

SAFETY DATA SHEET

Issue Date 10-Jan-2018	Revision Date	10-Jan-2018					Version 1
1. IDENTIFICA	ATION OF THE SUBS COMPANY/				AND OF	THE	
<u>Product identifier</u> Product Name	Copper Base Alloy Pow	der					
Other means of identification Synonyms	Copper Base Alloy Pow Cu-Nb Alloy, Narloy-Z, /		by, GRCop-	84 Alloy,	GRCop-42	Alloy, Cu-Z	r Alloy,
Recommended use of the chemi Recommended Use Uses advised against	ical and restrictions on use Alloy product manufactu		:**		:		.**
Details of the supplier of the safe Stanford Advanced Materials		er Address					
E-mail : sales@samaterials.com Tel : (949) 407-8904 Address : 23661 Birtcher Dr., La Emergency Telephone		.1	÷		1		, , ,
	2. HAZARDS	IDENTIFIC	ATION		1	1	- 1 I
<u>Classification</u>							

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute toxicity - Oral				Category 4]
Acute aquatic toxicity				Category 1		
Chronic aquatic toxicity				Category 1		

Label elements

		E	mergenc	y Overview				
Varning								
lazard statements larmful if swallowed /ery toxic to aquatic life /ery toxic to aquatic life v	with long locting of				1	 	}	
		:··		af i	:	 ÷	;**	
Appearance Powder				tate Solid			Odo	r Odorless

