OMNICLASS™

A Strategy for Classifying the Built Environment

Table 49 – Properties

Table 49 - Properties

Definition

Properties are characteristics of construction entities. Property definitions gain meaning through reference to one or more construction objects to which they may be applied.

Discussion

Properties serve as modifiers of the objects represented by the contents of other OmniClass tables. As the total number of properties is almost beyond calculation, this table is focused primarily on providing a hierarchical context for organizing and presenting properties. Properties included (as contrasted with property groupings of various levels) have been intentionally limited in number to properties that are common to, or shared by, multiple construction entities. The names of very specific or finely tailored properties that may be unique or specific to individual construction objects do not currently appear in this table, though the organizational structure of this table could be used to classify and organize libraries of property objects regardless of their breadth of possible application.

This table was developed with two key goals in mind: a classification system for properties that would allow for their organization, storage, retrieval, and analysis, and the collection of preferred terms for terminal node property concepts. Where possible, definitions of properties and of upper level property classifications are provided.

Examples

Properties include Color, Width, Length, Thickness, Depth, Inside Diameter, Net Rentable Area, Fire Resistance Rating, Weight, Compressive Strength, Freeze-Thaw Resistance.

Table Uses

To organize property object collections or libraries.

To describe the characteristics of instances of objects, by identifying a classification defined in one of the other tables and modifying it using properties identified in this table.

To define requirements for construction objects.

To compare the characteristics of similar objects.

To classify information resources on subjects relating to factors and properties.

Table Users

All users of any of the OmniClass tables who also need to define properties or requirements.

Technical information library managers, information providers, product manufacturers, designers, specifiers, facility managers, cost estimators, purchasing agents, construction managers, commissioning agents.

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2012 DRAFT OmniClass Table 49 - Properties						
Number	**Level 1 Title**	**Level 2 Title**	**Level 3 Title**	**Level 4 Title**	**Definition**	**Notes and Alternate Terms**
49-11 00 00	**Identification Properties**				Properties that identify objects or provide or enhance metadata about objects.	
49-11 11 00		**Facility Identifications**			Properties that identify a facility by location or other criteria. Refer to Tables 11 and 12 for Facility Types.	
49-11 11 11			**Site ID**		Label used to refer to an area of work, usually incorporating one or more buildings.	
49-11 11 13			**Site Type**		Brief description or classification of a building site.	
49-11 11 15			**Landmark ID**		Brief description or code for a prominent, well-known, or recognizable feature near a building or site.	
49-11 11 17			**Facilities Group**		Label used to refer to a collection or group of buildings.	
49-11 11 19			**Facility Name**		A word or set of words a building is known by.	
49-11 11 21			**Facility Number**		Number or code used for a specific building within a building inventory or general area.	
49-11 11 23			**Street Address**		Number of a specific building on a specified street name, typically assigned by the post office and visible at main entries.	
49-11 11 23 11				Address Suffix	Designator given to an address to denote the general directional properties, typically from a town center.	Typically expressed as N, E, S, W, NE, NW, SE, SW.
49-11 11 23 13				Unit Number	Designator given to a particular unit within a larger structure, typically for apartments, condos or hotels.	Typically expressed as Unit #, apartment, suite.
49-11 11 24			**Street Name**		Identifier used to identify a common road or travel lane on which buildings are located.	
49-11 11 25			**Zip or Postal Code**		Alphanumeric code added to a postal address to define general locations and assist sorting mail.	
49-11 11 27			**Emergency Services Information**		Contact information for public safety organizations assigned to particular buildings and sites.	
49-11 11 27 11				Building Data Access Policy	Procedures and protocols established by building owners to allow or deny access to building data.	
49-11 11 27 13				Facility Monitoring Company	The IP Address or similar of a facility monitoring organization that transmits messages to owners, local jurisdictions, or Public Service Answering Points (PSAP).	
49-11 11 27 15				Public Service Answering Point (PSAP)	A code to identify destination of a 9-1-1 call by their listing in the Federal Communications Commission (FCC) PSAP registry.	
49-11 11 27 17				Agency ID	Name or code for an emergency service organization.	
49-11 11 27 19				Master Street Address Guide (MSAG)	A database that includes street addresses, GPS coordinates, road segments, and similar information beneficial to emergency responders.	
49-11 11 27 21				Emergency Service Number (ESN)	3-5 digit Emergency Service Number associated with street segment, typically defined by the National Emergency Number Association (NENA).	
49-11 11 27 23				Road Segment ID	Unique Road Segment ID number, typically defined by the National Emergency Number Association (NENA) or a Geographic Information System (GIS).	
49-11 31 00		**Space Identifications**			Properties that identify or describe volumes enclosed by surfaces. Refer to Tables 13 and 14 for Space Types.	
49-11 31 11			**Floor Number**		Designation for a building level above or below grade.	
49-11 31 13			**Owner Space Name**		Room or area name designated by the Owner.	
49-11 31 15			**Standard Space Name**		Generic room or area name.	
49-11 31 17			**Owner Space Number**		Room code assigned by the Owner.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-11 31 19			**Space Number**		Room code visible to public, typically on door signs or floor plans.	
49-11 31 21			**Means of Egress**		Exit route through a building.	
49-11 51 00		**Occupancy Identifications**			Properties that identify or describe facility occupants and user groups.	
49-11 51 11			**Occupancy Class**		General categories of structures based on use and hazard, typically defined in local building codes.	
49-11 51 13			**Occupant Organizational Groups**		Brief description or code for people typically using a building or site.	
49-11 51 15			**Occupant Demographics**		Statistical data relating to the population and particular groups that typically use a building or site.	
49-11 51 17			**Animal Occupants**		Yes-No or a brief description for animals that may be found in a building or site.	
49-11 71 00		**Work Result Identifications**			Properties that identify or describe work results or details associated with work results.	
49-11 71 11			**Category**		A class or division of people or things that share particular characteristics.	
49-11 71 13			**Subcategory**		A secondary or more narrow or specific category.	
49-11 71 15			**Version**		A particular form of a material, system, device, computer file or software that differs from an earlier form.	
49-11 71 17			**Material ID Ref**		A software code to reference internal or external materials library.	
49-11 71 19			**Object ID**		A code, typically used in software, to tag unique items (objects) for ease of reference.	
49-11 71 21			**Industry Foundation Class (IFC)**		A class within the IFC data model to describe building and construction industry data.	
49-11 71 23			**International Framework for Dictionaries**		A collection of dictionaries to allow for the creation of multilingual dictionaries or ontologies related to building and construction industry data.	
49-11 71 25			**Label Type**		Describes the class of identifier given to an object or group of objects or things to be identified.	
49-11 71 27			**Radio Frequency ID (RFID)**		An object code to transfer data over radio waves from an electronic tag, called RFID tag or label, through a reader to identify and track the location of physical objects.	
49-11 71 29			**Bar Code Marking**		An optical machine-readable set of parallel lines and spaces with data about products (price, inventory, traceability and similar).	
49-11 71 31			**Tracking Number**		Number (sometimes Alpha-numeric) used to identify an item being tracked.	
49-11 71 33			**Source of Data**		Individual or Organization that created or last updated a file or record.	
49-11 71 35			**Seat Numbers**		Designation for a software license that can be an individual, desk, cubicle, or workstation.	
49-11 71 37			**Referencing Detail**		A symbol to tie dependent views together in a model or set of drawings.	
49-11 71 39			**Current Revision**		The latest revised information set.	
49-11 71 41			**Certified By**		Person or organization who certifies products or information related to a particular project.	
49-11 71 43			**Approved By**		Person or organization who approves products or information related to a particular project.	
49-11 71 45			**Designed By**		Person or organization who designs products or information related to a particular project.	
49-11 71 47			**Checked By**		Person or organization who checks products or information related to a particular project.	
49-11 71 49			**Drawn By**		Person or organization who draws or models information related to a particular project.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-11 71 51			File Path		A file or directory name to specify a unique location in a filing system.	
49-11 71 53			Issued To		Person or organization project information who receives project information.	
49-11 71 55			Issued By		Person or organization project information who prepares or sends project information.	
49-11 81 00		Proprietary Identifications			Properties that specifically identify objects, typically products.	
49-11 81 11			Brand Name		The manufacturer's designation for a product or range of products.	
49-11 81 13			Fabricator Name		The individual or organization that creates a particular work result.	
49-11 81 15			SKU Number		A number or code used to identify each unique product or item for sale in a store or other business.	
49-11 81 17			EAN Number		A barcoding standard which is a superset of the original 12-digit Universal Product Code (UPC) system developed in the United States.	
49-11 81 19			Trademark		Text or image legally registered to represent a specific company or product.	
49-11 81 21			UPC Code		A barcode symbology for tracking trade items in stores. Widely used in North America, the UK, Australia, and New Zealand.	
49-11 91 00		Communication Identifications			Properties that identify or describe information types or exchanges.	
49-11 91 11			URL		Uniform (Universal) Resource Locator, the text used to identify or navigate to a web page.	
49-11 91 13			Internet Country Code		A country code top-level domain (ccTLD) is an Internet top-level domain generally used or reserved for a country, a sovereign state, or a dependent territory.	
49-11 91 15			Telephone Number		A numeric identifier used to contact a specific business or residence via telephone or internet call.	
49-11 91 17			Fax Number		A numeric identifier used to transmit images to or from a specific business or residence via telephone lines.	
49-11 91 19			Email Address		Addresses which follow standard protocols to identify email mailbox where messages are sent or received.	
49-11 91 21			IP Address		An Internet Protocol address is a unique set of identification numbers, delimited by periods, that refers a computer connected to the Internet.	
49-21 00 00	Location Properties				Properties that provide physical location information.	
49-21 11 00		Geographic Locations			Properties that describe positions or points in physical space that an object occupies on the Earth's surface.	
49-21 11 11			Latitude		Angular distance north or south of Earth's equator.	Units: degrees.
49-21 11 13			Longitude		Angular distance on Earth's surface, measured east or west from the prime meridian near Greenwich, England, to the meridian passing through a position.	Units: degrees, minutes and seconds.
49-21 11 15			Altitude		Can refer to either the relative distance above sea level or above ground level (elevation).	Units: feet, miles, meters.
49-21 11 17			State Plane Coordinates		Zoning or coordinate system using Cartesian either transverse Mercator or Lambert conformal conic projections used to specify locations in the United States.	
49-21 11 19			GPS position		Location defined by triangulation to at least four satellites using transit time to each.	Units: latitude and longitude.

