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### **SECTION 1. IDENTIFICATION**

Product name : Product code :		ROTOFLEX RG - STANDARD EAP 046487SA0			
Manufacturer or supplier's de	eta	ils			
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 accorda 1910.1200)	anc	e with the OSHA Hazard Communicat	ion Standard (29 CFR	
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 concentration H302 Harmful if swallowed.	ons in air.	
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		H319 Causes s	serious eye irritation.
Preca	autionary Statements	Prevention:	
		P210	Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
		P240	Ground/bond container and receiving
		P241	equipment. Use explosion-proof electrical/ventilating/
		P264	lighting/ equipment. 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 +	CENTER/ doctor if you feel unwell. Rinse
		P305 + P351 +	<ul> <li>mouth.</li> <li>P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> </ul>
		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



fighting



## **ROTOFLEX RG - STANDARDEAP**

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	decanoic acid al concentration is withhe		11-4	>= 1 - < 5		
	4. FIRST AID MEASUF		51			
			in into frach cir			
Gene	ral advice	Move out of o Show this ma	im into fresh air. dangerous area. iterial safety data sheet to	o the doctor in		
lf inha	aled	: If unconsciou advice.				
In cas	se of skin contact	: Wash off imr If on skin, rins	If symptoms persist, call a physician. Wash off immediately with soap and plenty of water. If on skin, rinse well with water.			
In cas	se of eye contact	<ul> <li>If on clothes, remove clothes.</li> <li>Immediately flush eye(s) with plenty of water.</li> <li>Remove contact lenses.</li> <li>Keep eye wide open while rinsing.</li> <li>If eye irritation persists, consult a specialist.</li> </ul>				
lf swa	allowed	: Keep respirat Do not give n Never give ar	ory tract clear. hilk or alcoholic beverage hything by mouth to an ur persist, call a physician.	es.		
	important symptoms offects, both acute and ed	: Harmful if sw				
ECTION	5. FIRE-FIGHTING ME	ASURES				
Suita	ble extinguishing media	Dry sand	er against metal fire			
	ABC powder Unsuitable extinguishing : Water media High volume water jet Carbon dioxide (CO2)					
0	if in home value al union of inc		www.affframafinafia.htina.t			

Specific hazards during fire : 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

Advice on protection against fire and explosion	:	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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Con	ditions for safe storage	Smoking application Dispose of regulation Electrical the techn Keep awa Do not st Keep con To mainta sunlight. No smok Keep con place. Electrical	of rinse water in accordance with local and national is. installations / working materials must comply with ological safety standards. ay from sources of ignition - No smoking. ore near combustible materials. tainers tightly closed in a cool, well-ventilated place. in product quality, do not store in heat or direct
mea	hnical asures/Precautions erials to avoid	: Protect fr : Keep awa strongly a	om humidity and water. ay from oxidizing agents, strongly alkaline and acid materials in order to avoid exothermic reactions. ore together with oxidizing and self-igniting products.
	her information on age stability		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 (Copper)	NIOSH REL
			TWA (dusts and mists)	1 mg/m3 (Copper)	OSHA Z-1
			TWA (Fumes)	0.1 mg/m3 (Copper)	OSHA Z-1
			TWA (Fumes)	0.1 mg/m3 (Copper)	OSHA P0
			TWA (Dust and mist)	1 mg/m3 (Copper)	OSHA P0
Zinc		7440-66-6	TWA (total dust)	50 Million particles per cubic foot	OSHA Z-3
			TWA (total dust)	15 mg/m3	OSHA Z-3
			TWA (respirable fraction)	5 mg/m3	OSHA Z-3
			TWA (respirable fraction)	15 Million particles per cubic foot	OSHA Z-3
Octac	decanoic acid	57-11-4	TWA	10 mg/m3	ACGIH
			TWA (Inhalable particulate matter)	10 mg/m3	ACGIH
			TWA (Respirable particulate matter)	3 mg/m3	ACGIH

## Personal protective equipment

Respiratory protection	<ul> <li>Use suitable breathing protection if workplace concentration requires.</li> <li>Respirator with a dust filter</li> <li>P1 filter</li> </ul>	
Hand protection Material	: Leather	
Remarks	: Leather gloves The choice of an appropriate glove does not	