Precautionary Statements - Prevention

Wash hands thoroughly after handling Do not eat, drink or smoke when using this product Avoid release to the environment IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell Collect spillage Precautionary Statements - Disposal Dispose of contents/container to an approved waste disposal plant Hazards not otherwise classified (HNOC) Not applicable Other Information When product is subjected to welding, burning, melling, sawing, brazing, grinding, buffing, polishing, or other similar heat-generating processes, the following potentially hazardous airborne particles and/or fumes may be generated:: Heavalent Chomium (Chrinium VI) may cause lung, nasal, add/or sinus carcer. Zinc, copper, magnesium, or cadmium fumes may cause metal fumes fever. Synonyms Copper Base Alloy Powder: Cu-Cr Alloy, GRCop-84 Alloy, GRCop-42 Alloy, Cu-27 Alloy Curbo Alloy, Nardoy-Z, Amzire Alloy. Or 2000 (Curbo Alloy, Nardoy-Z, Amzire Alloy. Chemical Name CAS No. Weight-% Copper Base Alloy Powder: Cu-Cr Alloy, GRCop-84 Alloy, GRCop-42 Alloy, Cu-27 Alloy Or 3 Silver 7440-50-6 70 - 90.85 Chromium T440-67-7 O - 0.5 Later All Measures Erest All MeaSURES		e Alloy Po	wder							Revisio	n Date 10-	Jan-2018
Collect spillage Precautionary Statements - Disposal Dispose of contents/container to an approved waste disposal plant Hazards not otherwise classified (HNOC). Not applicable Other Information When product is subjected to welding, burning, melting, sawing, brazing, grinding, buffing, polishing, or other similar heat-generating processes, the following potentially hazardsous airborne particles and/or fumes may be generated:: Hexavalent Chromium (Chromium VI) may cause lung, nasal, and/or sinus cancer. Zinc, copper, magnesium, or cadmium fumes may cause metal furnes fever. 3. COMPOSITION/INFORMATION ON INGREDIENTS Synonyms Copper Base Alloy Powder: Cu-Cr Alloy, GRCop-84 Alloy, GRCop-42 Alloy, Cu-Zr Alloy, Cu-Nb Alloy, Nantoy-Z, Amzire Alloy. Chemical Name Copper 7440-50-8 70 - 99.86 Chromium Chromium (7440-47-3 0 - 27 Nicolium (Columbium) 7440-67-7 0 - 93.86 Chromium 7440-67-7 0 - 0.5 4. FIRST AID MEASURES First aid measures Eye contact In the case of particles coming in contact with eyes during processing, treat as with any forsign object. Skin Contact None under normal use conditions. If excessive amounts of smoke, fume, or particulate are inhaled during processing, rem to fresh air and consult a qualified health professional. If excessive amounts of smoke, fume, or particulate are inhaled during processing, rem to fresh air and consult a qualified health professional. Indication of any immediate medical attention and special treatment needed Note to physicians Treat symptomatically. 6. FIRE-FIGHTING MEASURES Suitable extinguishing media Product, If fammable as finely divided particles or pieces resulting from processing of th product.	Do not eat, drin	nk or smoke	when us		duct			.:	: · [*]	ji.	.:	e.
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Synonyms Copper Base Alloy Powder: Cu-Cr Alloy, GRCop-84 Alloy, GRCop-42 Alloy, Cu-Zr Alloy, Cu-Nb Alloy, Narloy-Z, Amzirc Alloy. Chemical Name CAS No. Weight-% Copper 7440-50-8 70 - 99.85 Chromium 7440-63-8 70 - 99.85 Chromium 7440-03-1 0 - 27 Nibbium (Columbium) 7440-03-1 0 - 3 Silver 7440-67-7 0 - 0.5 Silver 7440-67-7 0 - 0.5 Line constraint Response Response Eye contact In the case of particles coming in contact with eyes during processing, treat as with any foreign object. None under normal use conditions. Inhalation If excessive amounts of smoke, fume, or particulate are inhaled during processing, reme to fresh air and consult a qualified health professional. Ingestion Most important symptoms and effects, both acute and delayed Symptoms May cause acute gastrointestinal effects if swallowed. Indication of any immediate medical attention and special treatment needed Street symptomatically. Street symptomatically. Distributed form as distributed, flammable as finely divided particles or pieces resulting from processing of th product.					: • •	. • :		:				
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Small Fire Smother with salt (NaCl) or class D dry powder fire extinguisher.	Eye contact Skin Contact Inhalation Ingestion <u>Most importan</u> Symptoms Indication of a	nt symptom		foreign None u If exces to fresh IF SWA ffects, both May ca ical attentio	ase of par object. nder norm ssive amo a air and c ALLOWED a acute ar use acute on and sp ymptomat	rticlès con nal use co unts of sn onsult a q D: Call a P nd delaye e gastroint pecial trea ically.	ning in contac nditions. noke, fume, o ualified healt OISON CEN d estinal effects atment need	r particula n professio TER or do s if swallov ed	ite are in onal. ctor/phys	haled durin sician if you	g processing	g, remove
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Page 2/9	Eye contact Skin Contact Inhalation Ingestion Most importan Symptoms Indication of a Note to physic Suitable exting Product not flar product.	nt symptom any immedi cians guishing m mmable in ti	iate medi	foreign None u If exces to fresh IF SWA ffects, both May ca ical attentio Treat s feas distribute	ase of par object. nder norm ssive amo a air and c ALLOWED a acute ar use acute on and sp ymptomat 5. FIRE-I	rticles con nal use co unts of sn onsult a q b: Call a P nd delaye o gastroint pecial trea ically. FIGHTIN able as fin	ning in contac nditions. noke, fume, o ualified health OISON CEN ⁻ <u>d</u> estinal effects atment neede <u>NG MEASL</u> ely divided pa	r particula n profession FER or do s if swallow ed JRES	ite are in onal. ctor/phys wed.	haled durin sician if you	g processing	g, remove
Page 279 North America; English	Eye contact Skin Contact Inhalation Ingestion <u>Most importan</u> Symptoms <u>Indication of a</u> Note to physic <u>Suitable exting</u> Product not flar product.	nt symptom any immedi cians guishing m mmable in ti	iate medi	foreign None u If exces to fresh IF SWA ffects, both May ca ical attentio Treat s feas distribute	ase of par object. nder norm ssive amo a air and c ALLOWED a acute ar use acute on and sp ymptomat 5. FIRE-I	rticles con nal use co unts of sn onsult a q D: Call a P nd delaye gastroint pecial trea ically. FIGHTIN able as fin t (NaCl) o	ning in contac nditions. noke, fume, o ualified health OISON CEN ^T d estinal effects atment neede NG MEASU ely divided pa r class D dry	r particula n profession FER or do s if swallow ed JRES	ite are in onal. ctor/phys wed.	haled durin sician if you	g processing	g, remove