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-21 11 21			**WGS84**		GPS reference coordinate system.	Units: latitude and longitude.
49-21 11 23			**Compass Orientation**		Direction with relation to Earth's magnetic poles.	Units: North, South, East, West, and Degrees.
49-21 51 00		**Political / Legal Locations**			Properties that describe positions in relation to nations, national subdivisions, and their relationship to the world.	
49-21 51 11			**Country**		Value representing a country of origin or location.	Is expressed as a two-letter ISO 3166 code.
49-21 51 13			**Region**		An identifier given to a particular area for ease of identification. Usually meant to incorporate different states or provinces with similar geographic locations.	
49-21 51 15			**State / Province**		A state, commonwealth, national subdivision, region, province, prefecture, province, or other such geopolitical subdivision of a country.	
49-21 51 17			**County**		A county, parish, or other such geopolitical subdivision of a state; district. US County Name as given in FIPS 6-4.	
49-21 51 19			**Municipality**		Unique Community ID Number or Geocode. Includes cities, towns, neighborhoods and other local areas.	
49-21 51 21			**Municipality Division**		Can be expressed as city division, borough, district, ward, historic district.	
49-21 51 23			**Authority Having Jurisdiction (AHJ)**		The governmental agency or sub-agency which regulates the construction process. In most cases, this is the municipality in which the building is located. However, construction performed for supra-municipal authorities are usually regulated directly by the owning authority, which becomes the AHJ.	
49-21 51 25			**Zoning District**		Requirements set forth by local government stating the acceptable or approved structures that can be located on a parcel of land.	
49-21 51 27			**Planning District**		Varies by jurisdiction, typically includes local boards with top down or bottom up approaches and governance structures.	
49-21 51 29			**Legal Description**		Property information typically found on a deed, title policy, escrow instructions or contract of sale. Lot surveys are recommended and often required to complete a legal description. Some jurisdictions allow parcel number to be used in place of legal descriptions.	
49-21 51 31			**Land Parcel**		Identifier that refers to a piece of land, with set boundaries, that can be owned or improved upon.	
49-21 71 00		**Manufacturing and Product Locations**			Properties that describe locations in relation to production and distribution of objects or resources.	
49-21 71 11			**Manufacturer Location**		Geographic coordinates, typically relative to a project site, where products are manufactured for a project. May contribute to sustainable design documentation.	
49-21 71 13			**Assembly Location**		Geographic coordinates, typically relative to a project site, where products are assembled for a project. May contribute to sustainable design documentation.	
49-21 71 15			**Warehouse Location**		Geographic coordinates where products are stored by manufacturers, contractors, or owners until sale or installation.	
49-21 71 17			**Product Harvest Location**		Geographic coordinates where natural products such as stone or wood are collected for use by manufacturers or in projects.	
49-21 91 00		**In-Building Locations**				

