



UL 1204

STANDARD FOR SAFETY

Parts Cleaners

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UL Standard for Safety for Parts Cleaners, UL 1204

First Edition, Dated July 19, 2018

Summary of Topics

This First Edition of ANSI/UL 1204, Standard for Parts Cleaners, covers parts cleaners used for cleaning or removing grease and similar substances from the item contaminated, electrically operated parts cleaners rated up to 600 V, and manual type parts cleaners with no electrical connection.

The new requirements are substantially in accordance with Proposal(s) on this subject dated May 4, 2018.

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JULY 19, 2018

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ANSI/UL 1204-2018

UL 1204

Standard for Parts Cleaners

First Edition

July 19, 2018

This ANSI/UL Standard for Safety consists of the First Edition.

The most recent designation of ANSI/UL 1204 as an American National Standard (ANSI) occurred on July 19, 2018. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <https://csds.ul.com>.

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INTRODUCTION

1 Scope

1.1 These requirements cover parts cleaners used for cleaning or removing grease and similar substances from the item contaminated.

1.2 These requirements cover electrically operated parts cleaners rated up to 600 V, and manual type parts cleaners with no electrical connection.

1.3 These units are intended for use with flammable/combustible liquids or non-flammable/non-combustible cleaning solutions as detailed in the instruction manual provided with the unit and labels on the unit.

1.4 Requirements for the installation and use of parts cleaners are included in the National Electrical Code, NFPA 70, the Flammable and Combustible Liquids Code, NFPA 30, the Uniform Fire Code, NFPA 1, and the International Fire Code, IFC.

1.5 These requirements do not apply to the following:

- a) Units intended to be installed outdoors;
- b) Units intended for use with solvents or cleaning solutions that are considered unstable; or
- c) Parts cleaners employing evaporating and condensing solvents.

1.6 These requirements do not address the physiological effects of solvents or cleaning solutions used with the equipment or any hazardous waste generated by the equipment.

2 Components

2.1 Except as indicated in 2.2, a component of a product covered by this standard shall comply with the requirements for that component. See Appendix A for a list of standards covering components used in the products covered by this standard.

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

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

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

2.4 Specific components that are incomplete in construction features or restricted in performance capabilities may be employed if they 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.

3 Units of Measurement

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

4 Undated References

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

5 Glossary

5.1 For the purposes of this standard, the following definitions apply.

5.2 AUTO-IGNITION TEMPERATURE – The minimum temperature at which fuel-air mixtures will ignite spontaneously. This temperature is to be determined either at atmospheric pressure (14.7 psig), or at the maximum pressure present in the area of the fuel-air mixture, whichever is higher. At atmospheric pressure, the auto-ignition temperature of a solvent shall be determined in accordance with the Standard Test Method for Auto-Ignition Temperature of Liquid Chemicals, ASTM E 659.

5.3 COMBUSTIBLE LIQUID – A material that has a fluidity greater than 300 penetration asphalt when tested in accordance with the Standard Test Method for Penetration for Bituminous Materials, ASTM D 5, and that has a closed cup flash point at or above 37.8°C (100°F). Combustible liquids are subdivided as follows:

- a) Class II liquids include those having flash points at or above 37.8°C and below 60°C (140°F);
- b) Class IIIA liquids include those having flash points at or above 60°C and below 93°C (200°F); and
- c) Class IIIB liquids include those having flash points at or above 93°C.

5.4 FLAMMABLE LIQUID – A material that has a fluidity greater than 300 penetration asphalt when tested in accordance with the Standard Test Method for Penetration for Bituminous Materials, ASTM D 5, and that has a closed cup flash point below 37.8°C (100°F) and a vapor pressure not exceeding 2068 mm Hg (40 psia). Flammable liquids are Class I liquids, and are subdivided as follows:

- a) Class IA liquids include those having flash points below 22.8°C (73°F) and having a boiling point below 37.8°C (100°F);
- b) Class IB liquids include those having flash points below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F); and
- c) Class IC liquids include those having flash points at or above 22.8°C (73°F) and below 37.8°C (100°F).

5.5 FLASH POINT – The minimum temperature at which a liquid gives off vapor in sufficient concentration to form an ignitable mixture with air near the surface of the liquid within the vessel as specified by the appropriate test procedure and apparatus as follows:

- a) The flash point of a liquid having a viscosity less than 45 Saybold Universal Seconds (SUS) at 37.8°C (100°F) and a flash point below 93°C (200°F) as determined in accordance with the Standard Test Method for Flash Point by Tag Closed Cup Tester, ANSI/ASTM D 56 Rev A.
- b) The flash point of a liquid having a viscosity of 45 SUS or more at 37.8°C or a flash point of 93°C or higher as determined in accordance with the Standard Test Methods for Flash Point by the Pensky-Martens Closed Cup Tester – IP Designation: 34/99, ANSI/ASTM D 93 Rev A.
- c) The Standard Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus, ASTM D 3278, may be used for paints, enamels, lacquers, varnishes, and related units and their components having flash points between 0°C (32°F) and 110°C (230°F) and having a viscosity lower than 150 centistokes at 25°C (77°F).
- d) The Standard Test Methods for Flash Point by Small Scale Closed Tester – IP Designation: 303/83 (88), ANSI/ASTM D 3828, may be used for materials other than those for which specific setaflash methods exist.