Copper Base Alloy Po	wder					Revision D)ate: 10-	Jan-2018
Large Fire	: · '	Isolate fire and a	allow to burn out.	.:	; · '		.:	
Unsuitable extinguis	hing medi	characteristic is	caused by the hydrog					water with
		the burning mat	erial.				: * *	
Specific hazards arising ntense heat. Very fine, hig emperature. WARNING: F gnition sources including h	h surface	area material resu les of this product r	may form combustible	dust-air mixtu	ires. Ke	ep particles a	way from	m all
Hazardous combusti	on produc		omium (Chromium VI sium, or cadmium fum				us cancer	. Zinc,
Explosion data Sensitivity to Mechar Sensitivity to Static D			.: .:	:	. :	.:		
Protective equipment and irefighters should wear se				ng turnout gea	ır.			
· · · · · · · · · · · · · · · · · · ·		6. ACCIDEN	ITAL RELEASE I	MEASURES	5 ¹	1 1 1 1		
Personal precautions, pr	otective e	equipment and em	nergency procedure	<u>s</u>			:	
Personal precautions		Use personal pr	otective equipment a	s required.			- i	
For emergency responde	ers		otective equipment a EXCEPT for FIRE fol					
Environmental precautio	<u>ns</u>				.':	.11		
Environmental precautio	ns	Collect spillage	to prevent release to	the environme	ent.	:		
Methods and material for	<u>containn</u>	nent and cleaning	<u>l up</u>					
Methods for containment	t _{: .} .	Prevent further	leakage or spillage if	safe to do so.	\mathbb{R}^{2}	.÷.		: · `
Methods for cleaning up		Sweep or shove	el material into dry cor	ntainers. Avoic	l creatir	g uncontrolled	d dust.	
		7. HAN	DLING AND STO	RAGE				
Precautions for safe han	dling					.11	,	. 11
Advice on safe handling		processes of thi particles of this all ignition source	surface area material is product may ignite product may form cor ces including heat, sp	spontaneously nbustible dust	at roor air mix	n temperature tures. Keep pa	e. WARNII articles av	NG: Fine vay from
	: · `		ustible dust hazard.		: · `			: 1 ¹
Conditions for safe stora	<u>ge, incluc</u>							
Storage Conditions		Keep away from motors and stat	n heat, sparks, flame a ic electricity).	and other sou		gnition (i.e., p	ilot lights,	electric
ncompatible materials		Dissolves in hyd	drofluoric acid.					
	8. EX		NTROLS/PERSO	NAL PROT	ECTIC	N ^t		
Control parameters								
Joint of Darameters								

North America; English

Copper Base Alloy Powder

Exposure Guidelines

Chemical Name		ACGIH TLV	OSHA PEL
Copper		TWA: 0.2 mg/m ³ fume TWA: 1 mg/m ³ Cu	TWA: 0.1 mg/m ³ fume
7440-50-8		dust and mist	TWA: 1 mg/m ³ dust and mist
Chromium		TWA: 0.5 mg/m ³	TWA: 1 mg/m ³
 7440-47-3	1		
Niobium (Columbium)		-	-
7440-03-1			
Silver		TWA: 0.1 mg/m ³ dust and fume	TWA: 0.01 mg/m ³
 7440-22-4			
Zirconium		STEL: 10 mg/m ³ STEL: 10 mg/m ³ Zr	TWA: 5 mg/m ³ Zr
7440-67-7		TWA: 5 mg/m ³ TWA: 5 mg/m ³ Zr	(vacated) STEL: 10 mg/m3 (vacated) STE
			10 mg/m ³ Zr

Appropriate engineering controls **Engineering Controls** Avoid generation of uncontrolled particles. Individual protection measures, such as personal protective equipment Eye/face protection When airborne particles may be present, appropriate eye protection is recommended. For example, tight-fitting goggles, foam-lined safety glasses or other protective equipment that shield the eyes from particles. Skin and body protection Fire/flame resistant/retardant clothing may be appropriate during hot work with the product. Wear protective gloves. When particulates/fumes/gases are generated and if exposure limits are exceeded or **Respiratory protection** irritation is experienced, proper 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. **General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

