

**SECTION 1: IDENTIFICATION OF THE ARTICLE AND OF THE COMPANY**

Identification of the article	<b>DHP COPPER PRODUCTS</b> Produced according to EN 1057, EN 12735, EN 12735-2, EN 1652, EN 13348, EN 12449, ASTM B280, ASTM B88, ASTM B75, ASTM B743, ASTM B68, ASTM B819, ASTM B837, ASTM B306
Use of the article	Water tubes for gas, heating and sanitary applications (EN 1057, ASTM B88, ASTM B837) Refrigerator type tubes for air conditioning and cooling systems (EN 12735, ASTM B280, ASTM B743, ASTM B68) Sheets, Strips and Circles (EN 1652) Tubes for medical gases or vacuum (EN 13348, ASTM B819) Copper Drainage Tubes (DWV, ASTM B306)
Article Producer / Company identification	ELVALHALCOR S.A. / COPPER TUBES DIVISION 62nd km Nat. Road Athens – Lamia, GR 32011, Inofyta, Viotia, Greece Tel: +30 22620 48111 Fax: +30 22620 48799
Chemical Name	Cu-DHP (CR024A) acc to EN1976 – UNS No C12200
Synonym	NOT APPLICABLE
Chemical Formula	Cu
CAS number	7440-50-8
EINECS number	231-159-6
REACH Registration number	Cu: 01-2119480154-42-0025
Data Sheet Responsible	Dionysios Skarmoutsos dskarmoutsos@halcor.com
Emergency phone	+30 22620 48601 (available only during office hours)
Remarks	DHP Copper Products are articles according to REACH Regulation EC/1907/2006. For articles there is no legal obligation to issue a safety data sheet. However, to be able to provide information typically included in a safety data sheet also for articles, the present product information sheet for articles has been voluntarily issued.

**SECTION 2: HAZARDS IDENTIFICATION**

Physical/chemical hazards	The Copper in form of DHP COPPER PRODUCTS is not dangerous. Copper dust may potentially increase the risk of fire and explosion (sensitive to static discharge). Liquid Copper explodes in contact with water.
Human health hazards	The Copper in form of DHP COPPER PRODUCTS is not dangerous. Copper dust or fumes may cause irritation to respiratory tract and to the eyes. Irritating to skin. Harmful by ingestion.
Environmental hazards	Not applicable

**SECTION 3: COMPOSITION / INGREDIENTS**

Chemical Name	CAS	Concentration (c.a.)	EU N°	Hazard Class and Category Code(s)	Hazard Statement Code(s)	Pictograms, Signal Word Code(s)
COPPER	7440-50-8	> 99.90%	231-159-6	-	-	-
PHOSPHORUS	7723-14-0	0,015-0,040%	231-768-7	Flam.Sol.1 Aquatic Chronic 3	H228 H412	 GHS02, Dgr

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**SECTION 4: FIRST-AID MEASURES**

The below first aid measures are applicable when dust is generated from processing.

Inhalation	Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention in event of any complaints.
Skin	Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing and clean shoes before reuse. If irritation persists, consult a specialist.
Eyes	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. If irritation persists, consult an eye specialist.
Ingestion	Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
Note to Physician	Not applicable

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**SECTION 5: FIRE-FIGHTING MEASURES**

Extinguishing media suitable	Not inflammable extinguishing media appropriate to surrounding fire conditions. (note: very finely divided particles – ultra – fine powder – may burn in air).
Special Procedures	Not applicable
Personal Protection Equipment	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear (level protection: C)

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

Spill/Leaks	Not applicable. If exist copper dust, ventilate area of spill. Sweep up and containerize for reclamation or disposal. Do not allow to enter in sewage system. Vacuuming or wet sweeping may be used to avoid dust dispersal. Wear appropriate personal protective equipment (level protection C).
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**SECTION 7: HANDLING AND STORAGE**

Handling	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid generation of dust. Do not ingest or inhale. Do not allow contact with moisture.
Storage	Keep in a tight closed container. Protect from physical damage. Store in a dry, ventilated area away from moisture and incompatibilities.

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**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

Engineering Controls	Handle in ventilated area.
Occupational Exposure Limits	TWA: 1 mg/m <sup>3</sup> as Copper dust or mist (AGGIH, 2000).

