

1. IDENTIFICATION

Product identifier: Diamond Tools

Trade Name: Tool Shapes 50EA, 50PD, 50VA, 50MA, 50AP, 50APH, 50HPD, 50INS, 50TT, 50RE, 50RT

Manufacturer/ Distributor: Radiac Abrasives, Inc.
A Tyrolit Company
1015 S. College Avenue
P.O. Box 1410
Salem, IL 62881

Phone Number (08:00 – 16:00): (800) 851-1095

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2. HAZARD(S) IDENTIFICATION

The hazard identification is based on a formalistic procedure as the hazard statements of the ingredients are summarized in section 3. This does not correspond to the hazardousness of the product itself.

A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being ground. Most of the dust generated during grinding is from the base material being ground and the potential hazard from this exposure must be evaluated. This dust may present a fire or dust explosion hazard and may present a serious health hazard.

Classification:

Physical	Health	Environment
Not Hazardous	Carcinogen Category 1B Respiratory Sensitization Category 1 Skin Sensitization Category 1 Reproductive Toxicity Category 1A Specific Target Organ Toxicity – Repeat Exposure Category 1 Eye Irritant Category 2	Aquatic Acute Toxicity Category 1 Aquatic Chronic Toxicity Category 1

Hazards not otherwise classified: None

Symbol(s)



Signal word

Danger!

Hazard statement(s)

H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation

Precautionary statement(s)

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.

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H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H350 May cause cancer.
 H360 May damage fertility or the unborn child
 H372 Causes damage to the respiratory tract through prolonged or repeated exposure by inhalation.
 H410 Very toxic to aquatic life with long lasting effects.

P260 Do not breathe dust or fume.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves, eye protection and protective clothing.
 P284 In case of inadequate ventilation wear respiratory protection.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P333+P313 If skin irritation or rash occurs: Get medical attention.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: Get medical attention.
 P304+P340 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
 P308+P313 If exposed or concerned: Get medical attention.
 P391 Collect spillage.
 P405 Store locked up.
 P501 Dispose of contents and container in accordance with local and national regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures:

Chemical name	CAS No.	Concentration
Copper	7440-50-8	<90%
Tungsten	7440-33-7	48%
Cobalt	7440-48-4	24%
Tin	7440-31-5	20%
Diamond	7782-40-3	12%
Nickel	7440-02-0	10%
Silver	7440-22-4	10%
Chromium	7440-47-3	<1%
Zinc	7440-66-6	<1%
Molybdenum	7439-98-7	0.93%

The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret and to cover products of variable composition. For more information about the composition for sampling purposes, contact Radiac Abrasives.

4. FIRST-AID MEASURES

Inhalation: Remove victim to fresh air. If irritation or other symptoms persist, get medical attention.

Skin contact: No first aid should be required. If contact with dust occurs, do not rub or scratch. Remove contaminated clothing. Rinse exposed skin with cold water then wash skin with soap and water. Get medical attention if irritation or rash occurs. Launder clothing before re-use.

Eye contact: If particles enter eyes, do not rub your eyes. Dust particles may cause abrasive eye injury. Wash eyes with plenty of water for several minutes, while holding the eyelids apart. Get medical attention if irritation persists.

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Ingestion: Not an anticipated route of exposure. If swallowed, drink 1 or 2 glasses of water to dilute. Never give anything by mouth to an unconscious or convulsing person. Get medical attention.

Most important symptoms/effects, acute and delayed: Dust may cause mechanical eye, skin and respiratory irritation. Dust particles may cause abrasive injury to the eyes. May cause serious eye irritation. May cause skin and respiratory tract sensitization (allergic reaction). Inhalation of fumes may cause metal fume fever with flu-like symptoms. Prolonged inhalation of dust or fumes from this product may cause perforation of the nasal septum and damage to the lungs, brain and central nervous system. This product contains cobalt, which may cause cancer based on animal studies. Risk of cancer depends on duration and level of exposure. This product contains a component may damage fertility based on animal studies.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is required if breathing is difficult.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: Use any media that is appropriate for the surrounding materials.

Specific hazards arising from the chemical: This product is not combustible; however, consideration must be given to the potential fire or explosion hazards from the base material being processed. Many materials create flammable or explosive dusts or turnings when machined or ground.

Special protective equipment and precautions for fire-fighters: Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus. Contain water used in firefighting from entering sewers or natural waterways.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate respirator and protective clothing as needed to avoid eye contact and inhalation of dust.

Environmental precautions: Avoid contamination of water supplies and environmental releases. Report spills as required to authorities.

Methods and materials for containment and cleaning up: Carefully collect dry material, avoiding the creation of airborne dust. Place in a suitable container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not breathe dust. Use with adequate ventilation. Avoid eye and skin contact with grinding dust. Wear suitable gloves, eye protection and appropriate protective clothing according to the operation. Wash thoroughly after handling. Consider potential exposure to components of the base materials or coatings being ground. Refer to OSHA's substance specific standards for additional work practice requirements where applicable.