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-21 91 11			**Ceiling Finish**			
49-21 91 13			**Wall Finish**			
49-21 91 15			**Floor Finish**			
49-41 00 00	**Properties of Time and Money**				Properties relating to scheduling, durations, and cost.	
49-41 31 00		**Time and Scheduling Properties**			Properties when combined that result in a schedule by describing sequences, delivery and cost activities, lifespans, periods of time, and other values.	
49-41 31 11			**Age**		Measurement of the period of time which an object has existed.	
49-41 31 13			**Age Range**		Finite points set to examine or define a particular point in an object's existence.	
49-41 31 15			**Time Span**		Measurement of a period of time, typically utilizing a start and end date, encompassing infinite time increments.	
49-41 31 17			**Time Increment**		Measurement of how to break down units of time. Typically expressed in Seconds, Minutes, Hours, Days, Weeks, Months or Years.	
49-41 31 19			**Elapsed Time**		Measurement of time passed since a set start point.	
49-41 31 21			**Actual Life Span**		Measurement of how long a object or assembly has been performing its task as intended or acceptably.	
49-41 31 23			**Expected Life Span**		Estimated measurement of how long an object or assembly will perform its intended function as intended or acceptably.	
49-41 31 25			**Purchase Date**		Date on which the item(s) in question was secured or procured. This may not be the same as the actual date of payment in the case of invoicing.	
49-41 31 27			**Extraction Date**		Date on which the item(s) in question were obtained. Extraction occurs when an object is taken from another source to be used in another location or in an alternate manner.	
49-41 31 29			**Harvest Date**		Date on which the item(s) in question were farmed. Harvest date typically refers to plant life but may have other implications.	
49-41 31 31			**Manufacture Date**		Date of final assembly.	
49-41 31 33			**Date Updated**		Date of last change.	Typical format: CCYY-MM-DD
49-41 31 35			**Day Type**		Designation used to distinguish between standard weekdays (Monday-Friday), weekends (Saturday and Sunday), and holidays. Typically used for accounting, analysis, or scheduling purposes.	
49-41 31 37			**Manufacturing Lead Time**		Measurement of time between when a product is ready to be assembled and when assembly will complete.	
49-41 31 37 11				Set Up Time	Measurement of time between completion of a manufactured item and completion of the next manufactured item.	
49-41 31 37 14				Run Time	Measurement of time that a particular function is expected to utilize.	
49-41 31 37 17				Process Time	Measurement of time that a particular function utilizes to complete.	
49-41 31 37 21				Idle Time	Measurement of time during which a process or object is not active.	
49-41 31 37 24				Cycle Time	Measurement of time it takes to complete a task and be ready to perform the same task again.	
49-41 31 37 27				Throughput Time	Measurement of time required to bring a product from raw materials into the consumer's hand.	
49-41 31 41			**Ship Date**		Date on which products leave a manufacturer to be shipped to suppliers.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-41 31 41 11				Shipping Time	Measurement of the amount of time required to package item(s) for delivery.	Also expressed as processing time.
49-41 31 41 14				Delivery Time	Measurement of the amount of time required to transport a package from originating point to its intended destination.	
49-41 31 44			**Delivery Date**		Date on which the recipient obtained possession of the item.	
49-41 31 47			**Installation Start Date**		Date on which work to incorporate a product or system is begun.	
49-41 31 51			**Installation End Date**		Date on which work to incorporate a product or system is completed.	
49-41 31 51 11				Setting Time	Measurement of the amount of time required for a material to transition from a plastic or liquid state to a hardened state.	
49-41 31 51 13				Pot Life	Measurement of the amount of time something can be used once the packaging has been pierced.	
49-41 31 51 15				Shelf Life	Measurement of the amount of time a particular item can remain unused and still perform up to expectations.	
49-41 31 51 17				Tack Free Time	Measurement of the amount of time required for a particular substance to become non-tacky.	
49-41 31 51 19				Recoat Time	Measurement of the amount of time required before applying additional layers of a coating.	
49-41 31 51 21				Cure Time	Measurement of the amount of time required for an expected, necessary reaction (usually hardening or adhesiveness in the case of sealants) to occur.	
49-41 31 63			**Site Inspection Date**		Date on which the project area is inspected.	
49-41 31 65			**Site Test Date**		Date on which the product or assembly is tested at the project area.	
49-41 31 67			**Acceptance Date**		Date on which the work (installation, setup and testing) for a product or assembly is verified as complete.	
49-41 31 69			**Commissioning Date**		Date on which the product or assembly is put to use.	
49-41 31 75			**Project Phase**		Collection of logically grouped work done on a project, usually tied to a deliverable.	
49-41 31 75 11				Phase Created	Date or point at which a particular project phase originated.	
49-41 31 75 13				Phase Demolished	Date or point at which a particular project phase ceased.	
49-41 31 77			**Service Response Time**		Measurement of the time between the originating service request and the start of repair or replacement.	
49-41 31 79			**Date Put in Storage**		Date on which an object is shut down, disconnected, and no longer in use but still kept on site or in the possession of the customer.	
49-41 31 81			**Maximum Storage Time**		Measurement of the greatest amount of time an object can be kept prior to use and still be used as intended.	
49-41 31 83			**Operations and Maintenance**		Routine scheduled and unscheduled activities required to provide sufficient support for an object.	
49-41 31 83 11				Depreciation Schedule	A timeline depicting the value loss of an object as it ages.	
49-41 31 83 13				Maintenance Schedule	A timeline depicting the recommended dates for servicing an object.	Sometimes called Produce Maintenance Report.
49-41 31 85			**Decommissioning Date**		Date on which an object or assembly is shut down, disconnected, and no longer in use.	
49-41 31 87			**Demolition Date**		Date on which an object or assembly is destroyed.	
49-41 31 89			**Disposal Date**		Date on which an object or assembly is trashed.	
49-41 31 91			**Recycled Date**		Date on which an object or assembly is reformed and repurposed through recycling.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-41 31 93			**Removal Date**		Date on which an object or assembly is taken from the site for the purposes of relocation, disposal or recycling.	
49-41 61 00		**Cost Properties**			Attributes describing monetary values with relation mainly to products and materials.	
49-41 61 11			**Cost Value**		Price of products or materials usually expressed as a currency value or the cost of producing a unit of a product or material.	
49-41 61 13			**Currency Type**		Units of monetary exchange usually based on a political or economic boundary.	
49-41 61 15			**Unit Price**		Cost of producing a single unit of a product or material.	
49-41 61 17			**Wholesale Cost**		Price of a unit or group of units to an intermediate between the manufacturer and consumer.	
49-41 61 19			**Retail Cost**		An amount of money that stores, or others selling to consumers, charge for a product.	
49-41 61 21			**Manufacturer's Suggested Retail Price**		An amount of money recommended by a manufacturer to stores, or others selling to consumers, to charge for a product.	
49-41 61 23			**Cost Discount**		Either a fixed or percentage decrease in price.	
49-41 61 25			**Shipping Cost**		Price for transporting goods and materials from manufacturer or retailer to an intermediate or to consumer.	
49-41 61 27			**Installation Cost**		Price for placing materials, products, or goods in a project or at the place of use.	
49-41 61 29			**Purchase Terms**		Transaction agreement or contract stipulating conditions, limitations, warranties etc. with regard to payment for a product or material.	
49-61 00 00	**Source Properties**				Attributes describing creation, distribution, or installation of objects, chiefly products or work results.	
49-61 11 00		**Manufacturer Properties**			Properties relating to the creators and distributors of objects, chiefly products.	
49-61 11 11			**Source Limitations**		Properties that relate to the availability of raw materials and/or a manufacturer's ability to satisfactorily produce items on schedule.	
49-61 11 13			**Manufacturer Name**		Word(s) identifying a manufacturer who produces an item or material.	
49-61 11 15			**Manufacturer Experience**		Properties that intimate or convey prior satisfactory work done on similar projects.	
49-61 11 17			**Manufacture Production Rate**		Either the number of units produced within a given amount of time or the amount of time to produce one unit.	
49-61 11 17 11				Management Level		
49-61 11 17 13				Operators Level		
49-61 11 17 15				Controllers Level		
49-61 11 17 17				Field Level		
49-61 11 19			**Designer Name**		Word(s) identifying a person or manufacturer who conceived the product	
49-61 11 21			**Method of Manufacture**		Process used to create the product.	
49-61 11 23			**Manufacturer's Certification**		Document providing assurance that manufacturer meets criteria established by an authoritative body such as ISO, ANSI, etc.	
49-61 41 00		**Product Properties**			Attributes describing goods and materials with regard to harvest/mining, manufacture, and design.	
49-61 41 11			**Product Name**		Either the generic word of a good or material or the brand name of such a thing.	

