it flat surface grinding, cylindrical grinding, off-hand grinding or hand-held machines, our products will always meet the highest standards for service life, stock removal capacity and surface quality.

A **high stock removal** rate requires aggressive grinding with low physical strain for the user. The aim is a high stock removal rate per time unit.

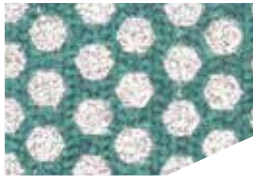
Consistent and reproducible surface results and **specific surface finishes**, surface roughnesses and gloss levels are crucial for a perfect finish.

## VSM offers a complete product range

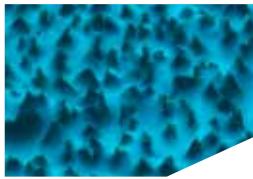
For all grinding tasks – in particular for metal working – we will provide you with the appropriate grinding tools on a cloth, paper or vulcanised fibre backing. From **VSM DIAMOND** to **VSM CERAMICS**, **VSM COMPACTGRAIN** and **VSM NON-WOVEN**, in a wide range of different shapes and dimensions, our product range has everything.



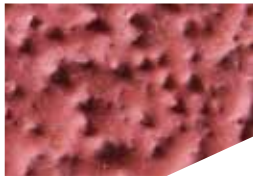
# The right grain for every application



VSM DIAMOND/CBN



VSM ACTIROX



VSM CERAMICS Plus



VSM CERAMICS



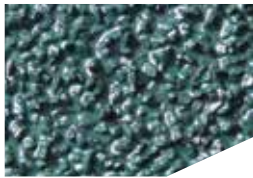
VSM ILUMERON



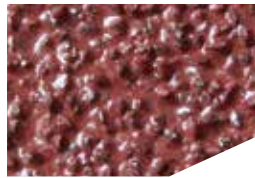
VSM COMPACTGRAIN Plus



VSM COMPACTGRAIN



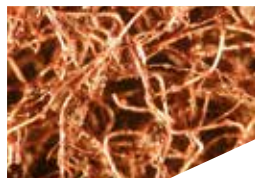
VSM ZIRCONIA ALUMINA



VSM ALUMINIUM OXIDE



VSM SILICON CARBIDE



VSM NON-WOVEN

## Efficient grinding

VSM produces abrasives for a wide range of applications. From a high stock removal rate to a reproducible surface, our range of abrasives, with more than 25,000 items, will have the appropriate solution for your grinding process.

Due to their exceptional properties, **VSM DIAMOND** and **VSM CBN** abrasives produce outstanding results when machining hard and brittle materials and wear-resistant HVOF coatings (thermal spray coatings).

**VSM ACTIROX** stands for maximum stock removal and increased productivity due to its geometrically shaped ceramic grain. Our specialist products with a self-sharpening effect, **VSM CERAMICS Plus** and **VSM CERAMICS**, achieve an extremely high stock removal rate and an extraordinarily long service life.

The newest long-term abrasive **VSM ILUMERON** achieves the highest gloss levels and perfect surface finishes. It also allows grinding and polishing to take place in a single processing step. **VSM COMPACTGRAIN Plus** and **VSM COMPACTGRAIN** are characterised by their extremely long service life and an even surface. These product series are made of granulate that contains numerous abrasive grains. This technology continuously exposes unused, sharp grain tips.

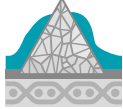
**VSM ZIRCONIA ALUMINIA**, **VSM ALUMINIUM OXIDE** and **VSM SILICON CARBIDE** are general all-rounders for a large number of applications. They can be used for processing metals, wood, plastics, glass, ceramics and stone. **VSM NON-WOVEN** products ensure a flawless surface finish, irrespective of whether they are used for decorative satin finishes, cleaning or light deburring work.

