



Standard Terminology Relating to Declarable Substances in Materials¹

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1. Scope

1.1 This terminology standard contains terms, definitions, descriptions of terms, nomenclature, and explanations of acronyms and symbols specifically associated with standards under the jurisdiction of ASTM International Committee F40 on Declarable Substances in Materials.

1.2 This terminology may also be applicable to documents not under the jurisdiction of ASTM F40, in which case this terminology may be referenced in those documents.

2. Referenced Documents

2.1 *ASTM Standards*:²

[E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications](#)

2.2 *Other References*:

[ASTM Dictionary of Engineering Science & Technology](#)³

[ISO 472 Plastics—Vocabulary](#)⁴

[ISO/IEC Guide 2 Standardization and Related Activities—General Vocabulary](#)⁵

[International Vocabulary of Basic and General Terms in Metrology \(VIM\)](#)⁶

[Nomenclature in Evaluation of Analytical Methods Including Detection and Quantification Capabilities](#)⁷

¹ This terminology is under the jurisdiction of ASTM Committee F40 on Declarable Substances in Materials and is the direct responsibility of Subcommittee F40.91 on Terminology.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Sponsored by ASTM Committee E02 on Terminology; available from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959; ASTM Stock Number: DEF00.

⁴ Standard ISO 472 is under the jurisdiction of ISO TC 61 on Plastics and is the direct responsibility of ISO TC 61 SC 1 on Terminology.

⁵ ISO/IEC Guide 2 is under the jurisdiction of the ISO Technical Management Board.

⁶ VIM is under the jurisdiction of the Joint Committee for Guides in Metrology (JCGM) and is the direct responsibility of JCGM-WG2.

⁷ Currie, Lloyd A., *Pure & Applied Chemistry*, Vol 67, No. 10, pp. 1699–1723, 1995, (IUPAC).

3. Significance and Use

3.1 Definitions, acronyms, and units given in Section 4 of this terminology are intended for use in all standards for declarable substances in materials. The definitions shall be used uniformly and consistently. The purpose of this terminology is to promote clear understanding and interpretation of the standards in which those definitions, acronyms, and units are used.

3.2 A terminology section is required in all F40 standards. This section shall contain terms specific to the standard or a reference to this terminology, or both.

3.3 All terms used within a standard that are unique to it shall be defined within the standard. Terms that are of more general application shall be defined in this terminology. If the technical subcommittee responsible for the standard feels that it is appropriate, the term and its definition may appear in both the standard and in this terminology.

3.4 The Subcommittee shall consult the ASTM Dictionary of Engineering Science & Technology or a standard dictionary, or both, prior to creating a new definition to determine if a suitable definition already exists. Other terminology documents, such as ISO 472 Plastics—Vocabulary, may also be consulted.

4. Terminology

absolute method, *n*—*in conformity assessment*, a practice requiring that results are not rounded prior to assessing conformance to limits.

DISCUSSION—For further information on absolute and rounding methods of conformity assessment see Practice E29.

chemical measurement process, *n*—a fully specified analytical method that is in a state of statistical control.

conformity assessment, *n*—any activity concerned with determining directly or indirectly that relevant requirements are fulfilled.

DISCUSSION—Definition comes from ISO/IEC Guide 2.

contaminant, *n*—a substance or material not intended to be present within or on another substance, material or object.

conflict metal, *n*—a metal derived from a conflict mineral sourced from the Democratic Republic of Congo or an adjoining country as defined in the United States by H. R.

4173 (‘Dodd-Frank Wall Street Reform and Consumer Protection Act’), section 1502.

conflict mineral, *n*—a mineral sourced from the Democratic Republic of Congo or an adjoining country as defined in the United States by H. R. 4173 (‘Dodd-Frank Wall Street Reform and Consumer Protection Act’), section 1502.

DISCUSSION—Conflict minerals are identified in section 1502 (opus cit.) as (A) columbite-tantalite (coltan), cassiterite, gold, wolframite, or their derivatives; or (B) any other mineral or its derivatives determined by the Secretary of State to be financing conflict in the Democratic Republic of the Congo or an adjoining country.

conflict mineral free article, *n*—an article not containing conflict minerals (or metals derived from conflict minerals) as defined in the United States by H. R. 4173 (‘Dodd-Frank Wall Street Reform and Consumer Protection Act’), section 1502.

de minimus limit, *n*—from Latin ‘*de minimus*’ meaning of no significant consequence; in regulatory contexts, the maximum amount that evokes no legal consequence, that is, the maximum allowed amount.

detection limit, *n*—the smallest net signal or the derived concentration that can be distinguished from the background signal or blank at a specified confidence level using a specified measurement process.