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49-61 41 13			**Stock or Custom**		Stock design products are fabricated from pre-established plans upon receipt of an order. Stock inventory products are manufactured without a specific order and may be available for immediate shipment. Custom products are fabricated to specific customer requirements.	
49-61 41 15			**In-Stock**		Item generally available for immediate shipment.	
49-61 41 17			**Pre-Assembled**		Products or large portions of work ready to be installed as shipped. Also known as pre-manufactured and pre-fabricated.	
49-61 41 19			**Product Certification**		Document providing assurance that product meets criteria established by an authoritative body or the product meets the criteria established by the contract specifications.	
49-61 41 21			**Packaging**		Container in which items are packed for distribution, storage or sale.	
49-61 41 23			**Level of Quality**		Standard used to rate properties of an item when compared to similar items.	Also expressed as Quality Level.
49-61 41 25			**Grade**		Identifier used to group items based on project scale.	
49-61 41 25 11				Residential	Identifier used to refer to items used in small-scale home construction.	
49-61 41 25 13				Commercial	Identifier used to refer to items used in large-scale industrial construction.	
49-61 41 25 15				Heavy-Duty	Identifier used to refer to specialized products or tools used in various types of construction.	
49-61 41 25 17				Extra Heavy Duty	Identifier used to refer to specialized products or tools used in various types of construction.	
49-61 41 27			**Species**		Identifier assigned to an item, not necessarily biological, that belongs to a group and can be distinguished from others classified in that group.	
49-61 41 29			**Product Construction**		General parameters that describe the makeup/layout of a produced item.	
49-61 41 29 11				Surface Type	Used to describe the visible outer area of an object that is typically exposed to the elements.	
49-61 41 29 13				Backing Type	Used to describe the area of an object that is not typically visible or exposed to the elements.	
49-61 41 31			**Style**		Identifier used to classify something based on aesthetics or function.	
49-61 41 33			**Pattern**		Is a type of theme of recurring events or objects.	
49-61 41 35			**Relief Pattern**		A three dimensional pattern.	
49-61 41 35 11				Relief Pattern Height	Measurement of the distance from a relief pattern to the medium.	
49-61 41 35 13				Relief Pattern Scale	Used to define the size and distance relationships of items in the pattern.	
49-61 41 37			**Perforations**		Holes made in something, sometimes decorative, but typically for ease of tearing.	
49-61 41 39			**Product Enclosure**		Container to enclose a product for protection, as an interface or for esthetic value.	
49-61 41 41			**Product Modifications**		Refers to changes or adjustments made to a particular product, usually in response to industry demand.	
49-61 41 43			**Factory Settings**		Default or original configuration/settings of a product at the time of manufacture.	
49-61 41 45			**Service Access**		Capability to gain access to the inner workings of a product to adjust or repair without damaging the product or enclosure.	
49-61 41 47			**Product Features**		Data referring to the properties of a particular item and how it differs from similar items.	
49-61 41 49			**Accessories**		An optional piece or assembly that accomplishes an additional function.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-61 41 51			**Options**		Refers to factory-made alterations or adjustments performed prior to purchase.	
49-61 41 53			**Color**		The quality of an object or substance with respect to light reflected by the object, usually determined visually by measurement of hue, saturation, and brightness of the reflected light; saturation or chroma; hue.	
49-61 41 53 11				Interior Color	Color of the inside of an object.	
49-61 41 53 13				Exterior Color	Color of the outside of an object.	
49-61 41 53 15				Color Coding	Visual-based classification style which uses color hues to denote different items.	
49-61 41 53 17				Dye Lot	A dye lot is a record taken during the dyeing of material to identify material that received its coloration in the same vat at the same time. Manufacturers assign each lot a unique identification number and stamp it on the label before shipping.	
49-61 41 53 19				Integral Color	Refers to the unfinished (base) color.	
49-61 41 55			**Orientation**		Refers to the positioning of an object with respect to compass location or polarity.	
49-61 41 57			**Finish**		Describes the visible or exposed layer of coating.	
49-61 41 57 11				Finish - Applied	Coating present as a result of work done which does not appear naturally.	
49-61 41 57 13				Finish - Integral	Coating present as a result of nature that has not been altered through work.	
49-61 41 57 15				Face Finish	Visible finish occurring on the visible portion of an object.	
49-61 41 57 17				Field Finishing Material	The substances used to apply finish to an object.	
49-61 41 57 19				Field Finishing Method	The applications or processes used to apply a finish to an object.	
49-61 41 57 21				Texture	Describes the physical characteristics of an item, usually with respect to the tactile feel.	
49-61 41 57 23				Base Finish	Can be expressed as Cove, Straight, Butt To, Sanitary, Traditional, One-Side.	
49-61 41 57 25				Gloss	Is an optical property describing the ability of a surface to reflect light into the specular direction	
49-61 41 57 27				Sheen	Finishes come in a variety of finish Sheen levels, which correspond to different levels of specular reflection.	
49-61 41 57 29				Patina	Refers to the change in color of a surface, usually attributed to or caused by duration of use.	
49-61 41 59			**Treatment**		A broad range of industrial processes that alter the surface of a manufactured item to achieve a certain property.	
49-61 41 59 11				Anti-Microbial Treatment	Substance added to a material or applied to a surface to kill or inhibit the growth of microorganisms such as bacteria, fungi, or protozoans.	
49-61 41 59 13				Pressure Treatment	Processes (also known as timber treatment, lumber treatment) that can extend the life of wood, timber, wood structures or engineered wood. These generally increase the durability and resistance from being destroyed by insects or fungus.	
49-61 41 59 15				Fire Retardant Treatment	Describes a substance applied to a surface or during the manufacturing of an item which provides a measured degree of fire resistance.	
49-61 41 59 17				Herbicide Treatment	Substance added to a material or applied to a surface to used to kill unwanted plants.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-61 41 59 19				Pesticide Treatment	Substance added to a material or applied to a surface intended for preventing, destroying, repelling or mitigating any pest.	
49-61 41 59 21				Anti-Corrosive Treatment	Substance added to a material or applied to a surface to protection the surfaces from corroding in aggressive (corroding) environments.	
49-61 51 00		**Warranty Properties**			Language used that conveys the intent and scope of a warranty.	
49-61 51 11			**Manufacturers Warranty Type**		Designation given to many types of warranties that provides a general description of the scope of the warranty with relation to purchased products.	Can be expressed as Full Warranty, Limited Warranty, Purchase Warranty.
49-61 51 13			**Manufacturers Warranty Terms**		Language used that conveys the specific intent and limitations of the warranty.	
49-61 51 15			**Installers Warranty Type**		Designation given to many types of warranties that provides a general description of the scope of the warranty with relation to installed products.	
49-61 51 17			**Installers Warranty Terms**		Language used that conveys the specific intent and limitations of the warranty.	
49-61 51 19			**Warranty Service Location**		Place where goods covered under warranty are remedied or replaced.	
49-61 51 21			**Warranty Period**		The maximum amount of time before a warranty expires.	
49-61 51 21 11				Warranty Start Date	Set forth in the warranty language, this is the beginning date of warranty coverage.	
49-61 51 21 13				Warranty End Date	Set forth in the warranty language, this is the final date of warranty coverage.	
49-61 71 00		**Shipping Properties**			Properties that relate to distribution.	
49-61 71 11			**Shipping Mode**		Describes the type of vessel used to move the item being shipped.	
49-61 71 13			**Shipper Type**		Describes the type of company used to move the item being shipped.	
49-61 71 15			**Shipping Packaging**		Describes the type of packaging the shipped item is sent and arrives in.	
49-61 71 17			**Delivery Marking**		Describes the procedure taken when receiving a delivery and is often related to inventory control.	
49-61 71 19			**Delivery Terms**		Describes the procedures taken on the part of the deliverer and any limitations on service.	
49-61 81 00		**Installation Properties**			Properties that relate to the use of products in the installation and creation of work results.	
49-61 81 11			**Installation Configuration**		Typically expressed as an image depicting the proper way to set up a product or assembly.	
49-61 81 13			**Surface Preparation**		Work done to ready an area for alteration.	
49-61 81 15			**Installation Method**		Describes the appropriate and intended way to set up a product or assembly within current constraints.	
