



# SAFETY DATA SHEET

Issuing Date 26-May-2015

Revision Date 26-May-2015

Revision Number 0

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

### GHS product identifier

**Product Name** CARBIDE INSERTED MANDRELS, SHOES and TOOL INSERTS

### Other means of identification

**Synonyms** PRODUCT IDENTIFIER SDS083

### Recommended use of the chemical and restrictions on use

**Recommended Use** Tooling used in the honing process

**Uses advised against** Not for consumer use.

### Supplier's details

#### **Supplier Address**

Sunnen Products  
7910 Manchester Road  
Saint Louis, MO 63143  
314-781-2100  
Website: www.sunnen.com

### Emergency telephone number

**Emergency Telephone Number** 1 (314) 781-2100 8 a. m. - 3 p.m. C.S.T (US)  
Email: SDS@sunnen.com

## 2. HAZARDS IDENTIFICATION

### Classification

Solid metallic products are generally classified as "articles" and do not constitute hazardous materials in solid form. However, downstream use of the article could result in some hazardous elements contained in these products to be emitted under certain processing conditions such as but not limited to: abrading, cutting, or grinding. The classification given below pertains to when used during these processes.

Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Carcinogenicity	Category 1B
Specific Target Organ Toxicity (Repeated Exposure)	Category 1

### GHS Label elements, including precautionary statements

#### Emergency Overview

**Signal Word**

**Danger**

**Hazard Statements**

- May cause allergy or asthma symptoms or breathing difficulties if inhaled
- May cause an allergic skin reaction
- May cause cancer
- Causes damage to organs through prolonged or repeated exposure

**Appearance** Metallic**Physical State** Solid (compressed).**Odor** None**Precautionary Statements****Prevention**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Use personal protective equipment as required.
- In case of inadequate ventilation wear respiratory protection.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective gloves.
- Do not breathe dust/fume/gas/mist/vapors/spray.
- Wash face, hands and any exposed skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.

**General Advice**

- If exposed or concerned: Get medical attention/advice
- Specific treatment (see supplemental instructions on the administration of antidotes on this label)

**Skin**

- IF ON SKIN: Wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical advice/attention.
- Wash contaminated clothing before reuse.

**Inhalation**

- IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing
- If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

**Storage**

- Store locked up.

**Disposal**

- Dispose of contents/container to an approved waste disposal plant.

**Hazard Not Otherwise Classified (HNOC)**

Not applicable

**Other information**

Very toxic to aquatic life Very toxic to aquatic life with long lasting effects

0% of the mixture consists of ingredient(s) of unknown toxicity.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Synonyms**

PRODUCT IDENTIFIER SDS083

Chemical Name	CAS-No	Weight %	Trade secret
Tungsten carbide	12070-12-1	0-100	*

Molybdenum carbide (Mo2C)	12069-89-5	0-30	*
Cobalt	7440-48-4	0-30	*
Nickel	7440-02-0	0-20	*
Zirconium carbide (ZrC)	12070-14-3	0-5	*
Chromium	7440-47-3	0-5	*
Zirconium	7440-67-7	0-2	*
Molybdenum	7439-98-7	0-2	*
Boron oxide	1303-86-2	0-2	*
Aluminum oxide	1344-28-1	0-2	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

#### 4. FIRST AID MEASURES

##### Description of necessary first-aid measures

###### General Advice

As solid objects honing tools do not present any hazards at normal temperatures. However when modified for use by abrading, grinding, cutting or processing in another fashion that creates potentially hazardous dust or fumes can result in exposure by inhalation, swallowing or come in contact with skin or eyes. The information below is for these instances.

###### Eye Contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

###### Skin Contact

Wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Remove and wash contaminated clothing before re-use.

###### Inhalation

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

###### Ingestion

Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

##### Most important symptoms/effects, acute and delayed

**Most Important Symptoms/Effects** Asthma-like and/ or skin allergy-like symptoms. Difficulty in breathing. Itching Coughing and/ or wheezing. Rashes

##### Indication of immediate medical attention and special treatment needed, if necessary

###### Notes to Physician

May cause sensitization of susceptible persons.