	Physical state Appearance Color	Solid Powder copper ye	llow			Odor Odor threshold		rless applicable		
	Property pH	Values				Remarks • Method	¹			. :
	Melting point/freezing point Boiling point / boiling range Flash point	No informa	ation av	/ailable /	2220 °F		÷		• •	:.
. '	Evaporation rate Flammability (solid, gas)	.:-				Not applicable Product not flammal flammable as finely resulting from proce	divided pa	rticles or pie		
. :	Flammability Limit in Air Upper flammability limit: Lower flammability limit:	- . .		.1	. :				. :	
	Vapor pressure Vapor density Specific Gravity	- - 7.63 - 8.9				Not applicable Not applicable				
	Water solubility Solubility in other solvents Partition coefficient	Insoluble - -		· · ·		Insoluble Not applicable Not applicable				:.
. '	Autoignition temperature	. : .		\mathbb{R}^{1}		Not applicable	. i .	.:	\mathbb{R}^{2}	.:

Сор	oper Base Alloy Powd	er	1.		:	1.		Revisior	Date : 10-	Jan-2018
Kine Dyna Expl	omposition temperature ematic viscosity amic viscosity losive properties dizing properties	- - Not a	pplicable		.÷	Not applica Not applica Not applica	ble		.:	
	er Information		; · ·			: • •			;**	
Mole VOC Den:		- - Not a -	pplicable	• •	÷	1.		÷		
Bulk	c density	·		11						
			IO. STAB	ILITY A	ND RE	ACTIVITY				
	<u>ctivity</u> applicable	i ui	:			:			:	
	mical stability ole under normal condition	ns.	÷.		÷	÷.		:	i.	• •
None	sibility of Hazardous Re e under normal processin Hazardous polymerizatio	g.	rdous polyn	nerization	does not	occur.	:.'	.:		: · '
Con	ditions to avoid t formation and dust accu									
	mpatible materials		:		.:1	: * *				. • 1
	olves in hydrofluoric acid.									
Diss Haza Whe heat	olves in hydrofluoric acid. ardous Decomposition I en product is subjected to -generating processes, th	Products welding, burnin ne following pote	entially haza	ardous aiı	rborne pa	rinding, buffing, rticles and/or fu	polishi mes m	ng, or other ay be gener	similar ated:. Hexa	valent
Diss <u>Haza</u> Whe heat	olves in hydrofluoric acid. ardous Decomposition I an product is subjected to	Products welding, burnin ne following pote	entially haza	ardous aiı	rborne pa	rinding, buffing, rticles and/or fu	polishi mes m	ng, or other ay be gener	similar ated:. Hexa	valent
Diss Haza Whe heat	olves in hydrofluoric acid. ardous Decomposition I en product is subjected to -generating processes, th	Products welding, burnin he following pote y cause lung, n	entially haza asal, and/or	ardous aiı r sinus ca	borne pa ncer.	rinding, buffing, rticles and/or fu ORMATION	polishi mes m	ng, or other ay be gener	similar ated:. Hexa	valent
Diss Haza Whe heat Chro Infor	olves in hydrofluoric acid. ardous Decomposition I en product is subjected to -generating processes, th	Products welding, burnin he following pote y cause lung, n 11	entially haza asal, and/or	ardous aiı r sinus ca	borne pa ncer.	rticles and/or fu	polishi mes m	ng, or other ay be gener	similar rated:. Hexa	valent
Diss Haza Whe heat Chrc Infor Proc	olves in hydrofluoric acid. ardous Decomposition I en product is subjected to -generating processes, th omium (Chromium VI) may rmation on likely routes duct Information Inhalation	Products welding, burnin he following pote y cause lung, n 11 of exposure Produ	entially haza asal, and/or . TOXICC	ardous ain r sinus ca DLOGIC	borne pa ncer. AL INF	rticles and/or fu	mes m	ay be gener	similar rated:. Hexar	valent
