Printing date 05.06.2014 Revision: 05.06.2014

1 Identification of the substance/mixture and of the company/undertaking

- · 1.1 Product identifier
- · Trade name: Steel Shot
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the mixture Surface cleaning
- · 1.3 Details of the supplier of the Safety Data Sheet
- · Manufacturer/Supplier:

H-B Instrument – A Division of Bel-Art Products

102 West Seventh Avenue Trappe, PA 19426 USA Phone: (610) 489-5500

· 1.4 Emergency telephone number:

ChemTel Inc.

(800)255-3924, +1 (813)248-0585

2 Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008

The product is not classified as hazardous according to GHS regulations.

The product is not classified as hazardous according to the CLP regulation.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC Not applicable.
- · Information concerning particular hazards for human and environment:

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008 Not Regulated
- · Hazard pictograms Not Regulated
- Signal word Not Regulated
- · Hazard-determining components of labelling: None.
- · Hazard statements Not Regulated
- · Hazard description:
- · WHMIS-symbols: Not hazardous under WHMIS.
- NFPA ratings (scale 0 4)



(Contd. on page 2)

Printing date 05.06.2014 Revision: 05.06.2014

Trade name: Steel Shot

(Contd. of page 1)

· HMIS-ratings (scale 0 - 4)



· HMIS Long Term Health Hazard Substances

None of the ingredients is listed.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- PBT: Not applicable.vPvB: Not applicable.

3 Composition/information on ingredients

- · Description: Mixture of substances listed below with nonhazardous additions.
- · Dangerous components:

None in reportable quantities.

	iron substance with a Community workplace exposure limit	50-100%
CAS: 7439-96-5 EINECS: 231-105-1	manganese	< 3,0%
CAS: 7440-21-3 EINECS: 231-130-8	silicon substance with a Community workplace exposure limit Flam. Sol. 2, H228	< 3,0%
CAS: 7440-44-0 EINECS: 231-153-3	carbon Xi R36/37	< 2,1%

· Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- · 4.1 Description of first aid measures
- General information: No special measures required.
- · After inhalation:

Unlikely route of exposure.

Supply fresh air; consult doctor in case of complaints.

· After skin contact:

Generally the product does not irritate the skin.

If skin irritation continues, consult a doctor.

· After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Contd. on page 3)

Printing date 05.06.2014 Revision: 05.06.2014

Trade name: Steel Shot

(Contd. of page 2)

· After swallowing:

Unlikely route of exposure.

Do not induce vomiting; call for medical help immediately.

· 4.2 Most important symptoms and effects, both acute and delayed

Adverse health effects are not reasonably expected from normal use of product.

Gastric or intestinal disorders when ingested.

- · Hazards No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Firefighting measures

- · 5.1 Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- · For safety reasons unsuitable extinguishing agents: None.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- 5.3 Advice for firefighters
- Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information No further relevant information available.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

No special measures required.

- **6.2 Environmental precautions:** No special measures required.
- · 6.3 Methods and material for containment and cleaning up:

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- 7.1 Precautions for safe handling No special measures required.
- Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Protect from humidity and water.
- Further information about storage conditions: None.

(Contd. on page 4)

Printing date 05.06.2014 Revision: 05.06.2014

Trade name: Steel Shot

· 7.3 Specific end use(s) No further relevant information available.

(Contd. of page 3)

8 Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters

· Ingredients v	Ingredients with limit values that require monitoring at the workplace:		
7439-89-6 iron			
EV (Canada)	Long-term value: 1* 5** mg/m³ as iron;*salts, water-soluble;**welding fume		
7439-96-5 manganese			
PEL (USA)	Ceiling limit: 5 mg/m³ as Mn		
REL (USA)	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³ fume, as Mn		
TLV (USA)	Long-term value: 0,02* 0,1* mg/m³ as Mn; *respirable **inhalable fraction		
EL (Canada)	Long-term value: 0,2 mg/m³ as Mn; R		
EV (Canada)	Long-term value: 0,2 mg/m³ as manganese		
7440-21-3 silicon			
PEL (USA)	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction		
REL (USA)	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction		
TLV (USA)	TLV withdrawn		
EL (Canada)	Long-term value: 10 mg/m³		
EV (Canada)	Long-term value: 10 mg/m³ total dust		

- · **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- Personal protective equipment:
- · General protective and hygienic measures: No further relevant information available.
- Respiratory protection: Not required under normal conditions of use.
- · Protection of hands:

Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.

(Contd. on page 5)

Printing date 05.06.2014 Revision: 05.06.2014

Trade name: Steel Shot

· Eye protection:

(Contd. of page 4)



Safety glasses

· Body protection:

Not required under normal conditions of use.