49-61 81 15 11				Mechanical Attached Method	Installation method detailing how to appropriately install a product or assembly using built-in fasteners or Velcro.	
49-61 81 15 13				Adhered Method	Installation method detailing how to appropriately install a product or assembly using adhesives.	
49-61 81 15 15				Loose-Laid Method	Installation method detailing how to appropriately install a product or assembly by laying the pieces and affixing at the edges.	
49-61 81 15 17				Ballasted Method	Installation method detailing how to appropriately install a product or assembly by utilizing a stabilizing agent such as bars or stone.	
49-61 81 15 19				Adhesive Type Method	Installation method detailing how to appropriately install a product or assembly using adhesives or a stick substance.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-61 81 17			**Fastening Method**		Details how to appropriately affix a specific object to another.	
49-61 81 19			**Fastener Type**		Designates the type of material or tool used to bind a specific object to another.	
49-61 81 21			**Installer Properties**		Properties relating to professional activities of the installer or installation company.	
49-61 81 21 11				Installer Experience	Measurement of the total amount of time the individual has spent on similar, related work.	
49-61 81 21 13				Installer Qualifications	An individual or company's past experience in the field relating to the type of work being done.	
49-61 81 23			**Application Rate**		The amount of substance being used per unit of measure.	
49-61 81 23 11				Theoretical Application Rate	Estimated amount of substance to be used per unit area.	
49-61 81 23 13				Actual Application Rate	Observed amount of substance used per unit area.	
49-61 81 25			**Coverage**		Amount of substance used to enclose or cover a set area.	
49-61 81 25 11				Theoretical Coverage	The estimated amount of material needed to enclose or cover a set area.	
49-61 81 25 13				Actual Coverage	The observed amount of material used to enclose or cover a set area.	
49-61 81 27			**Mounting Method**		Details the proper procedure for affixing one object or assembly to another.	
49-61 81 29			**Joining Method**		Details the proper procedure for affixing two objects or assemblies together.	
49-61 81 29 11				Joint Type	Details the proper type of fastening required to affix two objects together.	
49-61 81 29 13				Seam Type	Details the proper type of binging used to hold two objects together.	
49-61 81 31			**Ambient Temperature during Installation**		Measurement of the temperature (of the air, ground, etc.) around an item being installed.	
49-61 81 33			**Cleaning Method**		Details the proper amount and type of sanitizing or cleaning required.	
49-71 00 00	**Physical Properties**				Properties that describe the physical presentation of an object or that exist within an object by itself or as used, considered, or installed.	
49-71 11 00		**Quantity Properties**			Properties that describe the count or number of components.	
49-71 11 11			**Unit of Measurement**		Refers to the way in which the amount of a substance or item can be broken down and counted in a uniform manner.	
49-71 11 11 11				Metric (S.I.)	The international system of units of measurement devised around seven base units and the base of 10.	Base Units are: meter, kilogram, second, ampere, kelvin, mole, and candela.
49-71 11 11 13				Imperial	Primarily British and American system of units of measurement.	Base Units are numerous and sometimes differ from UK to USA.
49-71 11 11 15			**Single**		Refers to an individual item.	
49-71 11 11 17			**Set**		Refers to a grouping of similar or non-similar items to be used in conjunction or referred to in the same concept.	
49-71 11 11 19			**Pair**		Two items or sets of items that share some characteristics.	
49-71 11 11 21			**Number**		A designator given to identify an item or group of objects for ease of reference or to measure quantity.	
49-71 11 11 23			**Amount of Substance**		The measurable quantity of an item or items.	
49-71 11 11 25			**Concentration**		A measured ratio of mixture often depicted as a percentage of a particular item (or solute) with regards to the overall composition.	
49-71 11 11 27			**Distribution**		Refers to the allocation of items among various categories.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 11 11 29			**Capacity**		Refer to Function and Use and Facility Services for equipment capacities.	
49-71 11 11 31			**Yield**		Percentage of output from a process that passes inspection as good output.	
49-71 11 11 33			**Mean Size**		The averaged measurement of overall girth or extent of an item in a given data set ((X1 + X2 + Xn)/n).	
49-71 11 11 35			**Batch Size**		The quantity of items used or collected to analyze a trend or find an average.	
49-71 11 11 37			**Clearance Requirements**		A defined parameter (measurement or tolerance) set to allow for two or more elements to pass without interference.	
49-71 15 00		**Shape Properties**			Properties that describe the geometric shape of components.	
49-71 15 11			**Form**		Describes the physical layout or configuration of an item.	
49-71 15 13			**Shape**		Describes the geometric layout or configuration of an object.	
49-71 15 15			**Geometry**		Describes the shape and form of an object, usually with respect to mathematical shapes.	
49-71 15 17			**Modular**		Describes the characteristics of an item that can be used to form other items, usually part of a larger assembly.	
49-71 15 19			**Hand - Left or Right**		1. The altering or modifying of a product's shape to ensure proper use or application based on the operator's dominant or preferred hand, eye, or ear. 2. Door handedness: The direction a door swings based on user location (inside or outside of a room) and the location of the handle. 3. Chemical handedness (Chirality): an object that is not superposable on its mirror image.	
49-71 15 21			**Profile**		1. Describes a two-dimensional view of an object. 2. The outline or outer edge of an object being viewed.	
49-71 15 23			**Face**		Refers to the outside surface of an object that will typically be in view.	
49-71 15 25			**Edge**		Refers to the physical outside boundary of an object. Typically expressed using angle measurements.	
49-71 15 27			**Edge Profile**		The shape or contour made from the outside limit of an object, area or surface.	
49-71 15 29			**Vertex**		The pinnacle of a slope or the originating point of an angle.	
49-71 15 31			**Point**		Refers to a particular location, often on a grid or map, usually visually denoted by a dot or point.	
49-71 19 00		**Single Dimensions**			Properties that quantify a specific distance or angle.	
49-71 19 11			**Standard or Custom Size**		Designator given to an item based on its overall dimensions compared to predefined measurements or in stock items.	
49-71 19 13			**Length**		The shortest distance between the ends on a specified point of measure of the material. Usually differentiated from width by being the longer of the two.	
49-71 19 15			**Width**		The shortest distance between the ends on a specified point of measure of the material. Usually differentiated from length by being the shorter of the two.	
49-71 19 17			**Distance**		Refers to the measurement of the space between two points or places.	
49-71 19 19			**Span**		The maximum horizontal distance for supporting constructions for total load.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 19 21			**Height**		The shortest distance between the ends on a specified point of measure of the material. Usually differentiated from length and width by measuring from ground or floor and travelling up.	
49-71 19 21 11				Sill Height	Distance between bottom of opening of doors or windows to adjacent floor or ground.	
49-71 19 21 13				Head Height	Distance between top of opening of doors or windows to adjacent floor or ground.	
49-71 19 23			**Depth**		Refers to the measurement of the space between the surface of an item or substance to the bottom.	
49-71 19 25			**Thickness**		The shortest distance between the lateral surfaces on a specified point of measure of the material.	
49-71 19 25 11				Thickness of Cover	Measurement of the thickness of something with relation to the thing being covered. Useful in excavation to determine how deep to dig.	
49-71 19 25 13				Product Thickness	Measurement of the actual thickness of a product, without regard to packaging materials.	
49-71 19 25 15				Dry Film Thickness	Measurement, expressed in mils, of the thickness of a cured coating.	
49-71 19 25 17				Mean Thickness	The average measured distance between the lateral surfaces on a specific point of a material.	
49-71 19 27			**Gauge**		Measurement used to denote the size or thickness of something or its usefulness with respect to a particular project.	
49-71 19 29			**Radius**		Measurement of the distance from the central point to the outside edge of a circle and always equal to half the diameter.	
49-71 19 31			**Spacing**		Refers to the unused area or distance between two or more objects.	
49-71 23 00		**Area Dimensions**			Properties that quantify the extents of spaces with a 2 dimensional bound.	
49-71 23 11			**Angular Dimensions**		Distance, measured in degrees, between two radii.	Units: degrees.
49-71 23 13			**Arbitrary Dimension**		Distance between two points with no specific correlation or location.	
49-71 23 15			**Net Rentable Area**		Measurement of the area in a building, usually expressed in square footage, that can be leased or rented to occupants. Common areas such as stairwells and maintenance areas are typically excluded from this measurement.	Also expressed as Net Leasable Area.