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		and is different break through producer and t preventive skir	n its material but also on other quality features t from one producer to the other. The exact time can be obtained from the protective glove his has to be observed. Recommended a protection for a specific workplace should be discussed		
		with the produc	cers of the protective gloves.		
Еуе р	protection	: Safety glasses Wear face-shie problems.	eld and protective suit for abnormal processing		
Skin	and body protection	<ul> <li>Long sleeved clothing Safety shoes</li> <li>Dust impervious protective suit</li> <li>Choose body protection according to the amount and concentration of the dangerous substance at the work place.</li> </ul>			
Hygie	ene measures	: General indust Do not smoke. Wash hands b Keep away fro Keep away fro When using do When using do	<ul> <li>General industrial hygiene practice. Do not smoke.</li> <li>Wash hands before breaks and at the end of workday. Keep away from food and drink. Keep away from tobacco products.</li> <li>When using do not eat or drink.</li> <li>When using do not smoke.</li> <li>Wash hands before breaks and at the end of workday.</li> </ul>		

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

: : : : : : : : : : : : : : : : : : : :	powder gold characteristic No data available substance/mixture is non-soluble (in water) > 900 °C
:	No data available
:	No data available
:	No data available
:	The substance or mixture is a flammable solid with the category 1.
	combustible dust
:	No data available
:	No data available
	:







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Vapo	r pressure	: No data availa	able	
Relati	ive density	: No data availa	able	
Densi	ity	: 8 - 9 g/cm3		
Solub	oility(ies)			
	ater solubility	: insoluble		
	ion coefficient: n- ol/water	: No data availa	able	
Autoi	gnition temperature	: No data availa	able	
Deco	mposition temperature	: No data availa	able	
Visco	sity	: No data availa	able	

## SECTION 10. STABILITY AND REACTIVITY

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

Harmful if swallowed.		
<u>Components:</u>		
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:

#### Connor





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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)	:	10
M-Factor (Chronic aquatic toxicity)	:	10
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)	:	1
M-Factor (Chronic aquatic toxicity)	:	1
Ecotoxicology Assessment		
Acute aquatic toxicity	:	Very toxic to aquatic life.
Chronic aquatic toxicity	:	Very toxic to aquatic life with long lasting effects.
Persistence and degradabilit	ty	
Bioaccumulative potential No data available		
Other adverse effects No data available		





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<u>Com</u>	ponents:		
Сорр	per:		
	tional ecological mation	unprofessiona	ntal hazard cannot be excluded in the event of al handling or disposal. aquatic life with long lasting effects.
Zinc	:		
	tional ecological mation	unprofessiona	ntal hazard cannot be excluded in the event of al handling or disposal. 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.
Conteminated markening		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	:	I
Labels	:	FLAMMABLE SOLID
ERG Code	:	170
Marine pollutant	:	no
International Regulations		
IATA-DGR		
IATA-DGR UN/ID No.	:	UN 3089
IATA-DGR UN/ID No. Proper shipping name	:	Metal powder, flammable, n.o.s.
IATA-DGR UN/ID No.	: :	





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Labels Packin aircraft Packin	g group g instruction (cargo ) g instruction nger aircraft)	:	II Flammable Solid 448 445	
Class Packin Labels EmS C	nber shipping name g group ode pollutant		(Copper metal por 4.1 II 4.1 F-G, S-G yes IMDG Code segre	e, FLAMMABLE, N.O.S. wder) egation group 7 - Heavy metals and their 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			
U.S. ( This p Act Se This p Accid This p	Clean Air Act Section product does not conf ection 112 (40 CFR 6 product does not conf ental Release Preven	602 (40 CFR 82, Subp tain any hazardous air p 1). tain any chemicals liste ation (40 CFR 68.130, \$ tain any chemicals liste	oollutants (HAP), as defined d under the U.S. Clean Air	d by the U.S. Clean A Act Section 112(r) for
	Water Act			
Section This p Section	on 311, Table 116.4A product does not cont on 311, Table 117.3.	tain any Hazardous Che	ostances listed under the U. emicals listed under the U.S s listed under the U.S. Clea 71 %	S. CleanWater Act,
	Zinc	7440-66-6	27.4 %	
This p	product contains the f Copper	ollowing priority polluta 7440-50-8	nts related to the U.S. Clear 71 %	n Water Act:
	Zinc	7440-66-6	27.4 %	
	tate Regulations			
US Si				
	achusetts Right To	Know		
	achusetts Right To Copper	Know	74	140-50-8
	-	Know		140-50-8 140-66-6
Mass	Copper Zinc sylvania Right To K		74	140-66-6
Mass	Copper Zinc sylvania Right To K Copper		74	140-66-6 140-50-8
Mass	Copper Zinc sylvania Right To K		74 74 74	140-66-6







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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

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 abbreviati	ons	
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA PO	:	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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