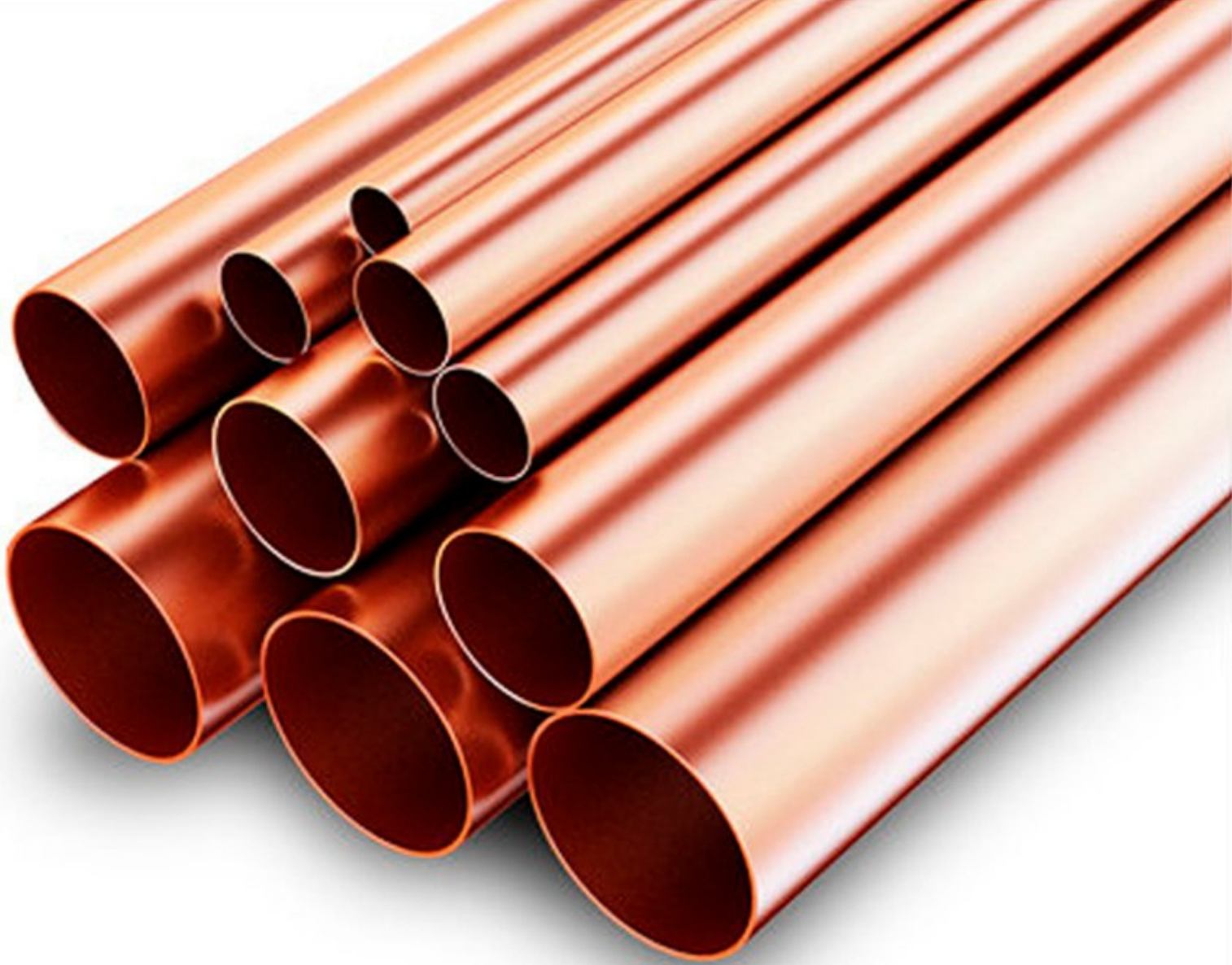




MEHTA TUBES LIMITED

The Company With Mettle

**CuFe2P COPPER-IRON
TUBES & FITTINGS**

COMPANY PROFILE

Mehta Tubes Limited is India's leading manufacturers and exporters of high-quality copper and copper-alloy products under the brand **MEXFLOW**, recognised for precision, reliability and consistent quality across global markets. With advanced manufacturing infrastructure, in-house testing facilities and decades of technical expertise, Mehta Tubes delivers products engineered to meet stringent international standards for performance, cleanliness and dimensional accuracy.

