

Copper Air Conditioning and Refrigeration Tube - Type ACR - per ASTM B280-23
by Copper Development Association



Health Product Declaration v2.3

created via: HPDC Online Builder

HPD UNIQUE IDENTIFIER: 123680958464
CLASSIFICATION: 23 23 00 Refrigerant Piping
PRODUCT DESCRIPTION: Copper tube for air conditioning and refrigeration, as manufactured by a Copper Development Association member, per ASTM B280-23. ASTM B280-23 establishes the requirements for seamless copper tube intended for use in the connection, repairs, or alterations of air conditioning, refrigeration units and piping systems in the field. These materials may be used as finished products or as part of larger products or systems. In the latter case, the materials do not experience any chemical changes; rather, they are physically altered to meet the application requirements. Additional Classifications can be found in Section 5: General Notes.

Section 1: SummaryNested Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residuals/Impurities Evaluation	
☒ Nested Materials Method	☐ 100 ppm	Completed in 1 of 1 Materials	For all contents above the threshold, the manufacturer has:
☐ Basic Method	☐ 1,000 ppm	Explanation(s) provided for Residuals/Impurities?	Characterized ☒ Yes ☐ No
Threshold Disclosed Per	☐ Per GHS SDS	☒ Yes ☐ No	Provided weight and role.
☐ Material	☒ Other		Screened ☒ Yes ☐ No
☒ Product			Provided screening results using HPDC-approved methods.
			Identified ☒ Yes ☐ No
			Provided name and CAS RN or other identifier.

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

NESTED MATERIAL | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE
COPPER ALLOY [UNS C10200 COPPER ALLOY]

Number of Greenscreen BM-4/BM3 contents ... 0
Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... None
Nanomaterial ... No
INVENTORY AND SCREENING NOTES:
Special Conditions applied: [MetalAlloy]

The formulation of each of the copper alloys was generated from the UNS designation, as found at www.unscopperalloys.org and alloys.copper.org, and duplicated in the 3E Exchange Passport Library. UNS and EN are composition-based systems of commercial materials that do not articulate a reporting threshold but are the best available options to associate individual systems and is supported by major trade associations. The specific material formulation should be obtained directly from the manufacturer of the product chosen. Metal alloys have different intrinsic characteristics than their alloying elements encapsulated therein, including health and environmental hazards. As such, alloys are generally expected to have different hazards than their alloying elements. The content reported in the connected HPDs follow the Best Practices for Metal Trade Associations Creating a Metal Alloy HPD and complies with Option 2 of the Metal Alloys Special Condition.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.
VOC emissions: Inherently non-emitting source per LEED
CONSISTENCY WITH OTHER PROGRAMS
No pre-checks completed or disclosed.

Third Party Verified? ☒ Yes	PREPARER: Self-Prepared VERIFIER: WAP Sustainability Consulting	SCREENING DATE: 2024-10-17 PUBLISHED DATE: 2024-11-20
---	--	--

This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- Basic Inventory method with Product-level threshold.
- Nested Material Inventory method with Product-level threshold
- Nested Material Inventory method with individual Material-level thresholds

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.3, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-3-standard

COPPER ALLOY

%: 100.0000

PRODUCT THRESHOLD: Other

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

MATERIAL TYPE: Metal

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities identified in the copper alloys are defined by the specific UNS alloy number. HPD users may obtain a Supplier Certificate of Analysis for specific alloy composition and concentration of alloying elements.

OTHER MATERIAL NOTES:

UNS C10200 COPPER ALLOY

ID: UNS C10200

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

%: 100.0000

GreenScreen: See notes

RC: UNK

NANO: No

MATERIAL ROLE: Structure component

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

Hazard Screening is not applicable to this Special Condition

METAL ALLOY HPD: See alloy HPD for alloying content inventory, GreenScreen scores, and hazards: [UNS C10200]

METAL ALLOY NOTES: In compliance with HPDC Special Conditions Policy for Metal Alloys, the listed alloy is considered the ingredient in this product, and is reported without information regarding its alloying elements. Metal alloys have different intrinsic characteristics, including health and environmental hazards, than their alloying elements. An alloy HPD with alloying element content inventory, their GreenScreen scores, and hazards is available at the link above.

GREENSCREEN BM-1 & LT-1 ALLOYING ELEMENTS: None

LISTING NOTES:

MATERIAL CONTENT NOTES: Recycled content type and source is dependent on the alloy manufacturer/provider.

UNS C12000 COPPER ALLOY

ID: UNS C12000

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

%: 100.0000 ALT

GreenScreen: See notes

RC: UNK

NANO: No

MATERIAL ROLE: Structure component

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

Hazard Screening is not applicable to this Special Condition

METAL ALLOY HPD: See alloy HPD for alloying content inventory, GreenScreen scores, and hazards: [[UNS C12000](#)]

METAL ALLOY NOTES: In compliance with HPDC Special Conditions Policy for Metal Alloys, the listed alloy is considered the ingredient in this product, and is reported without information regarding its alloying elements. Metal alloys have different intrinsic characteristics, including health and environmental hazards, than their alloying elements. An alloy HPD with alloying element content inventory, their GreenScreen scores, and hazards is available at the link above.

GREENSCREEN BM-1 & LT-1 ALLOYING ELEMENTS: None

LISTING NOTES:

MATERIAL CONTENT NOTES: Recycled content type and source is dependent on the alloy manufacturer/provider.

ALTERNATE: This material is an alternate material to UNS C10200 Copper Alloy.

