



Revision date: Feb 16, 2017
Date of issue: Feb 16, 2017

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Product name: Technical Copper Naphthenate

1. Identification

Product identifier:

Trade Name: Technical Copper Naphthenate.

Other means of identification:

Synonyms: Tech Cop Nap
SDS number: ISK090

Recommended use and restrictions on use:

Recommended use: Manufacturing Use Concentrate.
Recommended restrictions: Not intended for human consumption.

Initial supplier identifier:

Company Name: ISK Biocides, Inc.
Company Address: 416 East Brooks Road,
Memphis,
TN 38109.
Company Telephone: Office hours (Mon – Fri)
7:00 – 4:30pm (Central time).
(901) 344-5350 or (800) 248-7961
Company Contact Name: Anthony Accampo or Gail Watson.
Company Contact Email: sdsinquiry@iskbiocides.com

Emergency telephone number and any restrictions on the use of that number, if applicable:
Chemtrec (800) 424-9300 (24 hours).

2. Hazard identification

Classification of the chemical in accordance with Hazardous Products Regulations (WHMIS 2015):

WHMIS Classification

B3	Flammable and combustible material	Flammable Liquids: Combustible Liquids: Flashpoint of 37.8°C–93.3°C (100°F–200°F)
D2B	Toxic Material at ≥ 1%	Skin / Eye irritation

GHS Physical hazards

Flammable liquid, Category 3.

GHS Health hazards

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Acute toxicity (oral), Category 3.
Skin corrosion / irritation, Category 2
Serious eye damage/eye irritation, Category 2
Aspiration hazard, Category 1

Environmental hazards

Not adopted under WHMIS 2015

GHS Signal word: **DANGER.**

GHS Hazard statement(s): H226 - Flammable liquid and vapour.
H301 - Toxic if swallowed.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation

GHS Hazard symbol(s):



GHS Precautionary statement(s):

Prevention:

- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground and bond container and receiving equipment.
- P241 - Use explosion-proof [electrical/ventilating/lighting] equipment.
- P242 - Use non-sparking tools.
- P243 - Take action to prevent static discharge.
- P264 - Wash hands thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response:

- P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P302+P352 - IF ON SKIN: Wash with plenty of water.
- P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321 - Specific treatment (see sections 4 to 8 on this SDS and any supplementary information on the label).

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- P331 - Do NOT induce vomiting.
- P332+P313 - If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P362+P364 - Take off contaminated clothing and wash it before reuse.
- P370+P378 - In case of fire: Use water spray, dry chemical, alcohol foam, or carbon dioxide to extinguish.

Storage:

- P403+P235 - Store in a well-ventilated place. Keep cool.

Disposal:

- P501 - Dispose of contents/container to a suitable treatment site in accordance with local/regional/international regulations.

Physical hazards not otherwise classified (PNOC):

None known.

Health hazard(s) not otherwise classified (HNOC):

Can cause central nervous system depression. Can cause gastrointestinal irritation, nausea, vomiting, diarrhea, respiratory irritation, dizziness, headache, and weakness.

Percentage of ingredient(s) of unknown acute toxicity:

Not applicable.

3. Composition/Information on ingredients

Mixture: Mixture of oils.

Chemical name	CAS#	Concentration (weight %)
Copper Naphthenate	1338-02-9	51 - 66%
Mineral spirits	64742-88-7	19 - 36%
Distillates (petroleum), hydrotreated light	64742-47-8	4 - 6%
Naphthenic Acids	1338-24-5	1 - 2%

Note: The balance of the ingredients are not classified as hazardous or are below the concentration limit to be classified as hazardous, under the criteria of the Hazardous Products Regulations (WHMIS 2015).

4. First-aid measures

Description of necessary first-aid measures, subdivided according to the different routes of exposure (inhalation, ingestion, skin and eye contact):

Inhalation: Persons administering first aid to overexposure victims should carefully wash off any visible product from the victim's face. Do not give anything by mouth to an unconscious person. Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, administer oxygen. Seek medical attention.

Ingestion: DO NOT induce vomiting. NEVER induce vomiting or give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep airway clear. Seek medical attention IMMEDIATELY.