Diss Hazz Whe heat Chrc Infor Proc	olves in hydrofluoric acid. ardous Decomposition I an product is subjected to -generating processes, th omium (Chromium VI) may rmation on likely routes duct Information Inhalation Eye contact	Products welding, burnin he following pote y cause lung, n 11 of exposure Produ	entially haza asal, and/or . TOXICC	ardous ain r sinus ca DLOGIC sified.	borne pa ncer.	rticles and/or fu	mes m	ay be gener	similar ated:. Hexa	valent
Diss Hazz Whe heat Chro Infor Proc	olves in hydrofluoric acid. ardous Decomposition I ardous Decomposition I moduct is subjected to -generating processes, th omium (Chromium VI) may rmation on likely routes duct Information Inhalation Eye contact	Products welding, burnin he following pote y cause lung, n 11 of exposure Produ Produ	asal, and/oi . TOXICC	ardous ain r sinus ca DLOGIC sified. sified.	borne pa ncer.	rticles and/or fu	mes m	ay be gener	similar rated:. Hexar	valent
Diss Haza Whe heat Chrc Infor Proc I S I	olves in hydrofluoric acid. ardous Decomposition I en product is subjected to -generating processes, th omium (Chromium VI) may rmation on likely routes duct Information Inhalation Eye contact Skin Contact	Products welding, burnin he following pote y cause lung, n 11 of exposure Produ Produ Harm	asal, and/or asal, and/or . TOXICC . TO	ardous ain r sinus ca DLOGIC sified. sified.	borne pa ncer.	Dermal LD50	mes m	ay be gener	similar rated:. Hexar	
Diss Haza Whe heat Chrc Infor Proc I S I Cher Copp 7440	olves in hydrofluoric acid. ardous Decomposition I en product is subjected to -generating processes, th omium (Chromium VI) may rmation on likely routes duct Information Inhalation Eye contact Skin Contact Ingestion mical Name Der 0-50-8	Products welding, burnin he following pote y cause lung, n 11 of exposure Produ Produ Produ Harm	asal, and/or asal, and/or . TOXICC . TO	ardous ain r sinus ca DLOGIC sified. sified. sified. wed.	borne pa ncer.	rticles and/or fu	mes m	ay be gener	halation LC5	
Diss Haza Whe heat Chrc Infor Proc I Cher Copp 744(Chro 744(olves in hydrofluoric acid. ardous Decomposition I en product is subjected to -generating processes, th primium (Chromium VI) may rmation on likely routes duct Information Inhalation Eye contact Skin Contact Ingestion mical Name Der 0-50-8 mium 0-47-3	Products welding, burnin he following pote y cause lung, n 11 of exposure Produ Produ Produ Harm	asal, and/or asal, and/or . TOXICC . TO	ardous ain r sinus ca DLOGIC sified. sified. sified. wed.	borne pa ncer.	Dermal LD50		ay be gener	halation LCS	50
Diss Haza Whe heat Chrc Info Proc I E Copp 744(Chro 744(Niobi	olves in hydrofluoric acid. ardous Decomposition I en product is subjected to -generating processes, th omium (Chromium VI) may rmation on likely routes duct Information Inhalation Eye contact Skin Contact Ingestion mical Name Der 0-50-8 omium	Products welding, burnin he following pote y cause lung, n 11 of exposure Produ Produ Produ Harm 48 34	asal, and/or asal, and/or . TOXICC . TO	ardous ain r sinus ca DLOGIC sified. sified. sified. wed.	borne pa ncer.	rticles and/or fu ORMATION Dermal LD50 >2000 mg/kg bw		ay be gener	halation LC5	50
Diss Haza Whe heat Chro Infor Proc I Proc I Chro 7440 Chro 7440 Chro 7440 Silve	olves in hydrofluoric acid. ardous Decomposition I en product is subjected to -generating processes, th brition (Chromium VI) may rmation on likely routes duct Information Inhalation Eye contact Skin Contact Ingestion mical Name Der 0-50-8 mium 0-47-3 ium (Columbium) 0-03-1	Products welding, burnin he following pote y cause lung, n 11 of exposure Produ Produ Produ Harm 48 34	antially haza asal, and/or . TOXICC . T	ardous ain r sinus ca DLOGIC sified. sified. sified. wed.	borne pa ncer.	rticles and/or fu ORMATION Dermal LD50 >2000 mg/kg bw		ay be gener	halation LCS >5.11 mg/L > 5.41 mg/L	50