As the HVAC&R industry transitions towards environmentally responsible refrigerants, **CO₂ / R744** has emerged as a leading natural refrigerant for modern refrigeration and heat pump systems. However, CO₂ systems operate at significantly higher pressures than conventional refrigerant systems, creating the need for stronger, safer and more reliable piping solutions.

MEXFLOW CuFe2P tubes are high-strength copper-alloy tubes specifically engineered for **CO₂ refrigeration and high-pressure HVAC&R applications**. The iron-phosphorus alloy composition provides enhanced mechanical strength compared with conventional copper tubes, while retaining the proven advantages of copper-based piping such as ease of brazing, bending, installation and compatibility with established refrigeration practices.

Manufactured in line with **EN 12735-1** and **ASTM B1018** requirements and supported by **PED certification**, MEXFLOW CuFe2P tubes are designed for applications including **commercial refrigeration, supermarket systems, cold rooms, heat pumps, air-conditioning and transcritical CO₂ installations**.

Backed by strict process control, internal cleanliness testing including carbon residue testing as per **EN 723**, and adherence to relevant international specifications, **Mehta Tubes' MEXFLOW CuFe2P** range provides a reliable, practical and future-ready solution for the next generation of green refrigeration systems.



CuFe2P COPPER–IRON TUBES & FITTINGS

High-Strength Tubes for CO₂ / R744 Refrigeration Systems

Engineered for modern **CO₂ / R744 refrigeration and high-pressure HVAC&R systems**, MEXFLOW CuFe2P copper-iron alloy tubes deliver superior mechanical strength, pressure resistance and installation reliability. Designed as a stronger alternative to conventional copper tubes, they support high-pressure refrigeration applications while retaining the familiar benefits of copper-based piping, including brazing, bending and compatibility with standard installation practices.

Material Designation

Standard / System	Designation
EN	CuFe2P
DIN CEN/TS 13388	CW107C
UNS	C19400

Chemical Composition

Element	Weight Percentage
Cu	Balance
Fe	2.40%
Zn	0.10–0.12%
P	0.03%

Key Advantages

- High-strength **CuFe2P / CW107C / C19400** copper-iron alloy
- Suitable for **CO₂ / R744 high-pressure refrigeration systems**
- Size range: **3/8" to 2-5/8"**
- Clean, capped ends for contamination control
- Compatible with standard brazing methods
- No specialised tools or TIG welding required
- Good corrosion resistance in atmospheric and industrial environments
- Product documentation, traceability and technical support available

Operating Parameters

- Maximum operating pressure: **130 bar / 1885 psi**
- Minimum test pressure: **390 bar / 5655 psi**
- Maximum operating temperature: **150°C / 300°F**
- Designed for demanding high-pressure HVAC&R applications

Standards & Certifications

- Manufactured in accordance with **EN 12735-1** and **ASTM B1018** requirements
- Supported by **PED certification** for pressure applications
- **UL recognised / certified** for high-pressure refrigeration applications
- Suitable for systems designed in accordance with **CSA B52** requirements, subject to project-specific approval
- Internal cleanliness testing as per **EN 723**

Applications

- Supermarket refrigeration systems
- Commercial refrigeration
- Cold rooms and warehousing
- Industrial refrigeration
- Heat pump systems
- Air-conditioning systems
- Transcritical CO₂ installations
- Food and pharmaceutical refrigeration

CW107C *CuFe2P*

CuFe2P / CW107C seamless round tubes for high-pressure CO₂ refrigeration applications, manufactured in accordance with EN 12735-1, with pressure suitability/compliance considered under EN 14276:2000.

Temper: R300 (with heat treatment)
R420 (drawn)

Dimensions		Wall Thickness	Nominal Weight	Content Volume
mm	inch	mm	kg/m	l/m
80 bar				
15.88	5/8"	0.63	0.267	0.168
19.05	3/4"	0.76	0.386	0.241
22.22	7/8"	0.89	0.528	0.328
28.58	1 1/8"	1.20	0.913	0.538
34.92	1 3/8"	1.47	1.367	0.803
41.28	1 5/8"	1.74	1.912	1.122
53.98	2 1/8"	2.27	3.263	1.919
120 bar				
9.52	3/8"	0.56	0.140	0.050
12.7	1/2"	0.75	0.249	0.099
15.88	5/8"	0.93	0.386	0.154
19.05	3/4"	1.19	0.591	0.218
22.22	7/8"	1.38	0.800	0.298
28.58	1 1/8"	1.78	1.326	0.491
34.92	1 3/8"	2.17	1.976	0.734
41.28	1 5/8"	2.56	2.755	1.026
53.98	2 1/8"	3.35	4.715	1.755
66.67	2 5/8"	4.14	5.750	2.679
130 bar				
9.52	3/8"	0.61	0.151	0.054
12.7	1/2"	0.81	0.268	0.096
15.88	5/8"	1.04	0.429	0.149
19.05	3/4"	1.28	0.632	0.214
22.22	7/8"	1.49	0.859	0.291
28.58	1 1/8"	1.92	1.423	0.480
34.92	1 3/8"	2.34	2.120	0.718
41.28	1 5/8"	2.76	2.955	1.004
53.98	2 1/8"	3.61	5.055	1.717
66.67	2 5/8"	4.46	7.730	2.618