5.6 IGNITABLE MIXTURE – A vapor-air, gas-air, dust-air mixture or combinations of these mixtures that can be ignited by a static spark.

5.7 LINE VOLTAGE CIRCUIT – A circuit involving a potential of not more than 600 V and having circuit characteristics in excess of those of a low voltage circuit.

5.8 LOW VOLTAGE CIRCUIT – A circuit involving a potential of not more than 30 V (42.4 volts peak) and supplied by a primary battery, by a standard Class 2 transformer, or by an impedance which, as a unit, complies with all of the performance requirements for a Class 2 transformer.

5.9 LOWER FLAMMABILITY LIMIT (LFL) – The minimum concentration of vapor in air at which propagation of flame will occur in the presence of an ignition source. LFL is sometimes referred to as LEL, or lower explosive limit.

5.10 SOLUTION – a non-flammable/non-combustible cleaning liquid which has water as its primary content.

5.11 SOLVENT – A flammable or combustible liquid capable of dissolving another substance to form a uniformly dispersed mixture at the molecular or ionic level.

5.12 UNSTABLE LIQUID – A liquid that, in the pure state or as commercially produced or transported, will vigorously polymerize, decompose, undergo condensation reaction, or become self-reactive under conditions of shock, pressure, or temperature.

5.13 VESSEL – A container, tank, or other receptacle intended to contain solvent or other liquids.

CONSTRUCTION

6 General

6.1 Flammable/combustible liquids washers vats, lids, and supporting structures shall be constructed of steel, with a minimum thickness of 1.0 mm (0.04 in). The lid shall comply with the Lid Impact Test, Section 31.

6.2 Flammable/combustible liquids washers shall be provided with a fusible link assembly that will allow the lid to close in the event of a fire. See the Fusible Link Operation Test, Section 29.

6.3 Non-flammable/non-combustible cleaning solutions washers vats and lids may be constructed of a polymeric material or metal. The lid shall comply with the Lid Impact Test, Section 31.

6.4 Non-flammable/non-combustible cleaning solutions washers do not require a fusible link.

7 Solvents

7.1 The flammable/combustible solvents and non-flammable/non-combustible cleaning solutions intended for use with the equipment are to be described in the instruction manual.

7.2 Exemplar Safety Data Sheets (SDS) for the solvents and cleaning solutions intended for use with the equipment shall be supplied with the equipment.

8 Pumps

8.1 General

8.1.1 Submersible Pumps shall comply with 8.2 or 8.3.

8.1.2 Non-submersible electrical pumps motors shall be installed not less than 460 mm (18 inches) above floor level.

Exception: A motor evaluated for use in Class 1, Division 1, Hazardous Locations as defined in the National Electrical Code, NFPA 70, is not required to comply with this requirement.

8.2 Water based solution pumps

8.2.1 Pumps for use with water based solution shall be evaluated to the Standard for Motor-Operated Water Pumps, UL 778.

Exception: Pumps for use with water based solutions and complying with 8.3 are acceptable.

8.2.2 Pumps for use with water based solutions shall be permanently sealed.

8.3 Electric and pneumatic flammable and combustible liquid solvent pumps

8.3.1 Pumps for use with solvents other than water based shall be evaluated to the Standard for Power-Operated Pumps for Petroleum Dispensing Products, UL 79.

9 Supply Connections

9.1 General

9.1.1 Electrically powered parts cleaners shall be connected to a source of supply by either a power supply cord or a permanent connection.

9.1.2 Electrically powered parts cleaners connected by a supply cord shall comply with cord connected products, 9.2. Electrically powered parts cleaners that are permanently connected shall comply with permanently connected products, 9.3.

9.1.3 Electrically powered parts cleaners shall be provided with a connection to ground that complies with Grounding, Section 10.

9.2 Cord connected products

9.2.1 General

9.2.1.1 A cord connected unit shall be provided with a non-detachable cord and a grounding type attachment plug for connection to the supply circuit.

9.2.1.2 The power supply cord shall comply with the requirements of the Standard for Cord Sets and Power Supply Cords, UL 817.

9.2.1.3 The power supply cord shall be at least as serviceable as Type SJ cord and be evaluated for exposure to oil.

9.2.1.4 The power supply cord shall not be rated less than the rated voltage and current of the unit. In addition, the attachment plug shall be rated not less than 125 percent of the rated current of the unit.

9.2.1.5 The maximum length of the power supply cord from the face of the attachment plug to the plane or the connection point to the parts cleaner shall be 2.44 m (8 ft).