Copper Ba	se Alloy Powder
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Revision Date 10-Jan-2018

7440-67-7			1			1		Τ.
Information on toxicologi	ical effects			1	1			
Symptoms	May cause	acute gastrointestinal	effects if swall	owed.				
Delayed and immediate e	ffects as well as chron	ic effects from shor	t and long-ter	m exposur	<u>e</u>		. 1	. :
Acute toxicity Skin corrosion/irritation Serious eye damage/eye Sensitization	Harmful if su Product not irritation Product not Product not	classified. classified.			:	1.		:.
Germ cell mutagenicity Carcinogenicity	Product not Product not	classified.	.:			.:	\mathbb{R}^{2}	
Chemical Name	ACGIH	IARC		NTP		OSHA	1	٦
Chromium 7440-47-3		Group 3						1
Reproductive toxicity STOT - single exposure STOT - repeated exposur	Product not Product not	classified.						:
Aspiration hazard	Product not		1.		1			÷.,

12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a severe marine pollutant according to DOT.

Ecotoxicity

This product as shipped is classified for aquatic chronic toxicity. This product as shipped is classified for aquatic acute toxicity.

Chemical Name	Algae/aquatic plants	, Fish	Toxicity to	Crustacea
0			microorganisms	
Copper	The 72 h EC50 values of	The 96-hr LC50 for	The 24 h NOEC of copper	The 48 h LC50 values for
7440-50-8	copper chloride to	Pimephales promelas	chloride for activated sludge	Daphnia magna exposed to
:. :	Pseudokirchneriella	exposed to Copper sulfate	ranged from 0.32 to 0.64 mg of Cu/L.	copper in natural water
	subcapitata ranged between		or Cu/L.	ranged between 33.8 µg/L
	30 µg/L (pH 7.02, hardness	ug/L with water hardness		(pH 6.1, hardness 12.4 mg/L
	250 mg/L CaCO3, DOC 1.95			CaCO3, DOC 2.34 mg/L)
	mg/L) and 824 µg/L (pH	mg/L.		and 792 µg/L (pH 7.35,
	6.22, hardness 100 mg/L			hardness 139.7 mg/L
	CaCO3, DOC 15.8 mg/L).			CaCO3, DOC 22.8 mg/L).
Chromium 7440-47-3	· · · · · ·	<u> </u>	-	
Niobium (Columbium)	-	-	-	-
7440-03-1	· · · · · · · · · · · · · · · · · · ·		: • • •	
Silver	The 24 h EC10 of silver	The 96 h LC50 of silver	The 13.3 min NOEC of silver	The 48 h LC50 of silver
7440-22-4	nitrate to Pseudokirchnerella	nitrate to Pimephales	nitrate for nitrifying bacteria	nitrate to Daphnia magna
	subcapitata was 0.41 µg of	promelas was 1.2 µg of Ag/L	was 0.025 mg Ag/L.	was between 0.18 and 0.26
1	Ag/L.			μg of Ag/L.
Zirconium	The 14 d NOEC of zirconium	The 96 h LL50 of zirconium		The 48 h EC50 of zirconium
7440-67-7	dichloride oxide to Chlorella	to Danio rerio was greater		dioxide to Daphnia magna
	vulgaris was greater than 102.5 mg of Zr/L.	than 74.03 mg/L.		was greater than 74.03 mg of Zr/L.
Persistence and degrad	ability	t da dat	en de de	111 J.H
Bioaccumulation				

Other adverse effects

Copper Base Alloy Powder

Revision Date 10-Jan-2018

North America; English

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Chemical Name			RCRA - D Series Wastes
Chromium 7440-47-3	. :		5.0 mg/L regulatory level
Silver 7440-22-4			5.0 mg/L regulatory level

