

Victaulic® Ductile Iron Castings

(Safety Data Sheet)

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

1.1. Product Identifier

Product name : Ductile Iron Castings

1.2. Intended Use Of The Product

Use of the substance/preparation : Castings of various Victaulic product models

1.3. Name, Address, And Telephone Of The Responsible Party

Manufacturer

Victaulic Company
4901 Kesslersville Road
Easton, PA 18040
610-559-3300
web: www.victaulic.com

1.4. Emergency telephone number

Emergency number : 610-559-3300 Hours 9am-5pm EST M-F

SECTION 2: Hazards identification

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Castings are metallic articles that do not present hazards in their original form. This material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

SECTION 3: Composition/information on ingredients

Name	CAS#	%
Carbon	7440-44-0	3.4-4.3
Chromium	7440-47-3	<1.0
Copper	7440-50-8	<1.0
Iron	7439-89-6	Balance
Magnesium	7439-95-4	<0.1
Manganese	7439-96-5	<1.0
Nickel	7440-02-0	<1.0
Silicon	7440-21-3	2.35-2/75

SECTION 4: Description of first aid measures

Eye Contact : Not applicable
 Skin Contact : No special requirements
 Ingestion : Not applicable
 Inhalation : Not applicable

SECTION 5: Firefighting measures

Flammable properties : Not applicable
 Extinguishing media : Not applicable
 Protection of firefighters : Not applicable

SECTION 6: Accidental release measures

Not applicable

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Proper hand and foot protection is recommended.

7.2. Recommended storage conditions

No special requirements

SECTION 8: Exposure controls/personal protection

Engineering controls : None required. There are no health hazards from castings in solid form.

Name	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)
Carbon	NE	NE
Chromium	1	0.5
Copper	1	1
Iron	NE	NE
Magnesium	15 Oxide Fume	10 Oxide Fume
Manganese	1	1.5 (I)
Nickel	5 (C)	0.02 (R); 0.1 (I)
Silicon	15 Total	NE

NOTE

- All exposure limits referenced above are 8 hour time weighted averages (TWA) unless otherwise noted. It is not recommended to cut, weld, braze, solder, drill, grind or expose to flames, sparks, heat or other potential ignition sources. The dust or fumes generated from these processes may produce airborne contaminants and may contain other compounds with different exposure limits than those listed above.

SECTION 9: Physical and chemical properties

Appearance/Physical State	: Solid, silver gray in color
Odor/odor threshold:	: None
pH	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point/freezing point	: Approximately 2350°F (1300°C)
Boiling point	: 5000°F (2750°C) for iron
Flash Point	: Not applicable for solid castings
Evaporation rate	: Not applicable
Flammability	: Not applicable
Upper/lower flammability or explosive limits	: Not applicable for solid castings
Vapor pressure	: Not applicable
Vapor density	: Not applicable
Relative density (specific gravity)	: 7.85 g/cm ³ for iron
Solubility in water	: Insoluble
Partition coefficient	: n-octanol/water; not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not applicable
Viscosity	: Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

None

10.2. Chemical stability

Stable

10.3. Possibility of hazardous reactions

Not applicable

10.4. Conditions to avoid

None

10.5. Incompatible materials

None

10.6. Hazardous decomposition products

None

SECTION 11: Toxicological information

11.1. Potential health effects

Eye contact	: None
Skin	: None
Ingestion	: None
Inhalation	: None

11.2. Carcinogen Classification of Ingredients

Nickel (metal)	: OSHA - NL, NTP - RAHC, IARC - 2B : Target Organ- Lungs, Nose
----------------	--

SECTION 12: Ecological information

Ecotoxicity : Not applicable
Persistence and degradability : Not applicable
Bioaccumulative potential : Not applicable
Mobility in soil : Not applicable
Other adverse effects : Not applicable

SECTION 13: Disposal considerations

Recover or recycle if possible. Dispose of according to federal, state and local regulations.

SECTION 14: Transport information

In accordance with ICAO/IATA/DOT/TDG

14.1. UN number

Not regulated

14.2. UN proper shipping name

Not regulated

US DOT-HMR : not regulated

Canadian TDG : not regulated

Transport Hazard Class : not regulated

Packing Group : not regulated

Environmental Hazards : none

Label(s) Required : no

Transport in bulk : not applicable

Special shipping information : not applicable

SECTION 15: Regulatory information

- US-OSHA HCS : Reference 29 CFR 1910.1200 and 1910.1000. A finished casting is an article as defined in the OSHA HCS 29 CFR 1910.1200(c). Dust or fumes generated by cleaning, machining, grinding, or welding of the casting may produce airborne contaminants, such as chromium, copper, iron, magnesium, manganese, nickel, silicon, and silica. For hexavalent chromium references see 29 CFR 1910.1026.
- US-EPA (TSCA) : All components of these products are on the TSCA inventory list or are excluded from listing. US-EPA (SARA Title III) : Releases to the environment of chromium, copper, manganese and nickel, may be subject to reporting under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
- Canada-WHMIS : This SDS has been prepared according to hazard criteria of the Controlled Product Regulations (CPR) and the SDS contains the information required by the CPR.
- CEPA : Chromium and Nickel are on the CEPA Priorities Substances Lists.
- EINECS : All components of these products are on the EINECS list.
- RoHS Compliance : Castings comply with RoHS.
- California Proposition 65 Compliance : WARNING: This product contains or produces chemicals known to the State of California to cause cancer and birth defects (or other reproductive harm). (California Health and Safety Code 25248.5 et seq.)
- US State Regulatory Information : Some of the components listed in Section 3 may be covered under specific state regulations.

SECTION 16: Other information

This document has been prepared in accordance with the SDS requirements of OSHA HCS 29 CFR 1910.1200.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not, therefore, be construed as guaranteeing any specific property of the product.

16.1. Abbreviations

ACGIH	: American Conference of Industrial Hygenists
AIHA	: American Industrial Hygiene Association
AP	: Approximately
>:AP	: Greater Than
<:AP	: Less Than
C	: Ceiling limit
CEPS	: Canadian Environmental Protection Act
DOT	: Department of Transportation
EINECS	: European Inventory of Existing Commercial Chemical Substances
EPA	: US Environmental Protection Agency
EQ	: Equal
HCS	: Hazardous Communication Standard
HMIS	: Hazardous Materials Information System
I	: Inhalable fraction
IARC	: International Agency for Research on Cancer
NA	: Not Applicable
ND	: No Data
NE	: Not Established
NFPA	: National Fire Protection Association
NIOSH	: National Institute of Occupational Safety & Health
NL	: Not Listed
NPCA	: National Paint and Coatings Association
NTP	: National Toxicology ProGram
OSHA	: Occupational Safety & Health Administration
PEL	: Permissible Exposure Limit (OSHA)
R	: Respirable fraction
RAHC	: Reasonably Anticipated to be a Human Carcinogen
TDG	: Transportation of Dangerous Goods
TLV	: Threshold Limit Value
WHMIS	: Workplace Hazardous Materials Information System
2B	: Possibly Carcinogenic to Humans

References

American Foundry Society

Installation

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com.

Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

Note

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

Trademarks

Victaulic and Zero-Flex are registered trademarks of Victaulic Company.
