VULKAN BLAST SHOT TECHNOLOGY
10 Plant Farm Blvd., Unit 2
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Material Safety Data Sheet CHRONITAL

Revision Date: February 1, 2014

1 Material / Preparation and Company Name

1.1 Specifications of the material / preparation

1.1.1 Type of Product
Alloyed Chrome-Nickel-Steel

1.1.2 Product name
CHRONITAL, rust-resistant, cast stainless steel abrasive

1.1.3 Trade name
CHRONITAL

1.2 Specifications of the manufacturer / importer / supplier

1.2.1 manufacturer / importer / supplier
Vulkan Blast Shot Technology

1.2.2 Company address
10 Plant Farm Blvd., Unit 2, Brantford, Ontario Canada N3S 7W3

1.2.3. Place of business / postal address / country code / ZIP code / city
10 Plant Farm Blvd., Unit 2
Brantford, Ontario Canada N3S 7W3

1.2.4 Telephone
519-753-2226 or 1-800-263-7674 (U.S. and Canada)

1.2.5 Facsimile
519-759-8472

1.2.6 For further information, please contact
Quality Assurance Department

1.2.7 Emergency number
519-753-2226

2 Composition / Indication of Constituents

2.1 Chemical characterisation of the preparation
Iron-chromium-nickel-carbon alloy
Approx. main components:

Fe:	69 %
Cr:	16-20 % (metallic Chrome)
Cr^{6+}:	0,00 % (Chrome (VI), Hexavalent Chrome)
Ni:	8-10 %
C:	0.2 %
Mn:	1.2 %
Si:	2 %

2.2 Specifications with regard to the preparation

CAS – No.	Name of material	Percentage Value	Danger Code	„R" clauses	„S" Clauses
7440-02-0	Nickel	Approx. 10 %	Xn	11;40;43	2,22;36

2.3 Additional Notes concerning item 2.2
The product exists in the form of a solid metallic bond ensuring that nickel, as a possible hazardous material, does not have any effect. In the form in which it enters into circulation and is used, it does not present any health hazard.

3 Possible Risks

3.1 Designation of risks
During mechanical application (i.e in blasting plants) dust and vapour may occur. The usual precautions should be taken. The statutory limit values for dust and vapour have to be adhered to.

4 First - Aid Measures

4.1 General Notes
First - aid measures only refer to dust.

4.1.1 Measures in case of inhaling
Ensure sufficient fresh air supply, and consult and physician, if necessary.

4.1.2 Measures in case of eye contact
Rinse your eyes with plenty of water; consult and physician, if necessary.

5 Fire - Fighting Measures

not applicable (n.a.)

6 Measures to be taken in case of unintended release

not applicable (n.a.)

7 Handling and Storage

7.1 Handling
no danger

7.2 Storage
no danger

8 Restriction of Exposure and Personal Protective Equipment

8.1 Additional notes regarding the configuration of technical plants
cf. Item 3.1

8.2 Constituents with workplace - specific limiting values to be controlled
Limiting values are only defined for the elements contained in steel, e.g. for Ni, Cr, Mn, whereas no such limits have been established for steel, as such.

8.3 Personal protective equipment

Standard equipment for processing of metals. Dust and vapour have to be maintained below the statutory limits by providing adequate suction facilities.

9 Physical and Chemical Properties

9.1	**Appearance**	
9.1.1	**State**	solid
9.1.2	**Colour**	silver-grey, metallic
9.1.3	**Odour**	odourless
9.2	**Safety-relevant data**	n.a.
9.2.1	**pH - value**	n.a.
9.2.2	**Change of state**	n.a.
9.2.2.1	**Boiling point**	n.a.
9.2.2.2	**Melting point**	1.400 - 1.550 °C
9.2.3	**Flash point**	n.a.
9.2.4	**Inflammability**	n.a.
9.2.5	**Ignition temperature**	n.a.
9.2.6	**Self-inflammability**	n.a.
9.2.7	**Fire promoting properties**	n.a.
9.2.8	**Explosion limits**	n.a.
9.2.9	**Vapour pressure at.... °C**	n.a.
9.2.10	**Density at 20°C**	7,7 - 8,1 g/cm^3
9.2.11	**Solubilizing properties and distribution**	
9.2.11.1	**Water-Solubility**	insoluble
9.2.11.2	**Fat-Solubility**	n.a.
9.2.11.3	**Distribution coefficient**	n.a.

10 Stability and Reactivity

stable and non-reactive

11 Indications Concerning Toxicology

The steel contains nickel (classified as a hazardous material), chromium and manganese (with limited values to be controlled). In its usual solid state, and on condition of a usual industrial application, the steel can neither be inhaled nor be in permanent or long lasting contact with the skin.

11.1	**Results of toxicological tests**	
11.1.1	**Acute toxicity**	n.a.
11.1.1.1	**Acute toxicity oral**	n.a.
11.1.1.2	**Acute toxicity, when inhaled**	none
11.1.1.3	**Acute toxicity, dermal**	none
11.1.2.	**Irritant – caustic effect**	none
11.1.2.1	**Irritant – caustic effect on skin**	none
11.1.2.2	**Irritant – caustic effect on eyes**	n.a.
11.1.3	**Sensitization**	none
11.1.4	**Effects after repeated or extended exposure**	

11.1.5	**Subacute effects**	none
11.1.5.1	**Subchronic effects**	none
11.1.5.2	**Chronic effects**	none
11.1.5.3	**Specific effects**	none
11.1.5.3.1	**Carcinogenic effects**	none

11.2 **Experience from practical application**

11.2.1 **Classification-relevant observations**
A carcinogenic effect by manufacture, use, processing or machining of special steel could neither be proved in epidemiologic studies nor in the scope of experiments on animals.

11.2.2 **Other Observations**
The experience made for decades in the scope of a variety of applications has shown that this steel, in particular stainless steel is to be regarded as an extremely resistant and perfectly hygienic material.

11.3 **General Notes**
none

12 Notes Regarding Ecology

not water-soluble, no precautions required.

13 Notes Regarding Utilization and Disposal

Waste and scrap constitute valuable materials, which can easily be disposed, since new products of high value can be produced by means of recycling.

14 Notes Regarding Transport

not classified as hazardous material in the sense of transport regulations.

15 Regulations

15.1 **Identification according to Ri67/548/EWG**

15.1.1 **Code (cf. items 2,3 and 4)**
Xn for nickel

15.1.2 **Danger designation for nickel (cf. items 2,3 and 4)**
Slightly toxious

15.1.3 **R clauses for nickel (cf. items 2,3 and 4)**
11 easy inflammability
40 irreversible injury possible
43 potential sensitization by skin contact

15.1.4 **S clauses for nickel (cf. items 2, 3 and 4)**
2 not for children’s hands
22 do not inhale dust
36 always wear adequate protective clothing during processing

15.1.5 **Special marking**
n.a.

15.1.6 **Remarks**
Transmission of marking pursuant to Ri67/548/EWG

15.2 **National Regulations**

15.2.1 **Regulations**
German Chemicals Law, German Ordinance on Hazardous Materials, Federal German Act on Protection against Immissions

15.2.2 **Additional Notes and Shortcuts**
n.a = not applicable

Declaration: **The indications made in this Safety Data Sheet are based on the present state of our know-how and experience. The Safety Data Sheet describes the products in view of safety requirements. The indications do not constitute any guarantee with regard to product properties and do not create a contractual legal relationship.**