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

DOT	Regulated per 49 CFR, if transported in bulk or by vessel or if quantity with particles smaller than 100 micrometers (0.004 inches) in an individual package equals or exceeds the reportable quantity(RQ) of 5000 pounds of chromium, 5000 pounds of copper, 100 pounds of nickel.
Proper shipping name	UN/ID No. 3077 Environmentally hazardous substance, solid, n.o.s. (copper silver alloy powder) [include ", RQ" if RQ is exceeded]
Hazard Class	9
Packing Group	
Reportable Quantity (RQ)	"(, RQ)", if quantity with particles smaller than 100 micrometers (0.004 inches) in an individual package equals or exceeds the Reportable Quantity (RQ) of 5000 pounds of
1	chromium, 5000 pounds of copper, or 100 pounds of nickel.
Special Provisions	8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33
Marine pollutant	This product contains a chemical which is listed as a severe marine pollutant according to DOT.
Description	Copper silver metal powder
Emergency Response Guide Number	Follow Emergency Response Guidebook, Guide No. 171, EXCEPT for FIRE follow Emergency Response Guidebook, Guide No. 170

			15	. REGUL	ATORY	INFOR	MATION			1.1.1	
International Ir	ventor	ies									_
TSCA			Complie	es							
DSL/NDSL			Complie	es		1			1		 ÷
EINECS/ELINCS			Complie	es							
ENCS			Complie								
IECSC	1		Complie			1.				1	 1.
KECL			Complie				.:			. :	
PICCS			Not List								
AICS			Complie	es							
Lawawala											
Legend: TSCA - United Sta	the Tevie	Cubatana	an Control An	t Coption O/	h) Indonton		: * *			: • •	 . :
DSL/NDSL - Cana				```	, ,						
EINECS/ELINCS							st of Notified (Chemical	Substances		
ENCS - Japan Exi			, 0								
IECSC - China Inv							1.			1.	
KECL - Korean Ex	0										
PICCS - Philippine					stances						
AICS - Australian			al Substance	s	1	1.	:		1.		 1.

North America; English

US Federal Regulations

SARA 313

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 %
Copper - 7440-50-8	7440-50-8	70 - 99.85	1.0
Chromium - 7440-47-3	7440-47-3	0 - 27	1.0
Silver - 7440-22-4	7440-22-4	0 - 3	1.0

SARA 311/312 Hazard Categories

ARA STINSTE Hazara Galegones				 		
Acute health hazard		1.1	Yes	 1	 . :	
Chronic Health Hazard			No			
Fire hazard			No			
Sudden release of pressure hazard			No			
Reactive Hazard			No			
	1					,

CWA (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)

Copper 7440-50-8 Chromium	; × ,∷.		
7440-47-3	X	X	
Silver 7440-22-4	 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 Na	ame		Hazardous Substances RQs							
		Copper						500	00 lb			
1.	:	7440-50-8	8	:		1.1	1	1	1.1		1.1	
		Chromium	n					500	00 lb			
		7440-47-3	3									
		Silver	-					1	lb		-	
		7440-22-4	4									
					. 11			. 11				

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

U.S. State Right-to-Know Regulations

	Chemical Name		1	lew Jersey		М	assachusett	s	F	Pennsylvania	а
	Copper 7440-50-8			Х			Х			Х	
. :	Chromium 7440-47-3			×	. :	. :	×		. :	X	
	Silver 7440-22-4			Х			Х			Х	
:	Zirconium 7440-67-7	• •	÷	X	• •	÷	x		÷	X	

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

					16. 01	HER IN	IFORMA					
N	NFPA		Health h	nazards 1	Fla	mmability	/ 0	Instabilit	y 0		sical and C perties -	hemical
	IMIS Chronic Hazar	d Star Lege		nazards 2 *=Ch	Flai ronic Health	nmability Hazard	/ 1 , ; :	Physical	hazards		sonal prote	ction X
F F L	ssue Date Revision Dat Revision Not Jpdated to co Note:	te	GHS	10-Ja 10-Ja	n-2018 n-2018	1 1 1	:	÷.		:		
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