

4000 RG

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 12/06/2019

 2.1
 04/11/2024
 102000029169
 Date of first issue: 03/26/2018

SECTION 1. IDENTIFICATION

Product name : 4000 RG Product code : 046477F00

Manufacturer or supplier's details

Company name of supplier : ECKART America Corporation

Address : 830 East Erie Street

Painesville OH 44077

Telephone : 866-458-7837

(440) 954-7600

Telefax : (440) 354-6224

e-mail adresse : info.eckart.america.oh@altana.com

Emergency telephone : CHEMTREC: 800-424-9300

CHEMTREC: 1-703-527-3387 (International)

NCEC:

(contract no. ECKART29003-NCEC) US: +1 866 928 0789 (Toll free) Canada: +1 800 579 7421 (Toll Free)

Mexico: +52 55 5004 8763

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable solids : Category 1

Combustible dust

Acute toxicity (Oral) : Category 4

Eye irritation : Category 2A

GHS label elements

Hazard pictograms :





Signal Word : Danger

Hazard Statements : H228 Flammable solid.

May form combustible dust concentrations in air.

H302 Harmful if swallowed.



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H319 Causes serious eye irritation.

Precautionary Statements

Prevention:

P210 Keep away from heat/ sparks/ open flames/

hot surfaces. No smoking.

P240 Ground/bond container and receiving

equipment.

P241 Use explosion-proof electrical/ ventilating/

lighting/equipment.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this

product.

P280 Wear protective gloves/ eye protection/ face

protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON

CENTER/ doctor if you feel unwell. Rinse

mouth.

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 advice/

attention.

P370 + P378 In case of fire: Use for extinction: Special

powder for metal fires.

P370 + P378 In case of fire: Use for extinction: Dry sand.

Disposal:

P501 Dispose of contents/ container to an approved

waste disposal plant.

Hazardous ingredients which must be listed on the label:

Copper

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Copper	7440-50-8	>= 70 - < 90
Zinc	7440-66-6	>= 20 - < 30



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Octadecanoic acid 57-11-4 >= 1 - < 5

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Take the victim into fresh air.

Move out of dangerous area.

Show this material safety data sheet to the doctor in

attendance.

If inhaled : If unconscious, place in recovery position and seek medical

advice.

If symptoms persist, call a physician.

In case of skin contact : Wash off immediately with soap and plenty of water.

If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.

Remove contact lenses.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician.

Most important symptoms

and effects, both acute and

delayed

Harmful if swallowed.

Causes serious eye irritation.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Special powder against metal fire

Dry sand ABC powder

: Water

Unsuitable extinguishing

media

High volume water jet

Carbon dioxide (CO2)

Specific hazards during fire

fighting

Do not allow run-off from fire fighting to enter drains or water

courses.

Further information : Standard procedure for chemical fires.

Collect contaminated fire extinguishing water separately. This

must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations. Use a water spray to cool fully closed containers.

Special protective equipment

for fire-fighters

Wear self-contained breathing apparatus for firefighting if

necessary.



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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Use personal protective equipment. Evacuate personnel to safe areas. Use personal protective equipment.

Avoid dust formation. Avoid breathing dust.

Remove all sources of ignition.

General advice The product should not be allowed to enter drains, water

courses or the soil.

Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform

respective authorities.

Environmental precautions The product should not be allowed to enter drains, water

courses or the soil.

Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform

respective authorities.

Methods and materials for containment and cleaning up Use mechanical handling equipment.

Pick up and transfer to properly labeled containers.

Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

fire and explosion

Advice on protection against : Normal measures for preventive fire protection.

Avoid dust formation.

Keep away from open flames, hot surfaces and sources of

ignition.

Advice on safe handling Avoid creating dust.

Routine housekeeping should be instituted to ensure that

dusts do not accumulate on surfaces. Avoid formation of respirable particles.

Do not breathe vapors/dust. Avoid contact with skin and eyes.



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For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the

application area.

Dispose of rinse water in accordance with local and national

regulations.