Conditions for safe storage, including any incompatibilities: Store in accordance with ANSI B7.1. Protect abrasive wheels from damage.

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8. EXPOSURE CONTROLS / PERSONAL

Exposure guidelines:

Copper	As fume: 0.2 mg/m ³ TWA ACGIH TLV, 0.1 mg/m ³ OSHA PEL Dust and mist as Cu: 1 mg/m ³ TWA ACGIH TLV, 1 mg/m ³ TWA OSHA PEL
Tungsten	As insoluble compounds as W: 5 mg/m ³ TWA ACGIH TLV, 10 mg/m ³ STEL As soluble compounds as W: 1 mg/m ³ TWA ACGIH TLV, 3 mg/m ³ STEL
Cobalt	0.02 mg/m ³ TWA ACGIH TLV, 0.1 mg/m ³ OSHA PEL (for metal dust and fume)
Tin	As metal: 2 mg/m ³ TWA ACGIH TLV, 2 mg/m ³ TWA OSHA PEL As organic compounds: 0.1 mg/m ³ TWA ACGIH TLV, 0.2 mg/m ³ TWA, 0.1 mg/m ³ TWA OSHA PEL As inorganic compounds as Sn: 2 mg/m ³ TWA ACGIH TLV, 2 mg/m ³ TWA OSHA PEL (inorganic compounds except oxides)
Diamond	None Established
Nickel	Elemental: 1.5 mg/m ³ TWA ACGIH TLV (inhalable), 1 mg/m ³ TWA OSHA PEL As insoluble or soluble compounds as Ni: 0.2 mg/m ³ ACGIH TLV (inhalable, inorganic)
Silver	As metal: 0.1 mg/m ³ TWA ACGIH TLV (dust and fume) 0.01 mg/m ³ TWA OSHA PEL
Chromium	0.5 mg/m ³ TWA ACGIH TLV, 1 mg/m ³ TWA OSHA PEL
Zinc	None Established
Molybdenum	As insoluble compounds as Mo: 10 mg/m ³ TWA ACGIH TLV (inhalable), 3 mg/m ³ TWA (respirable), 15 mg/m ³ TWA OSHA PEL (total dust), As soluble compounds as Mo: 0.5 mg/m ³ TWA ACGIH TLV (respirable), 5 mg/m ³ TWA OSHA PEL

Appropriate engineering controls: Use local exhaust or general ventilation as required to minimize exposure to dust and maintain the concentration of contaminants below the TLVs.

Individual protection measures, such as personal protective equipment:

Respiratory protection: Use NIOSH approved respirator if exposure limits are exceeded or where dust exposures are excessive. Consider the potential for exposure to components of the coatings or base material being ground in selecting proper respiratory protection. Refer to OSHA's specific standards for lead, cadmium, etc. where appropriate. Selection of respiratory protection depends on the contaminant type, form and concentration. Select and use respirators in accordance with OSHA 1910.134 and good industrial hygiene practice.

Skin protection: Cloth or leather gloves recommended.

Eye protection: Safety goggles or face shield over safety glasses with side shields.

Other: Protective clothing as needed to prevent contamination of personal clothing. Hearing protection may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Solid.

Odor: May give off odor in use.

Odor threshold: Not applicable	pH: Not applicable
Melting point/freezing point: 700°C(1292°F)	Initial boiling point and boiling range: Not applicable
Flash point: Non-Combustible	Evaporation rate: Not applicable
Flammability (solid, gas): Not applicable	UEL: Not applicable
Flammable limits: LEL: Not applicable	Vapor density:
Vapor pressure: Not applicable	Solubility(ies): Not applicable
Relative density: Not applicable	Auto-ignition temperature: Not applicable
Partition coefficient: n-ctanol/water: Not applicable	Viscosity: Not applicable

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Decomposition temperature: Not applicable	
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10. STABILITY AND REACTIVITY

Reactivity: Not reactive

Chemical stability: Stable

Possibility of hazardous reactions: Will not occur.

Conditions to avoid: None known

Incompatible materials: Strong acids and bases

Hazardous decomposition products: Dust from grinding could contain ingredients listed in Section 3 and other, potentially more hazardous components of the base material being ground or coatings applied to the base material.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure:

Inhalation: Dust generated from processing may cause respiratory irritation and an allergic respiratory reaction (sensitization). Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, chest pain, and fatigue and muscle pain. Symptoms generally resolve in 24-48 hours.

Ingestion: None expected under normal use conditions. Swallowing large pieces may cause obstruction of the gastrointestinal tract.

Skin contact: Dust generated from processing may cause abrasive irritation. May cause allergic skin reaction (sensitization).

Eye contact: Contact with dust or fumes may cause mechanical irritation. Dust particles may cause abrasive injury to the eyes.