DISCUSSION—IUPAC definition per Lloyd A. Currie, *Nomenclature in Evaluation of Analytical Methods Including Detection and Quantification Capabilities*.

intentionally added substance, *n*—a chemical element, compound or ion that is purposely included within or on a substance, material or object.

percent by mass, *n*—units expressing the ratio of analyte mass to sample mass multiplied by 100.

DISCUSSION—For expression in SI units, the simple ratio of mass units (for example, mg/kg) is to be preferred over percent by mass. However, percent by mass (also written as % mass or mass %) is commonly used. In addition, the expressions weight % and % by weight are often substituted as synonyms for the more correct % mass. Definition comes from the International Vocabulary of Basic and General Terms in Metrology (VIM).

percent by weight, *n*—see **percent by mass**.

quantification limit, *n*—performance characteristic that marks the ability of a chemical measurement process to adequately “quantify” an analyte.

DISCUSSION—The ability to quantify is generally expressed in terms of the signal or analyte value that will produce estimates having a specified relative standard deviation, commonly 10 %. IUPAC definition per Lloyd A. Currie, *Nomenclature in Evaluation of Analytical Methods Including Detection and Quantification Capabilities*

rare earth elements, *n*—as defined by IUPAC, any of the following seventeen chemical elements: scandium, yttrium, lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium.

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rounding method, *n*—*in conformity assessment*, a practice allowing rounding of results prior to assessing conformance to the conformity assessment limit(s).

DISCUSSION—Results shall not be rounded to a number of decimal places less than those expressed by the conformity assessment limit(s).

substance—a chemical element, compound or ion.

4.1 *Acronyms:*

BFR—Brominated Flame Retardant

CAS—Chemical Abstracts Service

CEFIC—European Chemical Industry Council

CMR—Carcinogenic Mutagenic Reprotoxic

CPSIA—Consumer Product Safety Improvement Act of 2008 (U.S.)

DNEL—Derived No Effect Level

EChA—European Chemicals Association

EC—European Commission

EEC—European Economic Community

EEE—Electrical and Electronic Equipment

ELINCS—European List of Notified Chemical Substances

ELV—End-of-Life Vehicles; refers to European Commission Directive 2000/53/EC on End-of-Life Vehicles

EU—European Union

GCI—Green Chemistry Initiative

GRAS—Generally Recognized as Safe

IUCLID—International Uniform Chemical Information Database

MCV—Maximum Concentration Value; plural is MCVs

MSDS—Material Safety Data Sheet

NES—New and Existing Substances

PAH—Polycyclic Aromatic Hydrocarbon

PBB—Polybrominated Biphenyl

PBDE—Polybrominated Diphenyl Ether

PBT—Persistent Bioaccumulative and Toxic

PCB—Polychlorinated Biphenyl

PWB—Printed Wiring Board

REACH—Registration, Evaluation, Authorization and Restriction of Chemical substances; as originally established in Regulation (EC)No. 1907/2006

REE—Rare Earth Elements

RIP—REACH Implementation Project

SB20—California Senate Bill 20; refers to State of California, USA Bill approved 9/29/2003 entitled Solid waste; hazardous electronic waste

SB50—California Senate Bill 50; refers to State of California, USA bill approved 9/24/2004 entitled Solid waste; hazardous electronic waste: solid waste disposal fees

SCCP—Short Chain Chlorinated Paraffins

SDoC—Supplier Declaration of Conformance

SVHC—Substances of Very High Concern

DISCUSSION—As defined in REACH regulation (article 57).

RoHS—Restriction of Hazardous Substances; refers to European Commission Directive 2002/95/EC on Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment

WEEE—Waste Electrical and Electronic Equipment; refers to European Commission Directive 2002/96/EC on Waste Electrical and Electronic Equipment

5. Keywords

5.1 declarable; definitions; glossary; restricted; terminology

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