Skin contact: Wash with hand degreaser and then plenty of soap and water. Remove contaminated clothing and footwear. Wash clothing and decontaminate footwear before reuse. Seek medical attention if irritation persists.

Eye contact: IMMEDIATELY flush eyes with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire eye surface. Seek medical attention IMMEDIATELY.

Most important symptoms and effects, whether acute or delayed:

Mildly irritating to the eye. Can cause irreversible damage on prolonged contact. Can cause central nervous system depression. Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Can cause nasal and respiratory irritation, dizziness, nausea, vomiting, headache, and weakness. Skin irritant. Considered a non-sensitizer. Prolonged or repeated contact may result in itching, defatting, and dermatitis.

Indication of immediate medical attention and special treatment needed, if necessary: If any symptoms are observed, contact a physician and give them this SDS sheet. Aspiration of material into lungs due to vomiting may cause chemical pneumonitis. Depending on the amount ingested and the toxicity of the product, gastric lavage should be considered, taking care to avoid aspiration and possible mucosal damage during intubation.

5. Fire-fighting measures

Suitable extinguishing media: Foam, carbon dioxide or dry chemical.

Unsuitable extinguishing media: High volume water jet.

Specific hazards arising from the hazardous product:

Vapours can flow along surfaces to distant ignition source and flash back. Above flash point, vapour-air mixtures are explosive within flammable limits noted in section 9

Hazardous combustion products include CO (Carbon Monoxide), CO₂ (Carbon Dioxide).

Special protective equipment and precautions for firefighters:

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In the event of a fire, clear area of personnel. Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Keep out of reach of children. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8).

See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental precautions:

Do not contaminate water while cleaning equipment or disposing of wastes. Prohibit contamination of streams, lakes, or other bodies of water.

Methods and materials for containment and cleaning:

SMALL SPILL: Wear appropriate protective clothing (see Section 8). Recover free liquid. Absorb remainder with sand or clay and place in a waste receptacle.

LARGE SPILL: Wear appropriate protective clothing (see Section 8). Eliminate all ignition sources. Restrict access to contaminated area. Stop spill at source. Dike to prevent spreading. Pump liquid to a recovery vessel. Absorb remainder of material with sand or clay and place in a properly labelled waste receptacle. See Section 13 for information on appropriate disposal.

7. Handling and Storage

Precautions for safe handling:

Store away from food or feed in a secure, well-ventilated area protected from extreme temperatures. Do not transfer to an unmarked container. Keep container closed when not in use. Do not store or use in the vicinity of sparks, open flame, or other ignition sources. Observe good personal hygiene practices. Change protective gloves/clothing when signs of contamination appear. Keep out of reach of children.

Conditions for safe storage, including any incompatibles:

No smoking. Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions.

8. Exposure controls/Personal protection

Control parameters, including occupational exposure limit values or biological limit values and the source of those values:

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Canada. Alberta, Occupational Health and Safety Code		
Substance	TWA	STEL
Copper Naphthenate (Copper Fume)	0.2 mg/m ³	None known
(Copper - Dusts and mists (as Cu))	1 mg/m ³	
Mineral spirits (as mineral oil mist)	5 mg/m ³	10 mg/m ³
Distillates (petroleum), hydrotreated light (as mineral oil mist)	5 mg/m ³	10 mg/m ³
Naphthenic Acids	None known	None known

Canada. British Columbia OELs		
Substance	TWA	STEL
Copper Naphthenate (Copper Fume)	0.2 mg/m ³	None known
(Copper - Dusts and mists (as Cu))	1 mg/m ³	
Mineral spirits (as mineral oil mist)	5 mg/m ³	10 mg/m ³
Distillates (petroleum), hydrotreated light (as mineral oil mist)	5 mg/m ³	10 mg/m ³
Naphthenic Acids	None known	None known

North West territories – Occupational exposure limits		
Substance	TWAEV	STEV
Copper Naphthenate (Copper Fume)	0.2 mg/m ³	0.6 mg/m ³
(Copper - Dusts and mists (as Cu))	1 mg/m ³	3mg/m ³
Mineral spirits (as mineral oil mist)	5 mg/m ³	10 mg/m ³