49-71 23 17			**Floor Area Per Occupant**		Amount of usable square footage allocated for use by a single person (total ft2/number of occupants).	
49-71 23 19			**Floor Area Ratio**		The expression of usable square footage to number of persons occupying the given space.	
49-71 23 21			**Inside Diameter**		Distance along a straight line measured from two opposite points on interior of a hollow sphere or cylinder and that passes through the center of the circle plane.	
49-71 23 23			**Outside Diameter**		Distance along a straight line measured from two opposite points on exterior of a hollow sphere or cylinder and that passes through the center of the circle plane.	
49-71 23 25			**Circumference**		Measurement of the outside edge of a circle.	
49-71 23 27			**Perimeter**		Refers to the visual or conceptual line that forms the outside edge of an area.	
49-71 23 29			**Plane Angle**		Angle formed by two straight lines that share a plane.	
49-71 23 31			**Rise**		The vertical distance traveled along a line between two points.	
49-71 23 33			**Fall**		1. (Action) Descent from a higher to a lower place. 2. (Noun) Measurement of a downward slope.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 23 35			**Slope Angle**		An angle formed by the slope of a line (ratio of change in elevation to the change in distance traveled for two points on a line) using the tangent rule of slope=tanθ.	
49-71 23 37			**Solid Angle**		Is the two-dimensional angle in three-dimensional space that an object subtends at a point.	
49-71 27 00		**Volumes**			Properties that quantify the extents of spaces with a 3 dimensional boundary.	
49-71 27 11			**Fluid Volume**		The measurement of a liquid's overall size or area. Typically measured in fluid ounces (fl. oz.) or cubic milliliters (ml3).	
49-71 27 13			**Dry Volume**		The measurement of a solid's overall size or area. Typically measured in ounces (oz.) or cubic milligrams (mg3).	
49-71 27 15			**Specific Volume**		The ratio of a substance's volume to it's mass or the inverse of its density (v=V/m).	
49-71 27 17			**Volume per Unit Time**		The measurement of volume of (typically) fluid which passes through a given surface per unit time. Often referred to as volumetric flow rate.	
49-71 27 19			**Air Infiltration Volume**		Measurement of the unintended seepage of air into an environment.	
49-71 27 21			**Air Specific Volume**		Measurement of the density of air, dependent upon elevation.	
49-71 27 23			**Water Penetration Volume**		Measurement used to identify the amount of water capable of seeping into an environment.	
49-71 27 25			**Section Modulus**		Relating to both plastic section modulus and elastic section modulus, this is a geometric property assigned to design beams and structural members.	
49-71 27 27			**Second Moment of Area**		Measurement of a beam or support's capability to resist bending and flexing.	
49-71 31 00		**Relational Measurements**			Properties that quantify one measurement in relation to another.	
49-71 31 11			**Acceleration**		Measurement of the increase in velocity of a moving object.	Can be expressed as Feet per second, Kilometers per hour, Miles per hour, etc.
49-71 31 13			**Angular Acceleration**		The rate of change of angular velocity over time.	Measured in radians per second squared.
49-71 31 15			**Aspect Ratio**		The comparison between two dimensions of an object when considered using a specific measurement.	
49-71 31 17			**Dependent Variable**		A number or designator that changes based on the value of other variables. Often mathematically expressed as "y".	Also expressed as response variable.
49-71 31 19			**Dependent Value**		A value that changes based on the value of other variables.	
49-71 31 21			**Frequency**		Measurement of the number of occurrences of an event over a set period of time.	
49-71 31 23			**Relative Age**		A measurement of existence or being comparative to other item(s). Typically measured in units of time.	
49-71 31 25			**Relative Humidity**		Measurement of the ratio of water vapor in the air.	
49-71 31 27			**Relative Power**		A measurement of output or exerted energy comparative to other item(s).	Typically measured in units of Watt or Horsepower.
49-71 31 29			**Relative Range**		A measurement of distance comparative to other item(s). Typically measured in units of length.	
49-71 31 31			**Relative Sound**		A measurement of auditory volume comparative surrounding auditory energy. Typically measured in units of decibel.	
49-71 31 33			**Relative Time**		An observation of events over a duration comparative to other item(s). Typically represented as a ration of time in seconds or other measurements of time.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 31 35			**Rotational Frequency**		The rate at which an object makes a complete trip around a defined axis. Often measured as a result of rotations per unit of time (i.e., RPM).	
49-71 31 37			**Speed**		The rate at which an object travels.	
49-71 31 39			**Unit of Analysis**		The major entity that is being analyzed in a study.	
49-71 31 41			**Velocity**		The speed of something in a given direction	
49-71 31 41 11				Angular Velocity	Rate of change of angular displacement and is a vector quantity (more precisely, a pseudovector) which specifies the angular speed of an object and the axis about which the object is rotating.	Units: radians per second, degrees per second, degrees per hour, etc.
49-71 31 41 13				Relative Velocity	Vector difference between the velocities of two objects, as evaluated in terms of a single coordinate system.	
49-71 35 00		**Properties of Sustainability**			Attributes describing concept of balance between resource consumption and regeneration.	
49-71 35 11			**Building and Material Reuse**		Concept that buildings, portions of buildings, and materials can be reused without remanufacture or use of virgin materials.	
49-71 35 11 11				Salvaged Materials	Construction materials recovered from existing buildings or construction sites and reused in other buildings.	Common salvaged materials include structural beams and posts, flooring, doors, cabinetry, brick, and decorative items. flooring, doors, cabinetry, brick, and decorative items.
49-71 35 11 13				Refurbished Materials	Usually, materials that have been reworked or restored to a working order or to be aesthetically pleasing.	
49-71 35 11 15				Reused Materials	Materials used in one project or location and when no longer needed, may be dismantled and used either for the same purpose in another location or used for a different function but in largely the same form.	
49-71 35 11 17				Existing Walls Reuse	The act of preserving vertical partition and enclosure elements by design and construction with the purpose of reducing the amount of materials and systems needed for a construction project.	
49-71 35 11 19				Existing Floors Reuse	The act of preserving horizontal structure and finish elements by design and construction with the purpose of reducing the amount of materials and systems needed for a construction project.	
49-71 35 11 21				Existing Roof Reuse	The act of preserving the top portion of the structure and weatherproofing by design and construction with the purpose of reducing the amount of materials and systems needed for a construction project.	
49-71 35 13			**Harvest Method**		Procedures to gather materials, usually biological, for use in construction materials, especially crops and timber.	
49-71 35 15			**Extraction Method**		Procedures to gather materials, usually mineral, for use in construction materials especially with regard to mining.	
49-71 35 17			**Recycled Content**		Refers to the amount or ratio of the makeup of something that is made from post-consumer waste.	Typically expressed in percentages.
49-71 35 17 11				Recycled Content by Mass	Portion of a product's material recovered from pre- or post-consumer waste and expressed as a percentage or fraction of the whole quantity of matter.	
49-71 35 17 13				Post-industrial recycled content	Waste that is produced during the manufacturing process that is recycled back into the industrial process.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 35 17 15				Pre-consumer recycled content	Excess material that is separated during manufacturing and repurposed for its original intent.	
49-71 35 17 17				Post-consumer recycled content	Repurposed material which has been sold and used but can no longer be used for its original intent.	
49-71 35 19			**Rapidly Renewable Materials**		Material considered to be an agricultural product, both fiber and animal, that takes ten years or less to grow or raise, and to harvest in an ongoing and sustainable fashion.	Rapidly renewable materials include products made from bamboo, cotton, flax, jute, straw, sunflower seed hulls, vegetable oils, wheat, or wool.
49-71 35 21			**Non-Renewable Materials**		Products typically made from natural materials that, once used, cannot be replaced. Usually used to identify stones, ores, fossil fuels, and some gases.	
49-71 35 23			**Sustainable Product Certification**		Approval that ensures a particular product meets specific criteria with respect to its environmental impact.	
49-71 35 25			**Sustainable Manufacturing Certification**		Approval that ensures a particular manufacturing process meets specific criteria with respect to its environmental impact.	
49-71 35 25 11				Water Intake	Amount of water pulled into a system.	
49-71 35 25 13				VOC Emissions	Amount of Volatile Organic Compounds put off during a process.	
49-71 35 25 15				Recycled Waste	Amount of waste put off during a process which is recycled for later use.	