#### 5. FIRE-FIGHTING MEASURES

##### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** None

##### Specific Hazards Arising from the Chemical

None known

##### Explosion Data

**Sensitivity to Mechanical Impact**

None.

**Sensitivity to Static Discharge**

None.

##### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions, protective equipment and emergency procedures

**Personal Precautions** As solid objects honing tools do not present any hazards at normal temperatures. However when modified for use by abrading, grinding, cutting or processing in another fashion that creates potentially hazardous dust or fumes can result in exposure by inhalation, swallowing or come in contact with skin or eyes. Avoid dust formation. Avoid contact with the skin and the eyes. Avoid inhalation of dust.

### Environmental Precautions

**Environmental Precautions** Avoid release to the environment, metal fines produced from abrading, cutting, welding, sanding, burning, milling or grinding.

### Methods and materials for containment and cleaning up

**Methods for Containment** Not applicable

**Methods for Cleaning Up** Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Handling** None required under normal usage. If exposed to dust: Ensure adequate ventilation. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

### Conditions for safe storage, including any incompatibilities

**Storage** Store in accordance with the particular national regulations

**Incompatible Products** None known based on information supplied.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

**Exposure Guidelines** Occupational exposure limits apply to some of the components resulting from abrading, cutting or grinding producing dust or fumes.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Tungsten carbide 12070-12-1	STEL: 10 mg/m <sup>3</sup> W TWA: 5 mg/m <sup>3</sup> W	(vacated) TWA: 5 mg/m <sup>3</sup> W (vacated) STEL: 10 mg/m <sup>3</sup> W	TWA: 5 mg/m <sup>3</sup> W STEL: 10 mg/m <sup>3</sup> W
Cobalt 7440-48-4	TWA: 0.02 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> dust and fume (vacated) TWA: 0.05 mg/m <sup>3</sup> dust and fume	IDLH: 20 mg/m <sup>3</sup> dust and fume TWA: 0.05 mg/m <sup>3</sup> dust and fume
Molybdenum carbide (Mo <sub>2</sub> C) 12069-89-5	TWA: 10 mg/m <sup>3</sup> Mo inhalable fraction TWA: 3 mg/m <sup>3</sup> Mo respirable fraction	TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> Mo	IDLH: 5000 mg/m <sup>3</sup> Mo
Nickel 7440-02-0	TWA: 1.5 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> TWA: 0.015 mg/m <sup>3</sup>
Zirconium carbide (ZrC) 12070-14-3	STEL: 10 mg/m <sup>3</sup> Zr TWA: 5 mg/m <sup>3</sup> Zr	TWA: 5 mg/m <sup>3</sup> Zr (vacated) TWA: 5 mg/m <sup>3</sup> Zr (vacated) STEL: 10 mg/m <sup>3</sup> Zr	IDLH: 25 mg/m <sup>3</sup> Zr TWA: 5 mg/m <sup>3</sup> except Zirconium tetrachloride Zr STEL: 10 mg/m <sup>3</sup> Zr
Boron oxide 1303-86-2	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> total dust	IDLH: 2000 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>
Aluminum oxide 1344-28-1	TWA: 1 mg/m <sup>3</sup> respirable fraction	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	-

Molybdenum 7439-98-7	TWA: 10 mg/m <sup>3</sup> inhalable fraction TWA: 3 mg/m <sup>3</sup> respirable fraction	(vacated) TWA: 10 mg/m <sup>3</sup>	IDLH: 5000 mg/m <sup>3</sup>
Zirconium 7440-67-7	STEL: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> Zr (vacated) TWA: 5 mg/m <sup>3</sup> (vacated) STEL: 10 mg/m <sup>3</sup>	IDLH: 50 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>

**Appropriate engineering controls**

<b>Engineering Measures</b>	Showers Eyewash stations Ventilation systems
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**Individual protection measures, such as personal protective equipment**