Chronic effects from short- and long-term exposure: Long-term overexposure to respirable dust may cause lung damage (fibrosis) with symptoms of coughing, shortness of breath and diminished breathing capacity. Prolonged inhalation of nickel dust or fumes may cause perforation of the nasal septum and lung damage. Inhalation of cobalt particles results in disposition in the upper and lower respiratory tract and may lead to an interstitial lung disease generally referred to as hard metal lung disease. Chronic effects may be aggravated by smoking. Prolonged exposure to elevated noise levels during operations may affect hearing. A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being ground. Most of the dust generated during grinding is from the base material being ground and the potential hazard from this exposure must be evaluated.

Numerical measures of toxicity: This product and its components are not acutely toxic.

Copper: Oral rat LD50 > 2500 mg/kg, inhalation rat LC50 > 5.11 mg/L, dermal rat LD50 > 2000 mg/kg

Tungsten: Oral rat LD50 > 2000 mg/kg, inhalation rat LC50 > 5.4 mg/L, dermal rat LD50 > 2000 mg/kg

Cobalt: Oral rat LD50: 550 mg/kg, inhalation rat LC50 <=0.05 mg/L, dermal rat LD50 > 20000 mg/kg

Tin: Oral rat LD50 > 2000 mg/kg, inhalation rat LC50 > 4.75 mg/L, dermal rat LD50 > 2000 mg/kg

Diamond: Oral rat LD50 > 2000 mg/kg, inhalation rat LC50 > 5.2 mg/L, dermal rat LD50 > 2000 mg/kg

Nickel: Oral rat LD50 > 9000 mg/kg

Silver: Oral rat LD50 > 5110 mg/kg, inhalation rat LC50 > 5.16 mg/L, dermal rat LD50 > 2000 mg/kg

Chromium: Oral rat LD50 > 5000 mg/kg, inhalation rat LC50 > 5.41 mg/L

Zinc: Oral rat LD50 > 2000 mg/kg, inhalation rat LC50 > 5.4 mg/L

Molybdenum: No data available.

Carcinogenicity: Nickel compounds are classified by IARC as known human carcinogens (Group 1) and by NTP as known human carcinogens. Metallic nickel is classified by IARC as possibly carcinogenic to humans (Group 2B) and by NTP as reasonably anticipated to be a carcinogen. Cobalt and cobalt compounds are classified by IARC as possibly

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carcinogenic to humans (Group 2B). None of the other components of this product are listed as carcinogens by OSHA, IARC, NTP, or the EU CLP.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Copper: *Oncorhynchus mykiss* LC50: 0.19 mg/L/96hr
 Tungsten: *Danio rerio* LC50 > 181 mg/L/96hr
 Cobalt: *Danio rerio* NOEC: 2 mg/L/96hr
 Tin: *Pimephales promelas* LC50 > 0.0124 mg/L/96hr
 Diamond: *Oncorhynchus mykiss* LC50 > 100 mg/L/96hr
 Nickel: *Oncorhynchus mykiss* LC50: 35.5 mg/L
 Silver: *Pimephales promelas* LC50: 0.0012 mg/L/96hr
 Zinc: *Cottus bairdii* LC50: 0.439 mg/L/96hr

The dust produced from this product is classified as very toxic to aquatic life with long lasting effects. Release to the environment should be avoided.

Persistence and degradability: Biodegradation is not applicable to inorganic compounds.

Bioaccumulative potential: No data available

Mobility in soil: No data available.

Other adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable local, state/provincial and federal regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

14. TRANSPORT INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	None	Not Regulated	None	None	None
TDG	None	Not Regulated	None	None	None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None identified.

15. REGULATORY INFORMATION

SARA Section 311/312 Hazard Categories: Not Applicable (manufactured articles)

SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (Toxic Chemical Release Reporting):

Components	C.A.S. #	WT %
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None		
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California Proposition 65: WARNING You create dust when you cut, sand, drill or grind materials such as wood, paint, cement, masonry or metal. This dust often contains chemicals known to cause cancer, birth defects or other reproductive harm.

This SDS has been prepared in accordance with US OSHA HazCom 2012 and Canadian WHMIS 2015 regulations.

16. OTHER INFORMATION

NFPA Rating: Health = 1 Flammability = 0 Instability = 0
HMIS Rating: Health = 2* Flammability = 0 Physical Hazard =0
*Chronic health hazard

Date of current revision: 08/07/2024

The information and recommendations set forth are taken from sources believed to be accurate. Radiac Abrasives, Inc., a Tyrolit Company, makes no warranty with respect to the accuracy of this information or the suitability of these recommendations, assumes no liability to any user thereof. It is the responsibility of the user to investigate and understand pertinent sources of information to comply with all laws and procedures applicable to the safe use and handling of the product and to determine the suitability of the product for its intended use.

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DANGER



Hazard statement(s)

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Precautionary statement(s)

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P272 Contaminated work clothing must not be allowed out of the workplace.

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P280 Wear protective gloves, eye protection and protective clothing.

P284 In case of inadequate ventilation wear respiratory protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P333+P313 If skin irritation or rash occurs: Get medical attention.

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