49-71 35 25 17				Liquid Wastes	Amount of waste put off during a process that is liquid in origin.	
49-71 35 25 19				Air Pollution	Amount of waste put off during a process that is gaseous in origin.	
49-71 35 25 21				Toxic Emissions	Amount of harmful toxic waste put off during a process.	
49-71 35 25 23				Particulate Pollution	Amount of atoms produced during a process that may pollute the atmosphere.	
49-71 35 27			**Life Cycle Analysis (LCA)**		Standard self-certification to be verified by an independent third party.	
49-71 35 27 11				Life Cycle Inventory	An accounting of the energy and waste associated with the creation of a new product through use and disposal.	
49-71 35 27 13				Life Cycle Cost Analysis	Refers to the total cost of owning and maintaining a facility from startup through teardown.	
49-71 35 27 15				Life Cycle Impact Assessment (LCIA)	A gauge of how the life cycle of a project may factor into and change its surroundings.	
49-71 35 27 17				Environmental Impact	A full set of impacts includes land use, resource use, climate change, health effects, acidification, and toxicity.	
49-71 35 27 19				Green House Gas Emissions	Amount of environmentally harmful Green House Gas put off during a process.	
49-71 35 29			**Environmental Product Declaration (EPD)**		Product may have a comprehensive LCA or an EPD for reporting.	
49-71 35 31			**Environmental Footprint of Supply Chain**		A combination of information about a building and site, environmental programs, awards, reorganization.	
49-71 35 33			**Environmental Stewardship**		Responsible planning and management of resources; also known as environmental stewardship.	
49-71 35 35			**Relocatability**		The ability of something to be moved and still used as intended.	
49-71 39 00		**Properties of Chemical Composition**			Factors that relate to the makeup of various chemicals and their impact on a project.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 39 11			**Alloy, Temper**		Heat treatment technique applied to metal to metals, alloys and glass to achieve greater toughness by increasing the strength or materials and/ductility.	
49-71 39 13			**Biodegradability**		Measurement of the amount of time it takes for something to decay through exposure to the elements or proper waste disposal.	
49-71 39 15			**Chemical Aging**		The change in composition of an object or substance through normal exposure to biological or chemical agents.	
49-71 39 15 11				Corrosion Rate	Measurement of the amount of time it takes for something to oxidize.	
49-71 39 15 13				Activation Energy	The energy that must be overcome in order for a chemical reaction to occur.	
49-71 39 15 15				Hydration Rate	1. Measurement of the amount of time it takes for something to absorb water. 2. Measurement of the amount of time it takes for something to water or hydrate another object or substance.	
49-71 39 15 17				Diffusion Rate	The spread of particles through random motion from regions of higher concentration to regions of lower concentration.	
49-71 39 17			**Chemical Composition**		The empirical of a chemical compound that is the simplest positive integer of a atoms of each element present in a compound.	
49-71 39 19			**Compatibility**		The ability of two related or unrelated objects within a system to perform regular functions as intended without substantial additional work.	
49-71 39 21			**Constituent Materials**		Refers to the individual component substances that constitute a composite.	
49-71 39 23			**Ductility**		A solid material's ability to deform under tensile stress.	
49-71 39 25			**Malleability**		A material's ability to deform under compressive stress.	
49-71 39 27			**Solubility**		Measurement of the ability of a substance to dissolve when introduced to another substance.	
49-71 39 29			**Expansion**		Measurement of the amount of growth an object (solid, liquid, or gas) experiences.	
49-71 39 31			**Shrinkage**		Amount or proportion by which something is reduced or contracted.	
49-71 39 33			**Dielectric Constant**		The ratio of the amount of electrical energy stored in a material by an applied voltage, relative to that stored in a vacuum.	Also expressed as relative permittivity.
49-71 39 35			**Galvanic Corrosion**		An electrochemical process in which one metal corrodes preferentially to another when both metals are in electrical contact and immersed in an electrolyte.	
49-71 39 37			**Raw Material**		The basic material from which a product is manufactured or made.	
49-71 39 39			**Odor**		Refers to the classification or description of particles when ingested through olfactory glands.	
49-71 45 00		**Properties of Regulated Content**			Properties that apply to values that are controlled or regulated by a governing body.	
49-71 45 11			**VOC Content**		Measurement of an amount of Volatile Organic Compounds found in a substance or composition of an object.	Typically expressed as a percentage.
49-71 45 13			**VOC Compliance**		Adherence to prescribed code or certification with regards to VOC content of a given material.	
49-71 45 15			**Asbestos Content**		Portion of a product containing materials belonging to a specific set of six naturally occurring silicate materials.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 45 17			**Formaldehyde Content**		Portion of a product containing materials composed of methanol (HCHO).	
49-71 45 19			**Lead Content**		The amount of lead present in a substance or object.	
49-71 45 21			**Radiation Resistance**		Ability to resist radiation.	
49-71 45 23			**Ozone Depletion Content**		Amount of materials present that are harmful to the ozone layer.	
49-71 45 25			**Persistent, Bioaccumulative, and Toxic Pollutants (PBTs)**		Amount of harmful PBTs present.	
49-71 45 27			**Chlorofluorocarbon (CFC) Emissions**		Amount of CFCs present.	
49-71 45 29			**Hydrochlorofluorocarbons (HCFC) Emissions**		Amount of HCFCs present.	
49-71 45 31			**Toxic Content**		The amount of toxic substances present in a substance or object.	
49-71 45 33			**Ecological Toxicity**		Refers to the impact on an ecosystem when toxic impurities are released OR the potential of an item to release toxic impurities into the ecosystem.	
49-71 51 00		**Properties of Temperature**			Properties that apply to Temperature.	
49-71 51 11			**Absolute Temperature**		Scale of measuring temperature of an item with comparison to absolute zero, typically expressed in degrees Kelvin.	
49-71 51 13			**Ambient Temperature**		Common indoor temperature.	
49-71 51 13 11				Ambient Outdoor Temperature	Outdoor temperature, not taking into account wind chill or humidity.	
49-71 51 13 13				Ambient Temperature during Installation	Specified acceptable outdoor temperature range for proper product installation.	
49-71 51 15			**Brittleness Temperature**		Liability of a material to fracture when subjected to stress (temperature).	
49-71 51 17			**Design Temperature**		Indoor temperature range as defined by ASHRAE, building codes, etc.	
49-71 51 19			**Temperature Types**		Categorization given to different temperature values.	
49-71 51 19 11				Condensation Temperature	The temperature and pressure necessary for a gas to become a liquid.	
49-71 51 19 13				Deflection Temperature	A temperature at which a polymer of plastic sample deforms under a specific load.	
49-71 51 19 15				Ground Temperature	Measurement of the temperature of the ground and top layer of soil.	Also expressed as soil temperature.
49-71 51 19 17				Mean Temperature	The average temperature readings of a given area, typically simply an average of minimum and maximum observed temperatures.	
49-71 51 19 19				Thermal Radiation	Electromagnetic radiation generated by the thermal motion of charged particles in matter.	
49-71 51 19 21				Inside Air Temperature	Measurement of the temperature of a room.	Also expressed as room temperature.
49-71 51 19 23				Outside Air Temperature	Measurement of the temperature of an outdoor space.	
49-71 51 19 25				Supply Air Temperature	Temperature of air at room register.	
49-71 51 19 27				Surface Temperature	Physical property of matter that at quantitatively expresses the common notions of hot and cold.	
49-71 51 19 29				Summer Dry Bulb Temperature	Summer ambient air temperature (not affected by humidity). Dry bulb temperature is used as an indicator of heat content. The dry bulb temperature is determined by using data that includes project location.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 51 19 31				Winter Dry Bulb Temperature	Winter ambient air temperature (not affected by humidity). Dry bulb temperature is used as an indicator of heat content. The dry bulb temperature is determined by using data that includes project location.	
49-71 51 19 33				Wet-Bulb (WB) Temperature	An indication of the amount of moisture in the air and measure the temperature achieved by purely evaporative cooling of a water-wetted (or even ice-covered), ventilated surface.	
49-71 51 19 35				Summer Wet Bulb Temperature	Summer temperature of adiabatic saturation (evaporation of water on a thermometer and its cooling effect). The wet bulb temperature is always lower than the dry bulb temperature but identical to 100% relative humidity. The wet bulb temperature is determined by using data that includes project location.	
49-71 51 21			**Temperature Points**		Set values relating to temperature which are useful in monitoring, testing and measurement.	
49-71 51 21 11				Minimum Temperature	Value of the lowest recorded temperature over a given period of time.	
49-71 51 21 13				Maximum Temperature	Value of the highest recorded temperature over a given period of time.	
