

PART 1 - GENERAL

- 1.1 REFERENCES .1 Canadian General Standards Board (CGSB)
.1 CAN/CGSB-1.60-97, Interior Alkyd Gloss Enamel.
.2 CAN/CGSB-24.3-92, Identification of Piping Systems.
- 1.2 ACTION AND INFORMATIONAL SUBMITTALS .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- 1.3 QUALITY ASSURANCE .1 Quality assurance submittals: submit following in accordance with Section 01 33 00 - Submittal Procedures.
.2 Health and Safety:
.1 Do construction occupational health and safety in accordance with Section 01 35 29 - Health and Safety Requirements.
- 1.4 DELIVERY, STORAGE, AND HANDLING .1 Packing, shipping, handling and unloading:
.1 Deliver, store and handle in accordance with Section 01 10 10 - General Instructions.
.2 Deliver, store and handle materials in accordance with manufacturer's written instructions.
.2 Waste Management and Disposal:
.1 Construction/Demolition Waste Management and Disposal: separate waste materials for reuse and recycling in accordance with Section 01 10 10 - General Instructions.
.2 Dispose of unused paint and coating material at official hazardous material collections site approved by Departmental Representative.
.3 Do not dispose of unused paint and coating material into sewer system, into streams, lakes, onto ground or in locations where it will pose health or environmental hazard.

PART 2 - PRODUCTS

- 2.1 MANUFACTURER'S EQUIPMENT NAMEPLATES
- .1 Metal or plastic laminate nameplate mechanically fastened to each piece of equipment by manufacturer.
 - .2 Lettering and numbers raised or recessed.
 - .3 Information to include, as appropriate:
 - .1 Equipment: manufacturer's name, model, size, serial number, capacity.
 - .2 Motor: voltage, Hz, phase, power factor, duty, frame size.

- 2.2 SYSTEM NAMEPLATES
- .1 Colours:
 - .1 Hazardous: red letters, white background.
 - .2 Elsewhere: black letters, white background (except where required otherwise by applicable codes).
 - .2 Construction:
 - .1 3 mm thick laminated plastic or white anodized aluminum, matte finish, with square corners, letters accurately aligned and machine engraved into core.
 - .3 Sizes:
 - .1 Conform to following table:

Size #	mm	Sizes (mm)	No. of Lines	Height of Letters (mm)
1		10 x 50	1	3
2		13 x 75	1	5
3		13 x 75	2	3
4		20 x 100	1	8
5		20 x 100	2	5
6		20 x 200	1	8
7		25 x 125	1	12
8		25 x 125	2	8
9		35 x 200	1	20
 - .2 Use maximum of 25 letters/numbers per line.
 - .4 Locations:
 - .1 Terminal cabinets, control panels: use size # 5.
 - .2 Equipment in Mechanical Rooms: use size # 9.

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| 2.2 SYSTEM
NAMEPLATES
(Cont'd) | .5 | Identification for PWGSC Preventive Maintenance Support System (PMSS):
.1 Use arrangement of Main identifier, Source identifier, Destination identifier.
.2 Equipment in Mechanical Room:
.1 Main identifier: size #9.
.2 Source and Destination identifiers: size #6.
.3 Terminal cabinets, control panels: size #5.
.3 Equipment elsewhere: sizes as appropriate. |
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| 2.3 EXISTING
IDENTIFICATION
SYSTEMS | .1

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.3 | Apply existing identification system to new work.

Where existing identification system does not cover for new work, use identification system specified this section.

Before starting work, obtain written approval of identification system from Departmental Representative. |
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| 2.4 IDENTIFICATION
OF PIPING SYSTEMS | .1

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.5 | Identify contents by background colour marking, pictogram (as necessary), legend; direction of flow by arrows. To CAN/CGSB 24.3 except where specified otherwise.

Pictograms:
.1 Where required: Workplace Hazardous Materials Information System (WHMIS) regulations.

Legend:
.1 Block capitals to sizes and colours listed in CAN/CGSB 24.3.

Arrows showing direction of flow:
.1 Outside diameter of pipe or insulation less than 75 mm: 100 mm long x 50 mm high.
.2 Outside diameter of pipe or insulation 75 mm and greater: 150 mm long x 50 mm high.
.3 Use double-headed arrows where flow is reversible.

