Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THECOMPANY/UNDERTAKING

Product Identifier

Perihalan Produk: **Aluminum Copper square bar, alloy 2024**
Product Description: **Aluminum Copper square bar, alloy 2024**
Cat No. : 42103
Molecular Formula Al:Cu:Mg:Mn; 93.5:4.4:1.5:0.6 wt%

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals.
Uses advised against No Information available

Company

Thermo Fisher Scientific Fisher Scientific (M) Sdn Bhd
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No 12, Persiaran Perusahaan, Seksyen 23, 40300 Shah Alam,
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Main line: +60 3-5525 7888

Supplier

E-mail address Enquiry.my@thermofisher.com

Emergency Telephone Number

Tel: +03-5525 7888
CHEMTREC Malaysia **1-800-815-308** (Malay)
CHEMTREC Malaysia (Kuala Lumpur) **+(60)-327884561** (Malay)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Label Elements

Hazard Statements

Precautionary Statements
Storage
P403 - Store in a well-ventilated place
Disposal
P501 - Dispose of contents/ container to an approved waste disposal plant

Other Hazards
EUH210 - Safety data sheet available on request

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
Aluminum	7429-90-5	93.5
Copper	7440-50-8	4.4
Manganese	7439-96-5	1.5
Magnesium	7439-95-4	0.6

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur.

Self-Protection of the First Aider No special precautions required.

Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

approved class D extinguishers. Do not use water or foam.

Extinguishing media which must not be used for safety reasons

Water may be ineffective.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Metal oxides.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full

protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. No special precautions required.

Environmental precautions
Do not flush into surface water or sanitary sewer system. Should not be released into the environment. Do not allow material to contaminate ground water system.

Methods and Material for Containment and Cleaning Up
Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Pick up and transfer to properly labelled containers.

Reference to Other Sections
Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling
Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid contact with skin, eyes or clothing. Avoid dust formation.

Conditions for Safe Storage, Including any Incompatibilities
Keep in a dry place. Keep away from acids.

Specific End Uses
Use in laboratories.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Component	Malaysia	ACGIH TLV	OSHA PEL
Aluminum		TWA: 1 mg/m³	(Vacated) TWA: 15 mg/m³ (Vacated) TWA: 5 mg/m³ TWA: 15 mg/m³ TWA: 5 mg/m³
Copper		TWA: 0.2 mg/m³	(Vacated) TWA: 0.1 mg/m³ TWA: 0.1 mg/m³ TWA: 1 mg/m³
Manganese		TWA: 0.02 mg/m³ TWA: 0.1 mg/m³	(Vacated) TWA: 1 mg/m³ Ceiling: 5 mg/m³ (Vacated) STEL: 3 mg/m³ (Vacated) Ceiling: 5 mg/m³

Component	European Union	The United Kingdom	Germany
Aluminum		STEL: 30 mg/m³ 15 min STEL: 12 mg/m³ 15 min TWA: 10 mg/m³ 8 hr TWA: 4 mg/m³ 8 hr	TWA: 1.25 mg/m³ (8 Stunden). AGW - exposure factor 2 TWA: 10 mg/m³ (8 Stunden). AGW - exposure factor 2

			TWA: 4 mg/m³ (8 Stunden). MAK TWA: 1.5 mg/m³ (8 Stunden). MAK
Copper		STEL: 0.6 mg/m³ 15 min STEL: 2 mg/m³ 15 min TWA: 1 mg/m³ 8 hr TWA: 0.2 mg/m³ 8 hr	TWA: 0.01 mg/m³ (8 Stunden). MAK Höhepunkt: 0.02 mg/m³
Manganese	TWA: 0.2 mg/m³ (8h) TWA: 0.05 mg/m³ (8h)	STEL: 0.6 mg/m³ 15 min STEL: 0.15 mg/m³ 15 min TWA: 0.2 mg/m³ 8 hr TWA: 0.05 mg/m³ 8 hr	TWA: 0.2 mg/m³ (8 Stunden). AGW - exposure factor 8 TWA: 0.02 mg/m³ (8 Stunden). AGW - exposure factor 8 TWA: 0.2 mg/m³ (8 Stunden). MAK TWA: 0.02 mg/m³ (8 Stunden). MAK Höhepunkt: 1.6 mg/m³ Höhepunkt: 0.16 mg/m³

Exposure Controls

Engineering Measures

None under normal use conditions.

