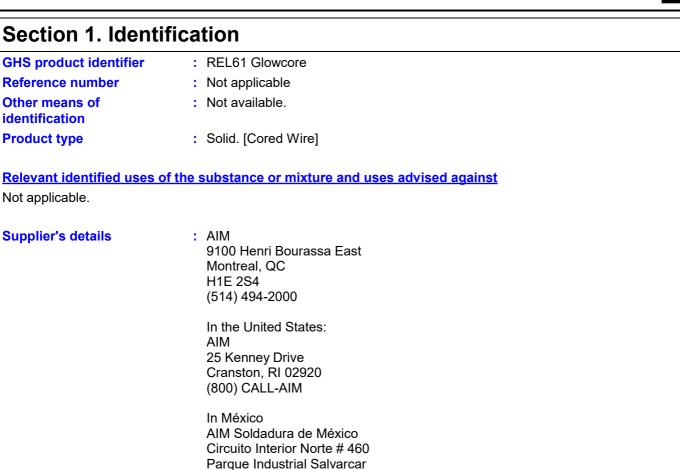
SAFETY DATA SHEET



Emergency telephone
number (with hours of
operation): INFOTRAC
North America: (800) 535-5053
International: (352) 323-3500

Ciudad Juárez, Chih. (656) 630-0032

Section 2. Hazards identification

OSHA/HCS status	: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Classification of the substance or mixture	: Not classified.
GHS label elements	
Signal word	: No signal word.
Hazard statements	: No known significant effects or critical hazards.
Precautionary statements	
Prevention	: Not applicable.
Response	: Not applicable.
Storage	: Not applicable.
Disposal	: Not applicable.
Hazards not otherwise classified	: None known.



identification

Section 3. Composition/information on ingredients

Substance/mixture Other means of

- : Mixture
- : Not available.

Ingredient name	%	CAS number
Tin	≥90	7440-31-5
Rosin	≤3	65997-06-0
copper	≤1	7440-50-8
	≤1	7440-22-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	 Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	 Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important sympto	oms/effects, acute and delayed
Potential acute health	<u>effects</u>
Eye contact	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Over-exposure signs/	<u>'symptoms</u>
Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

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

Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: None known.
Specific hazards arising from the chemical	: No specific fire or explosion hazard.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: metal oxide/oxides
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protect	tive equipment and emergency procedures
For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for co	entainment and cleaning up
Small spill	: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handlin		
Protective measures	: Put on appropriate personal protective equipment (see Section 8).	
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this materia handled, stored and processed. Workers should wash hands and face before drinking and smoking. Remove contaminated clothing and protective equipmentering eating areas. See also Section 8 for additional information on hygier measures.	e eating, nent before
Conditions for safe storage, including any incompatibilities	: Store in accordance with local regulations. Store in original container protected direct sunlight in a dry, cool and well-ventilated area, away from incompatible (see Section 10) and food and drink. Keep container tightly closed and seale ready for use. Containers that have been opened must be carefully resealed upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incommaterials before handling or use.	materials d until and kept priate
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Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits	
Tin	ACGIH TLV (United States, 3/2019). TWA: 2 mg/m ³ , (as Sn) 8 hours. Form: Inhalable fraction NIOSH REL (United States, 10/2016). TWA: 2 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 2 mg/m ³ , (as Sn) 8 hours.	
Rosin	None.	
copper	ACGIH TLV (United States, 3/2019). TWA: 1 mg/m ³ , (as Cu) 8 hours. Form: Dust and mist TWA: 0.2 mg/m ³ 8 hours. Form: Fume OSHA PEL 1989 (United States, 3/1989). TWA: 1 mg/m ³ , (as Cu) 8 hours. Form: Dusts and Mists TWA: 0.1 mg/m ³ , (as Cu) 8 hours. Form: Fume NIOSH REL (United States, 10/2016). TWA: 1 mg/m ³ , (as Cu) 10 hours. Form: Dusts and Mists OSHA PEL (United States, 5/2018). TWA: 1 mg/m ³ 8 hours. Form: Dusts and Mists TWA: 0.1 mg/m ³ 8 hours. Form: Fume	
silver	OSHA PEL 1989 (United States, 3/1989). TWA: 0.01 mg/m ³ , (as Ag) 8 hours. ACGIH TLV (United States, 3/2019). TWA: 0.1 mg/m ³ 8 hours. Form: Dust and fumes OSHA PEL (United States, 5/2018). TWA: 0.01 mg/m ³ , (as Ag) 8 hours. NIOSH REL (United States, 10/2016). TWA: 0.01 mg/m ³ , (as Ag) 10 hours. Form: METAL DUST AND SOLUBLE	

Appropriate engineering controls	: Good g contarr	eneral ventilation should be s inants.	sufficient to control v	vorker exposure	to airborne	
Environmental exposure controls	they co cases,	ons from ventilation or work p mply with the requirements o fume scrubbers, filters or eng necessary to reduce emission	f environmental prog gineering modification	tection legislatio	n. In some	
Individual protection meas	<u>ures</u>					
Hygiene measures	eating, Approp Wash o	nands, forearms and face tho smoking and using the lavate riate techniques should be us contaminated clothing before s are close to the workstation	ory and at the end o sed to remove poter reusing. Ensure tha	f the working pe itially contamina	riod. ted clothing	-
Eye/face protection	assess gases (eyewear complying with an a ment indicates this is necess or dusts. If contact is possibl essment indicates a higher d	ary to avoid exposu e, the following prote	re to liquid splas ection should be	hes, mists, worn, unles	ŝS
Skin protection						
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Section 8. Exposure controls/personal protection

Hand protection	 Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Body protection	 Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	 Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

<u>Appearance</u>	
Physical state	: Solid. [Cored Wire]
Color	: Not available.
Odor	: Not available.
Odor threshold	: Not available.
рН	: Not available.
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Not available.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: Not available.
Solubility	: Not available.
Solubility in water	: Not available.
Partition coefficient: n- octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.					
Chemical stability	: The prod	uct is stable.				
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.					
Conditions to avoid	: No speci	fic data.				
Incompatible materials	: No speci	fic data.				
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Section 10. Stability and reactivity

Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Rosin	LD50 Oral LD50 Oral		5000 mg/kg 8400 mg/kg	-

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Rosin	None.	4	-
copper	-	-	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely : Not available.

routes of exposure

al hazards.
al hazards.
al hazards.
al hazards.