<b>Eye/Face Protection</b>	Always wear approved safety glasses with side shields when operating machinery.
<b>Skin and Body Protection</b>	Wear protective gloves
<b>Respiratory Protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.
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**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Physical State</b>	Solid (compressed).	<b>Appearance</b>	Metallic.
<b>Odor</b>	None.	<b>Odor Threshold</b>	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
<b>pH</b>	Not applicable	None known
<b>Melting Point/Range</b>	Not applicable	None known
<b>Boiling Point/Boiling Range</b>	Not applicable	None known
<b>Flash Point</b>	Not applicable.	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limits in Air</b>		
upper flammability limit	No data available	
lower flammability limit	No data available	
<b>Vapor Pressure</b>	No data available	None known
<b>Vapor Density</b>	No data available	None known
<b>Specific Gravity</b>	Not applicable	None known
<b>Water Solubility</b>	Insoluble in water.	None known
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient: n-octanol/water</b>	No data available	None known
<b>Autoignition Temperature</b>	No data available	None known
<b>Decomposition Temperature</b>	No data available	None known
<b>Viscosity</b>	No data available	None known

<b>Flammable Properties</b>	Not flammable
<b>Explosive Properties</b>	No data available
<b>Oxidizing Properties</b>	No data available

**Other information**

<b>VOC Content (%)</b>	No data available
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**10. STABILITY AND REACTIVITY****Reactivity**

No data available.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Hazardous Polymerization**

Hazardous polymerization does not occur.

**Conditions to avoid**

None known based on information supplied.

**Incompatible materials**

None known based on information supplied.

**Hazardous decomposition products**

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure****Product Information****Inhalation**

Product does not present an acute toxicity hazard based on known or supplied information. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Inhalation of dust in high concentration may cause irritation of respiratory system.

**Eye Contact**

Dust contact with the eyes can lead to mechanical irritation.

**Skin Contact**

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

**Ingestion**

There is no data available for this product.

**Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cobalt	= 6170 mg/kg ( Rat )	-	> 10 mg/L ( Rat ) 1 h
Nickel	> 9000 mg/kg ( Rat )	-	-
Boron oxide	= 3150 mg/kg ( Rat )	-	-
Aluminum oxide	> 5000 mg/kg ( Rat )	-	-

**Symptoms related to the physical, chemical and toxicological characteristics****Symptoms**

No information available.

**Delayed and immediate effects and also chronic effects from short and long term exposure****Sensitization**

No information available.

**Mutagenic Effects**

No information available.

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Tungsten carbide		Group 2A	Reasonably Anticipated	X
Cobalt	A3	Group 2B	Reasonably Anticipated	X
Nickel		Group 2B	Reasonably Anticipated	X
Chromium		Group 3		

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

Group 2A - Probably Carcinogenic to Humans  
 Group 2B - Possibly Carcinogenic to Humans  
 Group 3 - Not Classifiable as to its Carcinogenicity to Humans

**NTP: (National Toxicity Program)**

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

**Reproductive Toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Aspiration Hazard** No information available.

**Numerical measures of toxicity - Product**

**Acute Toxicity** 0% of the mixture consists of ingredient(s) of unknown toxicity.

*The following values are calculated based on chapter 3.1 of the GHS document:* Not applicable

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Cobalt 7440-48-4	-	LC50 96 h: > 100 mg/L static (Brachydanio rerio)	-	-
Nickel 7440-02-0	EC50 72 h: = 0.18 mg/L (Pseudokirchneriella subcapitata) EC50 96 h: 0.174 - 0.311 mg/L static (Pseudokirchneriella subcapitata)	LC50 96 h: > 100 mg/L (Brachydanio rerio) LC50 96 h: = 1.3 mg/L semi-static (Cyprinus carpio) LC50 96 h: = 10.4 mg/L static (Cyprinus carpio)	-	EC50 48 h: > 100 mg/L (Daphnia magna) EC50 48 h: = 1 mg/L Static (Daphnia magna)
Boron oxide 1303-86-2		LC50 72 h: = 0.57 g/L flow-through (Carassius auratus)		EC50 48 h: 370 - 490 mg/L (Daphnia magna)
Aluminum oxide 1344-28-1		LC50 96 h: > 100 mg/L semistatic (Salmo trutta)		LC50 48 h: > 100 mg/L (daphnia magna)