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Copper Personal Protective Equipment	
Respirators	Not need generally. A respiratory protection program that meets OSHA'S 29 CFR : 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.
Skin	Material: Leather
Eyes	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA'S eye and face protection regulations in 29 CFR 1910.133 or European Standard EN 166.
Clothing	Safety shoes; wear appropriate protective clothing

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid
Appearance and odor	Redish metal, odorless
pH	Not applicable
Decomposition Temperature	Not applicable
Flash point	Not applicable
Auto Ignition Temperature	Not applicable
Explosives properties	Not applicable
Fire or explosion hazard	Not applicable
Vapor Pressure (20°C)	Not applicable
Vapor Density	Not applicable
Solubility (water)	Insoluble
Freezing/Melting Point	1083 °C
Boiling Point	2595 °C
Specific Gravity/Density	8.94 (water=1)

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## SECTION 10: STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions
Conditions to Avoid	Contact incompatibilities materials, prolonged exposure to air and moisture.
Incompatibilities with Other Materials	Copper is incompatible with oxidizers, alkalis, acetylene, chlorine plus oxygen difluoride, phosphorus, nitric acid, potassium peroxide, 1-bromo-2-propyne, sulphur plus chlorates. Reacts violently with ammonium nitrate, bromates, iodates, chlorates, ethylene oxide, hydrozoic acid, potassium oxide, dimethyl sulfoxide plus trichloroacetic acid, hydrogen peroxide, sodium peroxide, sodium azide, sulphuric acid, hydrogen sulphide plus air, and lead azide. A potentially explosive reaction occurs with acetylenic compounds. Copper ignities on contact with chlorine, fluorine (above 121 °C, chlorine trifluoride, and hydrazinum nitrate (above 70 °C). An incandescent reaction occurs with potassium dioxide.
Hazardous Decomposition Products	Fumes metals
Hazardous Polymerization	Not applicable

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## SECTION 11: TOXICOLOGICAL INFORMATION

<b>Potential Health Effects:</b>	
<b>Inhalation</b>	Inhalation of dust may cause irritation of the respiratory tract. May cause congestion of nasal mucous membranes. Is possible ulceration and perforation of the nasal septum. Inhalation of material fumes causes metal fume fever (symptom similar to strong grippe).
<b>Contact with skin</b>	Causes irritation to skin. Symptoms include redness, itching, and pain. Exposure to copper dust may cause a greenish-black skin discoloration.
<b>Contact with eyes</b>	Small copper particles in the eyes may cause irritation, discoloration and damage.
<b>Ingestion</b>	Copper ingestion causes nausea, vomiting, abdominal pain, metallic taste, and diarrhea. Ingestion of large doses may cause stomach and intestine ulceration, jaundice, and kidney and liver damage.
<b>Chronic effects</b>	Prolonged or repeated exposure to copper can discolour skin and hair and irritate the skin; may cause mild dermatitis, runny nose, and irritation of the mucous membranes. Repeated ingestion may damage the liver and kidneys. Repeated inhalation can cause chronic respiratory disease.
<b>LD50/LC50</b>	Oral (TDLo, Rats): 152 mg/kg; Oral (TDLo, Human): 0,12 mg/kg
<b>Aggravation of Pre-existing Conditions</b>	Persons with pre-existing skin disorders or impaired liver, kidney, or pulmonary function or pre-existing Wilson's disease may be more susceptible to the effects of this material. Copper is not listed as a dangerous substance in EEC and IMDG code
<b>Other information</b>	IDLH (Immediately Dangerous Life Health): 100 mg/m <sup>3</sup> (Copper dust or mist) It does not have cancer risk.

## SECTION 12: ECOLOGICAL INFORMATION

<b>Persistence/</b>	Not applicable
<b>Bio-accumulation</b>	Not applicable
<b>Environment effects</b>	May form sediments in aqueous bottom.

## SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

## SECTION 14: TRANSPORT INFORMATION

<b>UN N°</b>	Not applicable	
<b>Road/Rail Transport</b>		
<b>Shipping Name</b>	DHP COPPER PRODUCTS	
<b>ADR/RID Class</b>	Not regulated	
<b>ADR/RID Item Number</b>	Not regulated	
<b>Packing Group</b>	Not regulated	
<b>Identification Hazard Number</b>	Not regulated	
<b>Sea Transport</b>		
<b>Shipping Name</b>	DHP COPPER PRODUCTS	
<b>IMDG Class</b>	Not regulated	

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Packing Group	Not regulated
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## SECTION 15: REGULATORY INFORMATION

UE Classification (67/548/EEC-88/379/EEC)	
Hazard symbol	Not applicable
Risk phrases	Not applicable
Safety phrases	S 37 Wear suitable gloves.

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## SECTION 16: OTHER INFORMATION

Not applicable

### Disclaimer of Liability

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control. The user therefore assumes all risks of use of the product and we expressly disclaim all warranties of every kind and nature including warranties of merchantability and fitness for a particular purpose.

Handling Storage use and disposal of the product, as soon as is removed from our facility is beyond our control, and may be beyond our knowledge.

We therefore do not assume responsibility for loss damage, or expense arising from improper handling, storage use or disposal of the product.

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