Protection may be required for spills.

- · Limitation and supervision of exposure into the environment No special requirements.
- · Risk management measures No special requirements.

9 Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form:
Colour:
Silver grey
Odour:
Odour threshold:
Not determined.

pH-value:
Not applicable.

· Change in condition

Melting point/Melting range: Not Determined.

Boiling point/Boiling range: Boiling Point Range: 2851 - 3137 ° F / 1566 - 1725 °C.

Flash point: Not applicable.
 Auto/Self-ignition temperature: Not determined.
 Decomposition temperature: Not determined.

· **Self-igniting:** Product is not self-igniting.

• Danger of explosion: May form combustible dust concentrations in air.

· Explosion limits:

Lower:
Upper:
Not determined.
Not determined.

Vapour pressure:
Not applicable.

Density at 20 °C:
Relative density
Vapour density
Vapour density
Evaporation rate
Not applicable.
Not applicable.

· Solubility in / Miscibility with

water: Insoluble.

· Partition coefficient (n-octanol/water): Not determined.

(Contd. on page 6)

Printing date 05.06.2014 Revision: 05.06.2014

Trade name: Steel Shot

(Contd. of page 5)

· Viscosity:

Dynamic: Not applicable. **Kinematic:** Not applicable.

• 9.2 Other information No further relevant information available.

10 Stability and reactivity

- · 10.1 Reactivity
- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Reacts when heated with acids and alkalis releasing hydrogen.

Exothermic polymerization.

Reacts with strong oxidizing agents.

Reacts with humid air.

- · 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products:

Toxic metal compounds

Toxic metal oxide smoke

11 Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: No irritant effect.
- on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability

Inorganic product, is not eliminable from water by means of biological cleaning processes.

- · 12.3 Bioaccumulative potential May be accumulated in organism
- 12.4 Mobility in soil No further relevant information available.

(Contd. on page 7)

Printing date 05.06.2014 Revision: 05.06.2014

Trade name: Steel Shot

(Contd. of page 6)

- · Additional ecological information:
- · General notes:

This statement was deduced from products with a similar structure or composition.

Not known to be hazardous to water.

- · 12.5 Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · **vPvB:** Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

13 Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Contact waste processors for recycling information.

Smaller quantities can be disposed of with household waste.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- · Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information

· 14.1 UN-Number

· DOT, ADR, ADN, IMDG, IATA Not Regulated

· 14.2 UN proper shipping name

· DOT, ADR, ADN, IMDG, IATA Not Regulated

· 14.3 Transport hazard class(es)

· DOT, ADR, ADN, IMDG, IATA

· Class Not Regulated

· 14.4 Packing group

· DOT, ADR, IMDG, IATA Not Regulated

· 14.5 Environmental hazards:

· Marine pollutant: No

• 14.6 Special precautions for user Not applicable.

· 14.7 Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

· UN "Model Regulation":

(Contd. on page 8)

Printing date 05.06.2014 Revision: 05.06.2014

Trade name: Steel Shot

(Contd. of page 7)

15 Regulatory information		
· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture · United States (USA) · SARA		
· Section 355 (extremely hazardous substances):		
None of the ingredients is listed.		
· Section 313 (Specific toxic chemical listings):		
7439-96-5 manganese		
TSCA (Toxic Substances Control Act):		
All ingredients are listed.		
· Proposition 65 (California):		
· Chemicals known to cause cancer:		
None of the ingredients is listed.		
· Chemicals known to cause reproductive toxicity for females:		
None of the ingredients is listed.		
· Chemicals known to cause reproductive toxicity for males:		
None of the ingredients is listed.		
· Chemicals known to cause developmental toxicity:		
None of the ingredients is listed.		
· Carcinogenic Categories		
· EPA (Environmental Protection Agency)		
7439-96-5 manganese D		
· IARC (International Agency for Research on Cancer)		
None of the ingredients is listed.		
· TLV (Threshold Limit Value established by ACGIH)		
None of the ingredients is listed.		
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
None of the ingredients is listed.		
· Canada		
· Canadian Domestic Substances List (DSL)		
All ingredients are listed.		
· Canadian Ingredient Disclosure list (limit 0.1%)		
None of the ingredients is listed.		
· Canadian Ingredient Disclosure list (limit 1%)		
7439-96-5 manganese		
(Contd. on page 9)		

Printing date 05.06.2014 Revision: 05.06.2014

Trade name: Steel Shot

(Contd. of page 8)

- · Other regulations, limitations and prohibitive regulations
- · Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H228 Flammable solid.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

R36/37 Irritating to eyes and respiratory system.

R48 Danger of serious damage to health by prolonged exposure.

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

Flam. Sol. 2: Flammable solids, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com