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Distillates (petroleum), hydrotreated light (as mineral oil mist)	5 mg/m3	10 mg/m3
Naphthenic Acids	None known	None known

Canada. Nova Scotia OELs		
Substance	TWA	STEL
Copper Naphthenate (Copper Fume)	0.2 mg/m3	None known
(Copper - Dusts and mists (as Cu)	1 mg/m3	
Mineral spirits (as mineral oil mist)	5 mg/m3	10 mg/m3
Distillates (petroleum), hydrotreated light (as mineral oil mist)	5 mg/m3	10 mg/m3
Naphthenic Acids	None known	None known

Ontario. Occupational exposure limits (OELs)for Ontario Workplace Required under Regulation 833		
Substance	TWA	STEL
Copper Naphthenate (Copper Fume)	0.2 mg/m3	None known
(Copper - Dusts and mists (as Cu)	1 mg/m3	
Mineral spirits	525 mg/m3	None known
Distillates (petroleum), hydrotreated light (as mineral oil mist)	5 mg/m3	None known
Naphthenic Acids	None known	None known

Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants		
Substance	TWAEV	STEV

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Copper Naphthenate (Copper Fume)	0.2 mg/m ³	None known
(Copper - Dusts and mists (as Cu))	1 mg/m ³	
Mineral spirits (as mineral oil mist)	5 mg/m ³	10 mg/m ³
Distillates (petroleum), hydrotreated light (as mineral oil mist)	5 mg/m ³	10 mg/m ³
Naphthenic Acids	None known	None known

Yukon Permissible Concentrations for Airborne Contaminant Substances		
Substance	TWAEV	STEV
Copper Naphthenate (Copper Fume)	0.2 mg/m ³	0.2 mg/m ³
(Copper - Dusts and mists (as Cu))	1 mg/m ³	2 mg/m ³
Mineral spirits (as mineral oil mist)	5 mg/m ³	10 mg/m ³
Distillates (petroleum), hydrotreated light (as mineral oil mist)	5 mg/m ³	10 mg/m ³
Naphthenic Acids	None known	None known

USA. ACGIH Threshold Limit Values (TLV)		
Substance	TWA	STEL
Copper Naphthenate	1 mg/m ³	None known
Mineral spirits	100 ppm	None known
Distillates (petroleum), hydrotreated light	200 ppm	None known
Naphthenic Acids	200 mg/m ³	None known

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Appropriate engineering controls: Ventilate via mechanical methods (general or local exhaust) to maintain exposure below TLV(s), if applicable. Good industrial hygiene practice dictates that indoor work areas should be isolated and provided with adequate local exhaust ventilation.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear chemical splash goggles and/or face shield during mixing and when exposed to mist. Maintain eye wash fountain and quick-drench facilities in work area.

Skin and Hand protection: Wear rubber or plastic gloves when handling, using, or applying this product. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Respiratory protection: If TLV for product or any component is exceeded, use a cartridge respirator appropriate for the job conditions.

Other:

None normally required. Use as necessary to prevent exposure. Safety showers and eyewash stations should be provided in all areas in which this product is stored and/or handled. Persons exposed routinely to this material should shower prior to leaving work each day. Work clothing should be changed daily.

Thermal hazards: None established.

9. Physical and chemical properties

Appearance (such as physical state and colour):

Physical state:	Slightly viscous liquid
Colour:	Dark green.
Odour:	Musty.
Odour threshold:	Not established
pH:	Not applicable
Melting point/freezing point:	No data available
Initial Boiling Point and boiling range:	302 - 400 °F (150 - 204 °C)
Flash point:	104 °F / 40 °C PMCC
Evaporation rate:	No data available
Flammability (in the case of solids and gases):	Not applicable
Upper and lower flammability or explosive limits	
Flammability limit – lower (%):	Not established
Flammability limit – upper (%):	Not established
Explosive limit – lower (%):	Not established
Explosive limit – upper (%):	Not established
Vapour pressure:	No data available.