Personal protective equipment

Eye Protection Wear safety glasses with side shields (or goggles)

Hand Protection No special protective equipment required

Skin and body protection Long sleeved clothing

Respiratory Protection No protective equipment is needed under normal use conditions

Recommended Filter type: Particle filter

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls Prevent product from entering drains Do not allow material to contaminate ground water system Local authorities should be advised if significant spillages cannot be contained

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Silver	
Physical State	Solid Bar	
Odor	Odorless	
Odor Threshold	No data available	
pH	No information available	
Melting Point/Range	No data available	
Softening Point	No data available	
Boiling Point/Range	No information available	
Flash Point	No information available	**Method -** No information available
Evaporation Rate	Not applicable	Solid
Flammability (solid,gas)	No information available	
Explosion Limits	No data available	

Vapor Pressure	23 hPa @ 20 °C	
Vapor Density	Not applicable	Solid
Specific Gravity / Density	No data available	
Bulk Density	No data available	
Water Solubility	Insoluble in water	
Solubility in other solvents	No information available	

Partition Coefficient (n-octanol/water)

Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Viscosity	Not applicable	Solid
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Molecular Formula Al:Cu:Mg:Mn; 93.5:4.4:1.5:0.6 wt%

SECTION 10: STABILITY AND REACTIVITY

Reactivity

None known, based on information available.

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization	No information available.
Hazardous Reactions	None under normal processing.

Conditions to Avoid

None known.

Incompatible Materials

Oxidizing agent.

Hazardous Decomposition Products

Metal oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Product Information

(a) acute toxicity;

Oral	Based on available data, the classification criteria are not met
Dermal	No data available
Inhalation	No data available

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aluminum	-	-	LC50 > 0.888 mg/L (Rat) 4 h
Copper	-	-	LC50 > 5.11 mg/L (Rat) 4 h
Manganese	LD50 = 9 g/kg (Rat)	-	LC50 > 5.14 mg/L (Rat) 4 h
Magnesium	LD50 = 230 mg/kg (Rat)	-	-

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory	No data available
Skin	No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; Not applicable
Solid

Symptoms / effects,both acute and delayed No information available.

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity effects Contains a substance which is:. Very toxic to aquatic organisms. The product contains following substances which are hazardous for the environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water

system.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Copper	Onchorhynchys mykiss: LC50=0.15 mg/L 96h Cuprinus carpio: LC50=0.8 mg/L 96h	EC50: = 0.03 mg/L, 48h Static (Daphnia magna)	0.0426-0.0535 mg/L EC50 72 h 0.031-0.054 mg/L EC50 96 h	
Manganese	LC50: > 3.6 mg/L, 96h semi-static (Oncorhynchus mykiss)			

Persistence and degradability Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary

Persistence Insoluble in water, May persist.

Degradability Not relevant for inorganic substances.

Degradation in sewage treatment plant Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Bioaccumulative potential Product has a high potential to bioconcentrate; May have some potential to bioaccumulate

Mobility in soil Spillage unlikely to penetrate soil. Is not likely mobile in the environment due its low water solubility.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

Other adverse effects No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues/Unused Products Waste is classified as hazardous Dispose of in accordance with the European Directives on waste and hazardous waste Dispose of in accordance with local regulations

Contaminated Packaging Dispose of this container to hazardous or special waste collection point.

Other Information Do not flush to sewer

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO Not regulated

Road and Rail Transport Not regulated

IATA Not regulated

Special Precautions for User No special precautions required

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories X = listed

Component	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	IECSC	AICS	KECL
Aluminum	231-072-3	X	X	X	X		X	X	KE-00881
Copper	231-159-6	X	X	X	X		X	X	KE-08896
Manganese	231-105-1	X	X	X	X		X	X	KE-22999
Magnesium	231-104-6	X	X	X	X		X	X	KE-22673

National Regulations

Persistent Organic Pollutant This product does not contain any known or suspected substance
Ozone Depletion Potential This product does not contain any known or suspected substance

SECTION 16: OTHER INFORMATION

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
POW - Partition coefficient Octanol:Water

TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships
ATE - Acute Toxicity Estimate
VOC - (Volatile Organic Compound)

Key literature references and sources for data
https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

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In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

Disclaimer

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End of Safety Data Sheet