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UL 1365

Outline of Investigation for Corrugated Medical Tubing (CMT) Systems

Issue Number: 6

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Summary of Topics

This sixth issue of the Outline of Investigation for Corrugated Medical Tubing (CMT) Systems, UL 1365, which covers corrugated medical tubing systems intended for use in hospitals and health centers for distribution of nonflammable medical gas, is being issued to add 5/8 and 1-1/4 sizes to Tables 6.1 and 16.1.

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INTRODUCTION

1 Scope

1.1 This outline covers corrugated medical tubing systems intended for use in hospitals and health centers for distribution of nonflammable medical gas in accordance with the Standard for Health Care Facilities, NFPA 99.

1.2 CMT systems are intended for inside aboveground and in slab, when installed in approved nonmetallic conduit, applications only.

1.3 This outline covers medical tubing systems up to 2 inches (50.8 mm), based on the nominal inside diameter of the tubing.

1.4 These products have not been evaluated for use after fires, natural disasters such as earthquakes, or excessive physical damage beyond the expected assembly, installation and uses as identified in these requirements.

1.5 These products are intended to be periodically inspected and maintained for continued service, or taken out of service if necessary by qualified persons in accordance with industry recommended practices and/or the manufacturer's instructions.

2 Units of Measurement

2.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

3 Undated References

3.1 Any undated reference to a code or standard appearing in the requirements of this outline shall be interpreted as referring to the latest edition of that code or standard.

4 Components

4.1 Except as indicated in 4.2, a component of a product covered by this outline shall comply with the requirements for that component.

4.2 A component is not required to comply with a specific requirement that:

- a) Involves a feature or characteristic not required in the application of the component in the product covered by this outline, or
- b) Is superseded by a requirement in this outline.

4.3 A component shall be used in accordance with its rating established for the intended conditions of use.

4.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

CONSTRUCTION

5 General

5.1 A product shall employ materials found by investigation and allowed by NFPA 99 to be acceptable for the intended application.

5.2 Corrugated medical tubing systems shall be constructed entirely of new and unused parts and materials.

5.3 A product shall be assembled so that it will not be adversely affected by the vibration of normal operation.

PERFORMANCE

6 General

6.1 Representative samples of each size and specific construction of the CMT are to be subjected to the tests described in these requirements.

6.2 CMT systems are to be tested on the following basis consistent with the intended use of the product and Table 6.1:

- a) Size or diameter;
- b) Minimum radius of bend (per manufacturer's instructions); and
- c) Maximum rated pressure (per manufacturer's instructions).

Table 6.1
CMT system

Size (in.)	OAL (in.) hydrostatic, vibration, torsion tests	Length over diameter ratio	Torsional stress (in-lb)
3/8	14	37	150
1/2	17	34	150
5/8	19	31	175
3/4	21	28	200
1	26	26	250
1-1/4	31	25	300
1-1/2	36	24	350
2	45	23	450

6.3 For tests requiring pressure a calibrated pressure-indicating device is to be mounted to indicate pressures developed within the vessel. The pressure-indicating device shall comply with one of the following:

- a) An analog gauge having a pressure range of at least 150 percent of the anticipated maximum working pressure;