UNS C12200 COPPER ALLOY

ID: UNS C12200

HAZARD DATA SOURCE: Pharos Chemical and Materials Library				
%: 100.0000 ALT	GreenScreen: See notes	RC: UNK	NANO: No	MATERIAL ROLE: Structure component
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
Hazard Screening is not applicable to this Special Condition				

METAL ALLOY HPD: See alloy HPD for alloying content inventory, GreenScreen scores, and hazards: [[UNS C12200](#)]

METAL ALLOY NOTES: In compliance with HPDC Special Conditions Policy for Metal Alloys, the listed alloy is considered the ingredient in this product, and is reported without information regarding its alloying elements. Metal alloys have different intrinsic characteristics, including health and environmental hazards, than their alloying elements. An alloy HPD with alloying element content inventory, their GreenScreen scores, and hazards is available at the link above.

GREENSCREEN BM-1 & LT-1 ALLOYING ELEMENTS: None

LISTING NOTES:

MATERIAL CONTENT NOTES: Recycled content type and source is dependent on the alloy manufacturer/provider.

ALTERNATE: This material is an alternate material to UNS C10200 Copper Alloy.

Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

VOC EMISSIONS	Inherently non-emitting source per LEED	
CERTIFYING PARTY: Self-declared	ISSUE DATE: 2021-10-26 00:00:00	CERTIFIER OR LAB: N/A
APPLICABLE FACILITIES: All	EXPIRY DATE:	
CERTIFICATE URL:		
CERTIFICATION AND COMPLIANCE NOTES:		

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

No accessories are required for this product.

Section 5: General Notes

Substance ranges within the HPD are due to the variability in the UNS formulations. This HPD is meant to provide likely formulations of copper air conditioning and refrigeration tubes per the ASTM B280-23 standard and lists the copper alloy(s) referenced in that standard. Manufacturers should be contacted to obtain a true disclosure for the product in question. A list of Copper Development Association members can be found at <https://www.copper.org/about/cda-members.html>. Please see <https://www.copper.org/applications/plumbing/cth/> for more information available in the Copper Tube Handbook, a comprehensive resource for plumbers, engineers, HVAC technicians and contractors to obtain information about copper tube, piping and fittings, as well as different joining methods and applications. Related Construction Specifications Institute MasterFormat designations include the following. These are provided as a general guideline; others sections may apply: 23 06 20 Schedule for HVAC Piping and Pumps, 23 23 00 Refrigerant Piping , 23 01 20 Operation and Maintenance of HVAC Piping and Pumps, 23 23 13 Refrigerant Piping Valves, 23 23 16 Refrigerant Piping Specialties, 23 23 19 Refrigerant Safety Relief Valve Discharge Piping, 23 11 13 Facility Fuel-Oil Piping, 23 11 23 Facility Natural-Gas Piping, 23 11 26 Facility Liquefied-Petroleum Gas Piping.

MANUFACTURER INFORMATION

MANUFACTURER: **Copper Development Association**
ADDRESS: **1660 International Drive**
Suite 600
McLean, VA 22102
COUNTRY: **USA**

WEBSITE: **copper.org**
CONTACT NAME: **Erin Smith**
TITLE: **Deputy Director, EHS & Recycling**
PHONE: **212-251-7247**
EMAIL: **erin.smith@copperalliance.us**

The listed contact is responsible for the validity of this HPD and attests that it is accurate and complete to the best of his or her knowledge.

KEY

Hazard Types

AQU Aquatic toxicity	LAN Land toxicity	PHY Physical hazard (flammable or reactive)
CAN Cancer	MAM Mammalian/systemic/organ toxicity	REP Reproductive
DEV Developmental toxicity	MUL Multiple	RES Respiratory sensitization
END Endocrine activity	NEU Neurotoxicity	SKI Skin sensitization/irritation/corrosivity
EYE Eye irritation/corrosivity	NF Not found on Priority Hazard Lists	UNK Unknown
GEN Gene mutation	OZO Ozone depletion	
GLO Global warming	PBT Persistent, bioaccumulative, and toxic	

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)	LT-P1 List Translator Possible 1 (Possible Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-1 List Translator 1 (Likely Benchmark-1)
BM-2 Benchmark 2 (use but search for safer substitutes)	LT-UNK List Translator Benchmark Unknown
BM-1 Benchmark 1 (avoid - chemical of high concern)	NoGS No GreenScreen.
BM-U Benchmark Unspecified (due to insufficient data)	

GreenScreen Benchmark scores sometimes also carry subscripts, which provide more context for how the score was determined. These are DG (data gap), TP (transformation product), and CoHC (chemical of high concern). For more information, see 2.2.2.4 GreenScreen® for Safer Chemicals, www.greenscreenchemicals.org, and Best Practices for Hazard Screening on the HPDC website (hpd-collaborative.org).

Recycled Types

PreC Pre-consumer recycled content
PostC Post-consumer recycled content
UNK Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms:

GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Inventory Methods:

Nested Method / Material Threshold Substances listed within each material per threshold indicated per material
Nested Method / Product Threshold Substances listed within each material per threshold indicated per product
Basic Method / Product Threshold Substances listed individually per threshold indicated per product

Nano Composed of nano scale particles or nanotechnology
Third Party Verified Verification by independent certifier approved by HPDC
Preparer Third party preparer, if not self-prepared by manufacturer
Applicable facilities Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:

- a method for the assessment of exposure or risk associated with product handling or use,*
- a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.*

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and