# VSM grain technologies in the spotlight

## Top grain technologies for high stock removal rates

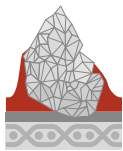
### VSM ACTIROX

NEW



- > **Geometrically formed** ceramic grain
- > Maximum stock removal and a faster cut for superalloys and stainless steels
- > Cool grinding extends the service life thanks to VSM TOP SIZE

### VSM CERAMICS Plus · (CER Plus)



- > **Optimised self-sharpening effect** when processing high-alloyed steels ensures very high stock removal rates
- > Reduced temperature in the contact area
- > Significantly extended service life

### VSM CERAMICS · (CER)

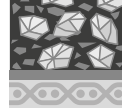


- > Top product with **self-sharpening effect** for processing non-alloyed steels and stainless steels
- > High removal rate
- > Cool grinding allows longer contact times

## Top grain technologies for perfect surface finishes

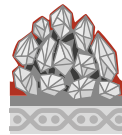
### VSM ILUMERON

NEW



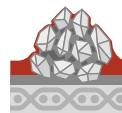
- > **Full faced coated long-term abrasive** with special bonding
- > For fine and consistent surfaces with high gloss levels
- > Developed primarily for processing stainless steels, superalloys and non-alloyed steels

### VSM COMPACTGRAIN Plus · (COM Plus)



- > **Long-term abrasive** that wears uniformly down to the backing material and achieves a consistent surface finish
- > Optimised reserve grain capacity
- > Improved bonding properties
- > Continuous self-sharpening thanks to the granulate structure

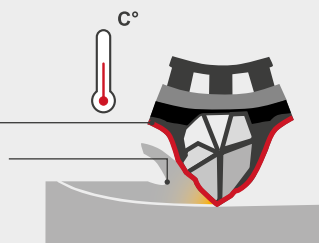
### VSM COMPACTGRAIN · (COM)



- > **Long-term abrasive** achieves reproducible surface finishes and consistent roughness
- > Uniform stock removal
- > Continuous self-sharpening thanks to the granulate structure

## VSM grinding-active additional layers

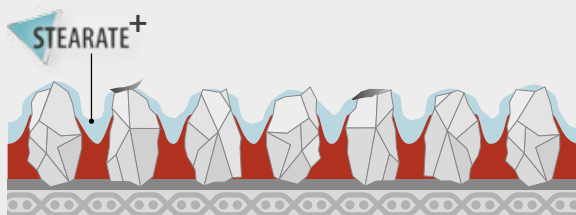
VSM TOP SIZE  
Less heat generated in the grinding zone ("cool grinding")



**VSM TOP SIZE** is recommended for dry machining heat-resistant stainless steels and non-ferrous metals. The grinding-active additional layer improves the cutting performance whilst reducing the temperature in the contact zone. This significantly extends the service life of the abrasive.

**VSM STEARATE Plus** and **VSM STEARATE** significantly reduce chip adhesion when processing non-ferrous metals and thus also reduce clogging of the abrasive. The service life is assured and extended so dramatically that excellent stock removal is achieved even after longer periods of use.

NEW



VSM STEARATE Plus



# Your application

VSM abrasives are suitable for a wide range of metal applications.



Tank and plant construction



Fittings



Sheets



Tools



Wire



Cast and forged parts



Special parts



Implants and medical instruments



Turbine blades



Vehicles and bodywork



Tubes



Piston rods and cylinders



Rolls



Last revised: 01/2021

Legend:		Flexibility of the backing material (last letter of the series name):		Features:	
CER = CERAMICS	<b>E</b> extremely flexible	<b>X</b> sturdy	○ for low to medium contact pressure	 <b>TOP SIZE</b>	Grinding-active additional layer reduces the temperature in the grinding zone
ZA = ZIRCONIA ALUMINA	<b>F</b> very flexible	<b>Y</b> very sturdy	⊙ for medium contact pressure	 <b>STEARATE<sup>+</sup></b>	The combination of VSM CERAMICS and STEARATE significantly reduces chip adhesion
AO = ALUMINIUM OXIDE	<b>J</b> flexible	<b>Z</b> extremely sturdy	● for medium to high contact pressure	 <b>STEARATE</b>	The combination of VSM ALUMINIUM OXIDE and STEARATE ensures significantly reduced chip adhesion
SIC = SILICON CARBIDE	<b>T</b> semi-sturdy		⊖ also suitable for wet applications	 <b>antistatic</b>	prevents adhesion of grinding dust
				<b>velour-backed</b>	products with a velour backing

Last revised: 01/2021

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					<b>velour-backed</b>	products with a velour backing



# A worldwide leader in abrasives.



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