Conditions for safe storage : Electrical installations / working materials must comply with

the technological safety standards.

Keep away from sources of ignition - No smoking.

Do not store near combustible materials.

Keep containers tightly closed in a cool, well-ventilated place. To maintain product quality, do not store in heat or direct

sunlight. No smoking.

Keep container tightly closed in a dry and well-ventilated

place.

Electrical installations / working materials must comply with

the technological safety standards.

Technical

measures/Precautions

Materials to avoid

Protect from humidity and water.

Keep away from oxidizing agents, strongly alkaline and

strongly acid materials in order to avoid exothermic reactions. Do not store together with oxidizing and self-igniting products.

Further information on

storage stability

Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Copper	7440-50-8	TWA	1 mg/m3 (Copper)	ACGIH
		TWA (dust and mists)	1 mg/m3 (Copper)	NIOSH REL
		TWA	1 mg/m3 (Copper)	OSHA P0
		TWA	0.2 mg/m3 (Copper)	ACGIH
		TWA	0.1 mg/m3 (Copper)	OSHA P0
		TWA (Dust and mist)	1 mg/m3 (Copper)	ACGIH
		TWA	0.2 mg/m3	ACGIH



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		(Fumes)	(Copper)	
		TWA (Dust)	1 mg/m3	NIOSH REL
			(Copper)	
		TWA (Mist)	1 mg/m3	NIOSH REL
			(Copper)	
		TWA (dusts	1 mg/m3	OSHA Z-1
		and mists)	(Copper)	
		TWA	0.1 mg/m3	OSHA Z-1
		(Fumes)	(Copper)	
		TWA	0.1 mg/m3	OSHA P0
		(Fumes)	(Copper)	
		TWA (Dust	1 mg/m3	OSHA P0
		and mist)	(Copper)	
Zinc	7440-66-6	TWA (total	50 Million	OSHA Z-3
		dust)	particles per cubic foot	
		TWA (total	15 mg/m3	OSHA Z-3
		dust)		
		TWA	5 mg/m3	OSHA Z-3
		(respirable		
		fraction)		
		TWA	15 Million	OSHA Z-3
		(respirable	particles per cubic	
		fraction)	foot	
Octadecanoic acid	57-11-4	TWA	10 mg/m3	ACGIH
		TWA	10 mg/m3	ACGIH
		(Inhalable		
		particulate		
		matter)		
		TWA	3 mg/m3	ACGIH
		(Respirable		
		particulate		
		matter)		

Personal protective equipment

Respiratory protection : Use suitable breathing protection if workplace concentration

requires.

Respirator with a dust filter

P1 filter

Hand protection

Material : Leather

Remarks : Leather gloves The choice of an appropriate glove does not



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only depend on its material but also on other quality features and is different from one producer to the other. The exact break through time can be obtained from the protective glove producer and this has to be observed. Recommended

producer and this has to be observed. Recommended preventive skin protection

The suitability for a specific workplace should be discussed

with the producers of the protective gloves.

Eye protection : Safety glasses

Wear face-shield and protective suit for abnormal processing

problems.

Skin and body protection : Long sleeved clothing

Safety shoes

Dust impervious protective suit

Choose body protection according to the amount and

concentration of the dangerous substance at the work place.

Hygiene measures : General industrial hygiene practice.

Do not smoke.

Wash hands before breaks and at the end of workday.

Keep away from food and drink. Keep away from tobacco products. When using do not eat or drink. When using do not smoke.

Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder Color : gold

Odor : characteristic
Odor Threshold : No data available

pH : substance/mixture is non-soluble (in water)

Melting point/range : > 900 °C

Initial boiling point and boiling :

range

No data available

Flash point : No data available Evaporation rate : No data available

Flammability (solid, gas) : The substance or mixture is a flammable solid with the

category 1.

combustible dust

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available



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Vapor pressure : No data available Relative density : No data available Density : 8 - 9 g/cm3

Solubility(ies)

Water solubility : insoluble

Partition coefficient: n- : No data available

octanol/water

Autoignition temperature : No data available
Decomposition temperature : No data available
Viscosity : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.
Chemical stability : No decomposition if stored and applied as directed.
Possibility of hazardous : Stable under recommended storage conditions.

reactions No hazards to be specially mentioned.