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Vapour density (air=1):	> 1
Relative density (water = 1):	0.99 g/L @ 68°F
Density	8.25 lbs/gal @ 68°F
Solubility:	Soluble in many organic solvents including most aliphatics, aromatics and ketones.
Partition coefficient n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	1000 cPs - Viscometer #2 @ 20 rpm @ 68°F

10. Stability and reactivity

Reactivity:	Stable.
Chemical stability:	This material is stable under normal handling and storage conditions.
Possibility of hazardous reactions:	Material is not known to polymerize.
Conditions to avoid, including static discharge, shock or vibration:	Heat, flames, ignition sources and incompatibles.
Incompatible materials:	Strong oxidizing agents
Hazardous decomposition products:	May form carbon dioxide and carbon monoxide when heated to decomposition.

11. Toxicological information

Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact):

Inhalation:	An expected route of entry.
Ingestion:	An expected route of entry.
Skin:	An expected route of entry.
Eye contact:	An expected route of entry.
Target Organ(s):	Eyes, Skin, Respiratory system, Central nervous system.

Symptoms related to the physical, chemical, and toxicological characteristics:

EYES: Mildly irritating.

INGESTION: Can cause central nervous system depression. Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

INHALATION: Can cause central nervous system depression. Can cause nasal and respiratory irritation, dizziness, nausea, vomiting, headache, and weakness.

SKIN: Skin irritant. Considered a non-sensitizer. Prolonged or repeated contact may result in itching, defatting, and dermatitis.

Delayed and immediate effects and chronic effects from short or long-term exposure:

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Can cause irreversible damage to eyes on prolonged contact. Prolonged or repeated contact to skin may result in itching, defatting, and dermatitis.

Numerical measures of toxicity including ATEs:
Acute toxicity estimates

Product information:

Oral - Acute Toxicity (Rat): LD50 > 5050 mg/kg.
 Inhalation - Acute Toxicity (Rat): LC50 > 1.17 mg/L
 Dermal - Acute Toxicity (Rabbit): LD50 > 2,020 mg/kg

Ingredient Information:

Substance	Test Type (species)	Value
Copper Naphthenate	LD ₅₀ Oral (Rat)	> 5050 mg/kg
	LD ₅₀ Dermal (Rabbit)	> 1.17 mg/L
	LC ₅₀ Inhalation, Vapour (Rat)	> 2020 mg/kg
Mineral spirits	LD ₅₀ Oral	No data available
	LD ₅₀ Dermal (Rabbit)	> 2000 mg/kg
	LC ₅₀ Inhalation,	No data available
Distillates (petroleum), hydrotreated light	LD ₅₀ Oral (Rat)	> 5000 mg/kg
	LD ₅₀ Dermal (Rabbit)	> 2000 mg/kg
	LC ₅₀ Inhalation,	No data available
Naphthenic Acids	LD ₅₀ Oral (Rat)	6.42 g/kg
	LD ₅₀ Dermal (Rabbit)	> 3160 mg/kg (24h)
	LC ₅₀ Inhalation,	No data available

Skin corrosion/irritation: Skin irritant. Prolonged or repeated contact may result in itching, defatting, and dermatitis.

Serious eye damage/eye irritation: Mildly irritating. Can cause irreversible damage on prolonged contact.

Respiratory sensitization: Based upon information available on the known components, the product is not anticipated to cause respiratory sensitization.

Skin sensitization: Based upon information available on the known components, the product is not anticipated to cause skin sensitization.

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Germ cell mutagenicity: Based upon information available on the known components, the product is not anticipated to cause germ cell mutagenicity.

Carcinogenicity: No information available on the mixture, however none of the components are listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or on the ACGIH Carcinogens List.

Reproductive toxicity: Based upon information available on the known components, the product is not anticipated to cause reproductive toxicity.

**Specific target organ toxicity-
Single exposure:** Based upon information available on the known components, the product is not expected to cause specific target organ toxicity after a single exposure.

**Specific target organ toxicity-
Repeat exposure:** Based upon information available on the known components, the product is not anticipated to cause specific target organ toxicity after repeated or prolonged exposure.

Aspiration hazard: Based upon information available on the known components, the product is expected to be an aspiration hazard.