**Persistence and Degradability** No information available.

**Bioaccumulation** No information available.

**Other Adverse Effects**

No information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** This material, as supplied, is not a hazardous waste according to state and federal regulations (40 CFR 261)

**Contaminated Packaging** Do not re-use empty containers.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Nickel - 7440-02-0	(hazardous constituent - no waste number)	Included in waste streams: F006, F039		
Chromium - 7440-47-3		Included in waste streams: F032, F034, F035, F037, F038, F039	5.0 mg/L regulatory level	

## 14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Complies
<b>DSL</b>	Complies

### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

### U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Cobalt	7440-48-4	30	0.1
Nickel	7440-02-0	20	0.1
Chromium	7440-47-3	5	1.0

### SARA 311/312 Hazard Categories

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

### Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Nickel		X	X	

### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Nickel	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
Chromium			RQ 5000 lb final RQ RQ 2270 kg final RQ

### U.S. State Regulations

#### California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Cobalt	7440-48-4	Carcinogen
Nickel	7440-02-0	Carcinogen



**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Tungsten carbide	X				
Cobalt	X	X	X	X	X
Nickel	X	X	X	X	X
Boron oxide	X	X	X		X
Aluminum oxide	X	X	X		X
Zirconium	X	X	X		X
Molybdenum	X	X	X		X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION**

<b>NFPA</b>	Health Hazard 0	Flammability 0	Instability 0	Physical and Chemical Hazards -
<b>HMIS</b>	Health Hazard 2*	Flammability 0	Physical Hazard 0	Personal Protection X

\*Indicates a chronic health hazard.

**Prepared By** Product Stewardship  
 23 British American Blvd.  
 Latham, NY 12110  
 1-800-572-6501

**Issuing Date** 26-May-2015  
**Revision Date** 26-May-2015  
**Revision Note** Initial Release.

**General Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

PRODUCT LABEL ON FOLLOWING SHEET



## CARBIDE INSERTED MANDRELS, SHOES, TOOL INSERTS and TS SHOT PRODUCT IDENTIFIER SDS-083

CONTAINS: <100% Tungsten carbide CAS 12070-12-1, <31% Molybdenum carbide CAS 12069-89-5, <31% Cobalt CAS 7440-48-4, <21% Nickel CAS 7440-02-0, <6% Zirconium carbide CAS 12070-14-3, <6% Chromium CAS 7440-47-3, <3% Zirconium CAS 7440-67-7, <3% Molybdenum CAS 7439-98-7, <3% Boron oxide CAS 1303-86-2, <3% Aluminum oxide CAS 1344-28-1.

### PRECAUTIONARY STATEMENTS

**PREVENTION:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.

**GENERAL ADVICE:** If exposed or concerned: Get medical attention/advice. **SKIN: IF ON SKIN:** Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**INHALATION: IF INHALED:** If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

**STORAGE:** Store locked up.

**DISPOSAL:** Dispose of contents/container to an approved waste disposal plant.

**HAZARD NOT OTHERWISE CLASSIFIED (HNOC):** Not applicable.

**OTHER INFORMATION:** Very toxic to aquatic life with long lasting effects.

SUNNEN PRODUCTS  
7910 MANCHESTER ROAD  
ST. LOUIS, MO 63143 U.S.A.  
314-781-2105

## DANGER

**May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause cancer. Causes damage to organs through prolonged or repeated exposure.** Appearance: Gray metallic Physical State: Solid Odor: None

### FIRST AID

As a solid object the tool presents no hazard at normal temperatures. However when used in the normal manner or if modified for use by abrading, grinding, cutting or processing in another fashion that creates potentially hazardous dust or fumes can result in exposure by inhalation, swallowing or come in contact with skin or eyes. The information below is for these instances.

**INHALATION:** Remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

**SKIN CONTACT:** Wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Remove and wash contaminated clothing before re-use.

**EYE CONTACT :** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses if convenient to do so. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**INGESTION:** Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

### IN CASE OF FIRE

Use water spray, dry chemical powder, carbon dioxide or alcohol resistant foam to extinguish. Do not breath fumes.

LAB-083-US(en)-CARBIDE INSERTED MANDRELS SHOES INSERTS