No decomposition if stored and applied as directed.

Dust may form explosive mixture in air.

Conditions to avoid : Heat, flames and sparks.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Components:

Copper:

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after

single ingestion.

Zinc:

Acute oral toxicity : (Rat): > 2,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 5.41 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Skin corrosion/irritation

Not classified based on available information.

Components:

Copper:



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Remarks: May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

Copper:

Result: Eye irritation

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC No ingredient of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

OSHA No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.



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Further information

Components:

Copper:

Remarks: No data available

Zinc:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Copper:

M-Factor (Acute aquatic

toxicity)

M-Factor (Chronic aquatic

toxicity)

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Zinc:

M-Factor (Acute aquatic

toxicity)

M-Factor (Chronic aquatic

toxicity)

: 1

: 1

: 10

: 10

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Other adverse effects

No data available



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Components:

Copper:

Additional ecological

information

An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

Zinc:

Additional ecological

information

An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water

courses or the soil.

Do not contaminate ponds, waterways or ditches with

chemical or used container.

Send to a licensed waste management company. In accordance with local and national regulations.

Contaminated packaging : Empty remaining contents.

Dispose of as unused product. Do not re-use empty containers.

Do not burn, or use a cutting torch on, the empty drum. In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

Domestic regulation

49 CFR

UN/ID/NA number : UN 3089

Proper shipping name : Metal powders, flammable, n.o.s.

Class : 4.1 Packing group : II

Labels : FLAMMABLE SOLID

ERG Code : 170 Marine pollutant : no

International Regulations

IATA-DGR

UN/ID No. : UN 3089

Proper shipping name : Metal powder, flammable, n.o.s.

Class : 4.1



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Packing group : II

Labels : Flammable Solid

Packing instruction (cargo : 448

aircraft)

Packing instruction : 445

(passenger aircraft)

IMDG-Code

UN number : UN 3089

Proper shipping name : METAL POWDER, FLAMMABLE, N.O.S.

(Copper metal powder)

Class : 4.1
Packing group : II
Labels : 4.1
EmS Code : F-G, S-G

Marine pollutant : yes

Remarks : IMDG Code segregation group 7 - Heavy metals and their

salts, IMDG Code segregation group 15 - Powdered metals

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ
		(lbs)
Zinc	7440-66-6	1000

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)

Combustible dust

Acute toxicity (any route of exposure) Serious eye damage or eye irritation

SARA 313 : The following components are subject to reporting levels

established by SARA Title III, Section 313:



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Copper 7440-50-8 >= 70 - < 90 %

Zinc 7440-66-6 >= 20 - < 30 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

Copper 7440-50-8 71 %

Zinc 7440-66-6 27.4 %

This product contains the following priority pollutants related to the U.S. Clean Water Act:

Copper 7440-50-8 71 %

Zinc 7440-66-6 27.4 %

US State Regulations

Massachusetts Right To Know

Copper 7440-50-8

Zinc 7440-66-6

Pennsylvania Right To Know

Copper 7440-50-8

Zinc 7440-66-6

Aluminum 7429-90-5

California Prop. 65



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WARNING: This product can expose you to chemicals including lead and cadmium, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances

Copper 7440-50-8

Zinc 7440-66-6

California Permissible Exposure Limits for Chemical Contaminants

Copper 7440-50-8

Zinc 7440-66-6

The ingredients of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

TSCA : On TSCA Inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated

values)

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1

Limits for Air Contaminants

OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3

Mineral Dusts

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA P0 / TWA : 8-hour time weighted average OSHA Z-1 / TWA : 8-hour time weighted average OSHA Z-3 / TWA : 8-hour time weighted average



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AllC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer: IATA - International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances: (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA -Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods: vPvB - Very Persistent and Very Bioaccumulative

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The information provided in this Material Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

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