Symptoms related to	the physical, chemical and toxicological characteristics
Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

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Section 11. Toxicological information

Delayed and immediate effect	and also chronic effects from short and long term exposure	
<u>Short term exposure</u>		
Potential immediate effects	Not available.	
Potential delayed effects	Not available.	
<u>Long term exposure</u>		
Potential immediate effects	Not available.	
Potential delayed effects	Not available.	
Potential chronic health eff	<u>s</u>	
Not available.		
General	No known significant effects or critical hazards.	
Carcinogenicity	No known significant effects or critical hazards.	
Mutagenicity	No known significant effects or critical hazards.	
Teratogenicity	No known significant effects or critical hazards.	
Developmental effects	No known significant effects or critical hazards.	
Fertility effects	No known significant effects or critical hazards.	

Numerical measures of toxicity

Acute toxicity estimates Not available.

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure	
copper	Acute EC50 1100 μg/l Fresh water Acute EC50 2.1 μg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia longispina - Juvenile (Fledgling, Hatchling, Weanling)	4 days 48 hours	
	Acute IC50 13 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours	
	Acute IC50 5.4 mg/l Marine water	Aquatic plants - Plantae - Exponential growth phase	72 hours	
	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours	
	Acute LC50 7.56 µg/l Marine water	Fish - Periophthalmus waltoni - Adult	96 hours	
	Chronic NOEC 2.5 µg/l Marine water	Algae - Nitzschia closterium - Exponential growth phase	72 hours	
	Chronic NOEC 7 mg/l Fresh water	Aquatic plants - Ceratophyllum demersum	3 days	
	Chronic NOEC 0.02 mg/l Fresh water	Crustaceans - Cambarus bartonii - Mature	21 days	
	Chronic NOEC 2 µg/l Fresh water	Daphnia - Daphnia magna	21 days	
	Chronic NOEC 0.8 µg/l Fresh water	Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	6 weeks	
silver	Acute EC50 1.4 µg/l Marine water	Algae - Chroomonas sp.	4 days	
	Acute EC50 0.24 µg/l Fresh water	Daphnia - Daphnia magna	48 hours	
	Acute LC50 11 μg/l Fresh water	Crustaceans - Ceriodaphnia reticulata	48 hours	
	Acute LC50 2.13 µg/l Fresh water	Fish - Pimephales promelas	96 hours	
	Chronic NOEC 5 mg/l Marine water	Algae - Glenodinium halli	72 hours	

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Section 12. Ecological information

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Rosin	3.42	-	low
silver	-	70	low

Mobility in soil

Soil/water partition	: Not available.
coefficient (Koc)	

Other adverse effects	: No known significant effects or critical hazards.
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Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	ΙΑΤΑ
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-	-

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according : Not available. to Annex II of MARPOL and the IBC Code

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: 3/4/2020

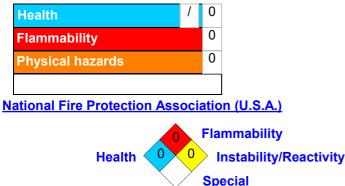
Date of previous issue

Section 15. Regulatory information

U.S. Federal regulations	:	United States inventory (TSCA 8b): All components are listed or exempted.
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	:	Not listed
Clean Air Act Section 602 Class I Substances	:	Not listed
Clean Air Act Section 602 Class II Substances	:	Not listed
DEA List I Chemicals (Precursor Chemicals)	:	Not listed
DEA List II Chemicals (Essential Chemicals)	:	Not listed
State regulations		
Massachusetts	:	The following components are listed: TIN
New York	:	The following components are listed: Copper
New Jersey	:	The following components are listed: TIN; COPPER
Pennsylvania	:	The following components are listed: TIN; COPPER FUME
California Prop. 65		
This product does not requir	e a	Safe Harbor warning under California Prop. 65.
International regulations		
Chemical Weapon Convent	ion	List Schedules I, II & III Chemicals
Not listed.		
Montreal Protocol		
Not listed.		
Stockholm Convention on F Not listed.	Per	sistent Organic Pollutants
Rotterdam Convention on F Not listed.	<u>Pric</u>	or Informed Consent (PIC)
UNECE Aarhus Protocol on	РС	DPs and Heavy Metals
Not listed.		
International lists		
National inventory		
Australia	:	Not determined.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Europe	:	Not determined.
Japan	:	Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
Malaysia	:	Not determined
New Zealand	:	Not determined.
Philippines	:	Not determined.
Republic of Korea	:	All components are listed or exempted.
Taiwan		All components are listed or exempted.
Turkey	:	Not determined.
Republic of Korea Taiwan		All components are listed or exempted. All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

	Justification	
Not classified.		
<u>History</u>		
Date of printing	: 3/4/2020	
Date of issue/Date of revision	: 3/4/2020	
Date of previous issue	: 3/2/2020	
Version	: 0.05	
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations	
References	: Not available.	

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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