Extent of background colour marking:
.1 To full circumference of pipe or insulation.
.2 Length to accommodate pictogram, full length of legend and arrows. |
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2.4 IDENTIFICATION
OF PIPING SYSTEMS
(Cont'd)

- .6 Materials for background colour marking, legend, arrows:
- .1 Pipes and tubing 20 mm and smaller: waterproof and heat-resistant pressure sensitive plastic marker tags.
- .2 Other pipes: pressure sensitive plastic-coated cloth or vinyl with protective overcoating, waterproof contact adhesive undercoating, suitable for ambient of 100% RH and continuous operating temperature of 150 degrees C and intermittent temperature of 200 degrees C.
- .7 Colours and Legends:
- .1 Where not listed, obtain direction from Departmental Representative.
- .2 Colours for legends, arrows: to following table:

Background colour:	Legend, arrows:
Yellow	BLACK
Green	WHITE
Red	WHITE

- .3 Background colour marking and legends for piping systems:

Contents	Background colour marking	Legend
Domestic hot water supply	Green	DOM. HW SUPPLY
Domestic cold water supply	Green	DOM. CWS
Contaminated lab waste	Yellow	CONT. LAB WASTE
Sanitary	Green	SAN
Plumbing vent	Green	SAN. VENT
Distilled water	Green	DISTILL. WTR
Demineralized water	Green	DEMIN. WATER
Compressed air (<700kPa)	Green	COMP. AIR kPa
Vacuum	Green	VACUUM

2.5 IDENTIFICATION
DUCTWORK SYSTEMS

- .1 50 mm high stencilled letters and directional arrows 150 mm long x 50 mm high.
- .2 Colours: back, or co-ordinated with base colour to ensure strong contrast.

2.6 VALVES,
CONTROLLERS

- .1 Brass tags with 12 mm stamped identification data filled with black paint.
- .2 Include flow diagrams for each system, of approved size, showing charts and schedules with

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2.6 VALVES,
CONTROLLERS
(Cont'd) .2 (Cont'd)
identification of each tagged item, valve type,
service, function, normal position, location of
tagged item.

2.7 LANGUAGE .1 Identification in English and French.

PART 3 - EXECUTION

3.1 MANUFACTURER'S
INSTRUCTIONS .1 Compliance: comply with manufacturer's written
recommendations or specifications, including product
technical bulletins, handling, storage and
installation instructions, and datasheet.

3.2 TIMING .1 Provide identification only after painting specified
Section 09 91 23 - Interior Painting has been
completed.

3.3 INSTALLATION .1 Perform work in accordance with CAN/CGSB-24.3 except
as specified otherwise.
.2 Provide ULC and or CSA registration plates as
required by respective agency.
.3 Identify systems, equipment to conform to PWGSC
PMSS.

3.4 NAMEPLATES .1 Locations:
.1 In conspicuous location to facilitate easy
reading and identification from operating floor.
.2 Standoffs:
.1 Provide for nameplates on hot and/or insulated
surfaces.
.3 Protection:
.1 Do not paint, insulate or cover.

3.5 LOCATION OF
IDENTIFICATION ON
PIPING AND DUCTWORK
SYSTEMS

- .1 On long straight runs in open areas in boiler rooms, equipment rooms, galleries, tunnels: at not more than 17 m intervals and more frequently if required to ensure that at least one is visible from any one viewpoint in operating areas and walking aisles.
- .2 Adjacent to each change in direction.
- .3 At least once in each small room through which piping or ductwork passes.
- .4 On both sides of visual obstruction or where run is difficult to follow.
- .5 On both sides of separations such as walls, floors, partitions.
- .6 Where system is installed in pipe chases, ceiling spaces, galleries, confined spaces, at entry and exit points, and at access openings.
- .7 At beginning and end points of each run and at each piece of equipment in run.
- .8 At point immediately upstream of major manually operated or automatically controlled valves, and dampers. Where this is not possible, place identification as close as possible, preferably on upstream side.
- .9 Identification easily and accurately readable from usual operating areas and from access points.
 - .1 Position of identification approximately at right angles to most convenient line of sight, considering operating positions, lighting conditions, risk of physical damage or injury and reduced visibility over time due to dust and dirt.

3.6 VALVES,
CONTROLLERS

- .1 Valves and operating controllers, except at plumbing fixtures, radiation, or where in plain sight of equipment they serve: Secure tags with non-ferrous chains or closed "S" hooks.
- .2 Install one copy of flow diagrams, valve schedules mounted in frame behind non-glare glass where directed by Departmental Representative. Provide one copy (reduced in size if required) in each operating and maintenance manual.
- .3 Number valves in each system consecutively.

- 3.7 CLEANING .1 Proceed in accordance with Section 01 10 10 -
General Instructions.
- .2 Upon completion and verification of performance of
installation, remove surplus materials, excess
materials, rubbish, tools and equipment.