12. Ecological information

Ecotoxicity (aquatic and terrestrial, if available):

Ingredient Information:

Substance	Test Type	Species	Value
Copper Naphthenate	LC ₅₀	Fish	No data available
	EC ₅₀	Invertebrate	No data available
	LC ₅₀	Algae	No data available
Mineral spirits	LC ₅₀	Fish	No data available

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	EC ₅₀	Invertebrate - Daphnia magna	> 100 mg/l – 48h
	LC ₅₀	Algae - Selenastrum capricornutum	450 mg/l - 96h
Distillates (petroleum), hydrotreated light	LC ₅₀	Fish	No data available
	EC ₅₀	Invertebrate	No data available
	LC ₅₀	Algae	No data available
Naphthenic Acids	LC ₅₀	Fish Bluegill (Lepomis macrochirus) Danio rerio (zebra fish)	5.6 mg/l – 96h > 16.3 mg/l - 96 h
	EC ₅₀	Invertebrate	No data available
	LC ₅₀	Algae	No data available

Persistence and degradability: No data available.
Bioaccumulative potential: No data available.
Mobility in soil: No data available.
Mobility in general: No data available.
Other adverse effects: No data available.

13. Disposal considerations

Information on safe handling for disposal and methods of disposal, including any contaminated packaging:

Product - Rinse the emptied container thoroughly and add the rinsings to the treatment site. Follow regional instructions for any required additional cleaning of the container prior to its disposal. Make the empty container unsuitable for further use. Dispose of the container in accordance with regional requirements.

For information on the disposal of unused, unwanted product and the clean-up of spills, contact the regional Regulatory Agency or the Manufacturer.

Contaminated packaging - Contaminated packaging may contain residues of product. Dispose of in the same manner as product. Comply with applicable local, state or international regulations concerning solid or hazardous waste disposal and/or container disposal.

14. Transport Information

UN number: UN 3009
United Nations proper shipping name as provided for in the United Nations Model Regulations: RQ Copper based pesticide, liquid, toxic, flammable, n.o.s. (copper naphthenate)

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Transport hazard class as provided in the United Nations Model Regulations: 6.1, 3

Packing group as provided in the United Nations Model Regulations: III

Reportable Quantity: 644 gallons
National Motor Freight Classification Preservatives, wood, n.o.i - NMFC 161490-2

Environmental hazards according to the International Maritime Dangerous Goods Code and the United Nations Model Regulations:
 Marine pollutant: No.

Transport in bulk (according to Annex II of the *International Convention for the Prevention of Pollution From Ships, 1973*, as modified by the Protocol of 1978 (MARPOL 73/78) and the *International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (IBC Code)*):
 No further relevant information available.

Special precautions in connection with transport or conveyance either within or outside the premises.
 None.

15. Regulatory Information

Safety, health and environmental regulations, made within or outside Canada, specific to the product in question.

CANADA:

Canada Domestic Substances List (DSL): All of the components are either listed on or exempted from the Domestic Substances List.

Canada National Pollutant Release Inventory (NPRI):

Component	NPRI Part # (Threshold Category)	Mass Threshold**	Concentration Threshold**
Copper Naphthenate	na	na	n/a
Mineral spirits	5	1 tonne of 10-tonne total VOC air release	n/a
Distillates (petroleum),	5	1 tonne of 10-tonne	n/a

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hydrotreated light		total VOC air release	
Naphthenic Acids	na	na	n/a

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 – WHMIS**

Component	Classification code
Copper Naphthenate	B3, D2B
Mineral spirits	B3, D2A, D2B
Distillates (petroleum), hydrotreated light	B3, D2A, D2B
Naphthenic Acids	D2B
PRODUCT	B3, D2B

16. Other information

Date of the latest revision of the safety data sheet: February 16, 2017

DISCLAIMER:

The information in this Safety Data Sheet is provided in good faith and is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance and is not to be considered a warranty or quality specification. User is responsible to evaluate all available information when using product for any particular use, including, if necessary, conducting any tests needed to determine the suitability of the product for a particular use. User is also responsible for compliance with all Federal, State, Provincial and Local laws and regulations. ISK Biocides, Inc. assumes no responsibility for injury, damage or loss resulting from the use of the material. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, INCLUDING THAT THE INFORMATION OR PRODUCT MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS, ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.