

ARCHITECTURAL GUIDE SPECIFICATIONS

The following are parts of a guide specification for incorporation into architectural specifications. Complete details, specifications and descriptive text for the installation of copper roofs, gutters, flashings, etc., are contained in the Revere manual *Copper & Common Sense*.

General

QUALITY ASSURANCE

Unless otherwise shown or specified, comply with applicable recommendations and details in *Copper & Common Sense* by Revere Copper Products, Inc.

Products

Material Data

Physical Properties

Atomic wt.	63.54
Specific gravity	8.89 to 8.94
Density	.0322lb./cu.in.
Coefficient of thermal expansion	0.0000098

Thickness	Theoretical	Minimum	Wt/Sq. Ft
16 oz.	0.0216"	0.0204"	1.00 lb.
20 oz.	0.0270"	0.0258"	1.25 lb.
24 oz.	0.0323"	0.0308"	1.50 lb.
32 oz.	0.0431"	0.0411"	2.00 lb.

Mechanical properties	Temper designation			
	Soft	Cold-rolled		
	060	H00	H01	H02
Tensile strength	30-38	32-40	34-42	37-46
Yield strength	-	20	28	30
Elongation	45%	30%	25%	10%
Rockwell F Scale	65	54-82	60-84	77-89

MATERIALS

A. Copper- Select copper or coppers as required for aesthetics.

1. **Standard sheet copper:** cold rolled ounce weight (12-ounce, 16-ounce, 20-ounce, and/ or 32-ounce as noted on drawings) copper sheet complying with ASTM B370. Unless otherwise noted, temper shall be H00.

2. **ContinentalBronze:** Our pre-aged copper is shipped with a natural brown/bronze copper oxide finish. This material has no chemicals on the surface and will patina over time, in most environments the copper surface will eventually weather to a green patina.

3. **Tin-zinc alloy coated copper:** cold rolled ounce weight (12-ounce, 16-ounce, and 20-ounce as noted on drawings) copper coated both sides with tin-zinc alloy. Base copper sheet or coil shall comply with ASTM B370. Finish and appearance shall be that of Revere **FreedomGray™**.

4. **Pan-forming copper:** cold rolled ounce weight (12-ounce, 16-ounce and/ or 20-ounce as noted on drawings) copper in coil complying with ASTM B370 and manufactured in accordance with specifications for Revere **Ultrapan™**.

5. **Textured copper:** Solid copper having a designated minimum copper content of 99.5% or higher, in thickness ranging from .008" to .135", as specified on drawings. Finish and appearance shall be that of **Liberty Collection™ Rigidized©** textured copper.

6. **Copper composite panel:** Thermoplastic core coated both sides with lightweight copper sheet, with a protective film on exterior skin. Total thickness shall be 4mm or 6mm as specified on drawings. Finish and appearance shall be that of Revere **Alpolic Composite Panel™**.

B. Solder- shall conform to ASTM B32.

For **FreedomGray** tin/zinc alloy coated copper- Pure tin or lead-free, high-tin solders such as Number 497 by Johnson Manufacturing.

C. Fasteners- for plain copper, **Continental Bronze** and **FreedomGray** tin/zinc alloy coated copper shall be copper, copper alloy or non-magnetic, series 300 stainless steel.

Execution

STORAGE AND COORDINATION

A. Store all architectural copper sheet and coils (plain/bare, Continental Bronze, and /or FreedomGray) off the ground in an enclosed structure so as to maintain dry conditions and exclude condensation. Do not store on bare ground under tarp.

B. Handle sheets and formed shapes in a manner to reduce scratches.

Note: The use of gloves may minimize fingerprints during initial weathering. Fingerprints fade and disappear with addition weathering. However, in arid locations they may persist for an extended period.

INSTALLATION

A. Except as otherwise shown or specified, comply with Revere Copper Products, Inc. recommendations and instructions as published in *Copper & Common Sense* and published Revere literature.

B. Separate and protect dissimilar metals as recommended by manufacturers of dissimilar metals (other than copper).

C. Solder plain/bare copper or **FreedomGray** in accordance with instructions published by Revere Copper Products, Inc.

Note: Prior to soldering plain/bare copper, **ContinentalBronze** or **FreedomGray**, areas to be soldered must be mechanically cleaned to produce a bright, unoxidized surface. Plain/bare copper and **ContinentalBronze** should be pre-tinned before soldering. It is not necessary to remove the tin-zinc alloy coating from the **FreedomGray**.

CLEANING

Do **not** chemically or abrasively clean plain/bare copper, **ContinentalBronze** and/or **FreedomGray**. If necessary, construction dirt may be washed from copper with clean, fresh water only. Do **not** use soaps, detergents or other cleaning agents.

PROTECTION

Protect plain/bare copper, **ContinentalBronze** and/or **FreedomGray** from oils, greases, masonry cleaning compounds, iron and steel fines and fasteners, and other construction materials that may stain or discolor copper surface. To minimize condensation or water stains, at the end of each workday, remove tarps or other protections placed on copper. Manufacturing representatives are available for assistance or on-site meetings.

Refer to current manufacturer's SDS for safety and handling information.



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