

SEMI S13-0113 (Reapproved 0819) ENVIRONMENTAL, HEALTH AND SAFETY GUIDELINE FOR DOCUMENTS PROVIDED TO THE EQUIPMENT USER FOR USE WITH MANUFACTURING EQUIPMENT

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1 Purpose

1.1 This Safety Guideline presents considerations for environmental, health and safety information in documents (such as operation, maintenance, installation and safety manuals) provided for use with manufacturing equipment in order to help reduce risk in operation, maintenance, and installation of equipment.

1.2 It is intended that personnel who operate, maintain, service, install, decontaminate or decommission equipment should read the documents provided to the equipment user that describe the tasks they are to perform.

2 Scope

2.1 This Safety Guideline applies to the documents provided to the equipment user to be used with equipment for production, measurement, assembling, and testing of products.

NOTICE: SEMI Standards and Safety Guidelines do not purport to address all safety issues associated with their use. It is the responsibility of the users of the Documents to establish appropriate safety and health practices, and determine the applicability of regulatory or other limitations prior to use.

3 Limitations

3.1 Evaluation reports are not within the scope of SEMI S13.

3.2 SEMI S13 does not address physical characteristics of documents.

3.3 SEMI S13 does not list all the documentation criteria that might be applicable to the supplier's equipment. There might be additional criteria in appropriate regulations, or standards (including SEMI Standards) to which the equipment supplier intends its equipment conform.

4 Referenced Standards and Documents

4.1 SEMI Standards and Safety Guidelines

SEMI S1 — Safety Guideline for Equipment Safety Labels

SEMI S2 — Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment

SEMI S6 — Environmental, Health, and Safety Guideline for Exhaust Ventilation of Semiconductor Manufacturing Equipment

SEMI S8 — Safety Guideline for Ergonomics Engineering of Semiconductor Manufacturing Equipment

SEMI S10 — Safety Guideline for Risk Assessment and Risk Evaluation Process

SEMI S12 — Environmental, Health, and Safety Guideline for Manufacturing Equipment Decontamination

SEMI S14 — Safety Guideline for Fire Risk Assessment and Mitigation for Semiconductor Manufacturing Equipment

SEMI S16 — Guide for Semiconductor Manufacturing Equipment Design for Reduction of Environmental Impact at End of Life

SEMI S26 — Environmental, Health, and Safety Guideline for FPD Manufacturing System

4.2 ANSI Standard¹

ANSI Z400.1 — American National Standard for Hazardous Industrial Chemicals – Material Safety Data Sheets – Preparation

4.3 ISO Standard²

ISO 12100 — Safety of Machinery — General Principles for Design – Risk Assessment and Risk Reduction

¹ American National Standards Institute, 25 West 43rd Street, New York, NY 10036, USA; Telephone: +1.212.642.4900, Fax: +1.212.398.0023, <http://www.ansi.org>

² International Organization for Standardization, ISO Central Secretariat, BIBC II, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland; Telephone: +41.22.749.01.11, <http://www.iso.org>

4.4 NFPA Standard³

NFPA 704 — Standard System for the Identification of the Hazards of Materials for Emergency Response

4.5 Other Documents

International Labor Convention No. 170 — Convention Concerning Safety in the Use of Chemicals at Work⁴

NOTICE: Unless otherwise indicated, all documents cited shall be the latest published versions.

5 Terminology

5.1 Terminology defined in SEMI S1, SEMI S2, SEMI S6, SEMI S8, SEMI S10, SEMI S12, SEMI S14, SEMI S16, and SEMI S26 is incorporated herein by reference.

5.2 Abbreviations and Acronyms

5.2.1 *EHS* — environment, health, and safety

5.2.2 *MSDS* — material safety data sheet

5.2.3 *PPE* — personal protective equipment

5.3 Definitions

5.3.1 *consumable parts* — parts which are recognized by the equipment supplier as having a useful lifetime which is expected to be significantly less than the lifetime of the equipment.

NOTE 1: Consumable parts include some parts that degrade gradually (such as O-rings) and some that degrade suddenly (such as drive belts).

5.3.2 *decommissioning* — the process of removing equipment from service for disposition by sale, storage, or disposal.

5.3.3 *documents provided to the equipment user* — documents provided by the equipment supplier, such as operation manual, maintenance manual, installation manual, safety manual, or OEM manual, not only printed paper or cleanroom paper but also multimedia information such as CD/DVD or material provided by Internet, which are intended for use with equipment.

5.3.4 *evaluation report* — a report describing the results of an evaluation to determine the conformance of equipment to a SEMI Document.

5.3.5 *hazardous material* — a solid, liquid, or gas that has a degree-of-hazard rating in health, flammability, or reactivity of class 3 or 4 as ranked by NFPA 704.

NOTE 2: Applicable regulations might have definitions of ‘hazardous material,’ or very similar terms, that are defined more broadly than this.

5.3.6 *supporting device* — a device which is prepared to assist in the use of equipment.

5.3.7 *unjamming* — service task used to loosen automated material handler from entanglement.

6 General Criteria of Documents Provided to the Equipment User

6.1 The EHS information needed to perform a task should either be included in the document provided to the user that describes how to perform a task or be provided separately in another document. In latter case, the document provided to the user describing the task should identify where to find EHS information relevant to the task.

6.2 Documents provided to the equipment user should provide specific instructions to enable safe installation, operation, maintenance, decontamination and decommissioning of the equipment.

EXCEPTION: Any procedure that is to be performed only by the equipment supplier’s personnel does not need to be described in the documentation provided to the equipment user.

³ National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269, USA; Telephone: +1.617.770.3000, Fax: +1.617.770.0700, <http://www.nfpa.org>

⁴ International Labour Organization, 4, Route des Morillons CH-1211 Geneva 22, Switzerland; Telephone: +41.22.799.6111, Fax: +41.22.798.8685, <http://www.ilo.org/>