UNS C19400 *CuFe2P*

MEXFLOW CuFe2P / UNS C19400 seamless round tubes for high-pressure CO₂ refrigeration applications, manufactured in accordance with ASTM B1018.

Model Names	Sizes	Outer Diameter	Average thickness	Tolerance on Thickness	Minimum Thickness	Inner Daimeter
	inch	inch	inch	inch	inch	inch
80 bar						
CUFE20375	3/8"	0.375	0.024	0.002	0.0220	0.327
CUFE20500	1/2"	0.500	0.024	0.002	0.0220	0.452
CUFE20625	5/8"	0.625	0.029	0.0025	0.0265	0.567
CUFE20750	3/4"	0.750	0.035	0.004	0.0310	0.68
CUFE20875	7/8"	0.875	0.041	0.004	0.0370	0.793
CUFE21125	1 1/8"	1.125	0.051	0.004	0.0470	1.023
CUFE21375	1 3/8"	1.375	0.062	0.004	0.0580	1.251
CUFE21625	1 5/8"	1.625	0.072	0.004	0.0680	1.481
CUFE22125	2 1/8"	2.125	0.097	0.007	0.0900	1.931
CUFE22625	2 5/8"	2.625	0.118	0.007	0.1110	2.389
130 bar						
CUFE20375	3/8"	0.375	0.028	0.002	0.0260	0.319
CUFE20500	1/2"	0.500	0.037	0.003	0.0340	0.426
CUFE20625	5/8"	0.625	0.045	0.003	0.0420	0.535
CUFE20750	3/4"	0.750	0.054	0.004	0.0500	0.642
CUFE20875	7/8"	0.875	0.063	0.004	0.0590	0.749
CUFE21125	1 1/8"	1.125	0.079	0.004	0.0750	0.967
CUFE21375	1 3/8"	1.375	0.097	0.005	0.0920	1.181
CUFE21625	1 5/8"	1.625	0.115	0.006	0.1090	1.395
CUFE22125	2 1/8"	2.125	0.15	0.008	0.1420	1.825
CUFE22625	2 5/8"	2.625	0.186	0.011	0.1750	2.253



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COMPARISON *CuFe2P* & *Cu-DHP*

Feature	MEXFLOW <i>CuFe2P</i> / CW107C Tubes	Conventional <i>Cu-DHP</i> Copper Tubes
Material Type	Copper-iron alloy: <i>CuFe2P</i> / CW107C / C19400	Phosphorus-deoxidised copper: <i>Cu-DHP</i> / C12200 / CW024A
Primary Application	High-pressure CO₂ / R744 refrigeration systems	Conventional HVAC&R and refrigeration systems
Pressure Capability	Designed for high-pressure applications up to 130 bars	Suitable for standard refrigerant pressure ranges
Mechanical Strength	Higher strength compared with standard copper tubes	Standard copper strength
Burst Resistance	Higher safety margin for demanding pressure conditions	Standard safety margin for conventional systems
Fatigue & Vibration Performance	Improved performance in high-pressure operating conditions	Suitable for normal HVAC&R service
Thermal Conductivity	Balanced between heat-transfer performance and higher strength	Higher thermal conductivity
Formability	Good	Excellent
Installation Method	Compatible with standard brazing and copper-tube installation practices	Standard brazing and installation practices
Cleanliness	Cleaned and capped ends for refrigeration-grade contamination control	Refrigeration-grade cleanliness, depending on specification
Standards & Compliance	Manufactured in line with EN 12735-1 and ASTM B1018 requirements; supported by PED certification	Commonly supplied to EN 12735-1 / ASTM B280 , depending on market requirement
Typical Applications	Supermarkets, cold rooms, heat pumps, transcritical CO₂ systems, commercial refrigeration	Air-conditioning, standard refrigeration and HVAC&R systems
Main Advantage	Enables copper-based piping for modern high-pressure CO₂ refrigeration systems	Proven, economical solution for conventional refrigerant systems