49-71 51 21 15				Boiling Point Temperature	Temperature at which something begins to boil.	
49-71 51 21 17				Dew Point Temperature	temperature at which air can no longer hold all its water vapor.	
49-71 51 21 19				Flash Point Temperature	Lowest temperature of a volatile material at which it can vaporize to form an ignitable mixture in air.	
49-71 51 21 21				Freezing Point Temperature	Temperature a which water changes from a liquid to solid state.	
49-71 51 21 23				Melting Point Temperature	Temperature at which a substance changes from a solid to a liquid.	
49-71 51 21 25				Cooling Setpoint	Temperature at which the system will maintain the cooling for spaces in the zone.	
49-71 51 21 27				Heating Setpoint	Temperature at which the system will maintain heating for spaces in the zone.	
49-71 51 23			**Temperature Ranges**		Series of points relating to temperature which are useful in monitoring, testing and measurement.	
49-71 51 23 11				Acceptable Temperature Range	Defined or empirically determined range-low to high-that is allowable for the function of an artifact or organism before failure.	
49-71 51 23 13				Cycling Temperature Range	The defined minimum or maximum temperature which turns equipment on or off.	
49-71 51 23 15				Service Temperature Range	The minimum to the maximum operating temperature range.	
49-71 51 23 17				Mean Daily Range	The mean temperature range based on the project location.	
49-71 51 23 19				Delta T	Change in temperature.	
49-71 51 25			**Phase Temperatures**		Temperature or range of temperatures that relate to a specific phase of an object such as solid, liquid, or gas.	
49-71 51 25 11				Phase Transition Temperature	temperature at which a material or liquid changes from one phase or state matter to another.	
49-71 51 25 13				Phase Transition Pressure	Pressure at which a material or liquid changes from one phase or state matter to another.	
49-71 51 25 15				Glass-liquid Transition Temperature	Temperature for the transition of amorphous materials from a hard and relatively brittle state into a molten or rubber-like state.	
49-71 51 25 17				Curie Temperature	The temperature at which a ferromagnetic or a ferrimagnetic material becomes paramagnetic on heating; the effect is reversible.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 51 25 19				Neel Temperature	The temperature above which an antiferromagnetic material becomes paramagnetic-I.E., the thermal energy becomes large enough to destroy the macroscopic magnetic ordering within the material.	
49-71 51 25 21				Triple Point Temperature	The temperature and pressure at which the three phases(gas, liquid and solid) of a substance coexist in thermodynamic equilibrium.	
49-71 51 27			**Temperature Rise**		Increase in temperature by measured units on a thermometer.	
49-71 51 29			**Temperature Interval**		The scale interval for a unit of measurement for temperature.	
49-71 51 31			**Temperature Differential**		Temperature difference between the supply and return of an A/C system.	
49-71 51 33			**Heat Index**		Formula using dry-bulb temperature and relative humidity to determine human comfort.	
49-71 53 00		**Properties of Structural Loading**			Properties that pertain to external forces applied to components.	
49-71 53 11			**Dead Loads**		Static forces that are relatively constant for an extended time.	
49-71 53 13			**Live Loads**		Usually refers to unstable or moving loads.	
49-71 53 13 11				Uniform Design Load		
49-71 53 13 13				Wind Load	Force applied due to windy conditions.	
49-71 53 13 15				Snow Load	Force applied as a result of snow or ice.	
49-71 53 13 17				Horizontal Live Load	Non-static force applied, non-vertically, to a support.	
49-71 53 13 19				Impact Load	Force applied due to vibration or striking.	
49-71 53 13 21				Seismic Load	Horizontal load applied due to earthquakes and tremors.	
49-71 53 13 23				Moving Load	Force applied due to lifting and/or transportation such as loads on bridges or cranes.	
49-71 57 00		**Properties of Air and Other Gases**			Properties that pertain to gasses in the atmosphere.	
49-71 57 11			**Indoor Air Quality (IAQ)**		A measure of the purity of air in a given space.	
49-71 57 13			**Moisture Vapor Transmission Rate**		The measure of the passage of water vapor through a substance.	
49-71 57 15			**Criteria Air Pollutants**			
49-71 57 17			**Carbon Dioxide Level**		Concentration of gas in earth's atmosphere in parts per million.	
49-71 57 19			**Methane Level**		Concentration of gas in earth's atmosphere in parts per million.	
49-71 57 21			**Nitrous Oxide Level**		Concentration of gas in earth's atmosphere in parts per million.	
49-71 57 23			**Smog Level**		Measurement of the amount of smog present in a given atmosphere.	
49-71 57 25			**Visibility**		The measure of the distance at which an object or light can be clearly discerned.	
49-71 63 00		**Properties of Liquids**			Properties that describe and qualify fluids.	
49-71 63 11			**Liquid Concentration**		Concentration of solutions on a parts per million, milligram per liter, molar and normal basis	
49-71 63 13			**Liquid Evaporation Rate**		Vaporization of a liquid that occurs only on the surface of a liquid or by boiling. Rate is determined by liquid, energy, and intermolecular forces.	
49-71 63 15			**Liquid pH**		Measurement of the acidity or alkalinity of a substance.	Typically expressed using the pH scale.
49-71 63 17			**Hygrometric Expansion**		All materials (particularly those of organic origin) expand and contract in relation to their moisture content.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 63 19			**Hygroscopicity**		Ability of a substance to attract and hold water molecules from the surrounding environment.	
49-71 63 21			**Fluid Viscosity**		Measure of the resistance of a fluid which is being deformed by either shear or tensile stress.	
49-71 63 23			**Fluid Density**		Mass per unit volume of a liquid.	
49-71 69 00		**Properties of Mass**			Properties that apply to the weight and amount of matter.	
49-71 69 11			**Mass**		In everyday usage, mass is often referred to as weight, the units of which are often taken to be kilograms.	
49-71 69 11 11				Mass per unit length	Also known as Linear density, linear mass density or linear mass is a measure of mass per unit of length, and it is a characteristic of strings or other one-dimensional objects.	
49-71 69 11 13				Mass per unit area	Also known as Column Density, the mass of substance per unit area integrated along a path, typically a line of sight.	
49-71 69 11 15				Mass per unit time	Measurement of the amount of mass, per a given time unit, that passes through the measuring tool.	
49-71 69 11 17				Molar Mass	A physical property of a given substance (chemical element or chemical compound), namely its mass per amount of substance.	
49-71 69 13			**Weight**		The force on the object due to gravity.	
49-71 69 13 11				Weight Classification	Broad category incorporating a range of weights used to group similarly weighted items.	
49-71 69 13 13				Shipping Weight	Total weight of a package just prior to shipping, including all packaging.	
49-71 69 15			**Density**		Is defined as its mass per unit volume used as a measure of the compactness of a substance. It is commonly expressed as kilograms per cubic meter (kg/m3) or pounds per cubic foot (lb./ft3),	
49-71 69 15 11				Bulk Density	mass of many particles of the material divided by the total volume they occupy.	
49-71 69 15 13				Specific Gravity Density	Numerical value identifying the density of an object.	Numbers equal to 1 are the same density as water. Numbers greater than 1 are denser than water.
49-71 69 15 15				Angular Momentum Density	Measurement of the amount of angular momentum in a system or object.	
49-71 69 15 17				Moment of Inertia Density	Measurement of the amount of resistance to changes in movement or rotation in a system or object.	
49-71 69 15 19				Momentum Density	Measurement of the amount of force to change the momentum of an object or system.	
49-71 69 17			**Specific Gravity**		Specific gravity is the ratio of the density (mass of a unit volume) of a substance to the density (mass of the same unit volume) of a reference substance.	
49-71 69 19			**Momentum**		Calculation of the mass and velocity of an object.	
49-71 69 19 11				Angular Momentum	Vector quantity that can be used to describe the overall state of a physical system.	
49-71 69 21			**Exchange Effectiveness**		Measurement of the effectiveness of an item or substance replaced with a similar substance.	
49-71 69 23			**Initial Moisture Content**		Measurement of the amount of water or water vapor observed in a given atmosphere or object prior to any testing.	
49-71 69 25			**Final Moisture Content**		Measurement of the amount of water or water vapor observed in a given atmosphere or object after testing.	
49-71 73 00		**Properties of Force**			Properties which cause a mass to change velocity or direction.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 73 11			**Force, General Properties**		Commonly used force properties.	
49-71 73 13			**Applied Forces**		Forces currently in use or stressing an object or material.	
49-71 73 15			**Force Per Unit Length**		Measurement of the amount of force per measured unit.	
49-71 73 17			**Surface Tension**		Amount of pressure a surface can withstand without fracturing.	
49-71 73 19			**Thrust to Mass Ratio**		Amount of pressure exerted during thrust vs. the mass of the object thrusting.	
49-71 73 21			**Viscosity**		Measure of the ability of a material to provide lubrication and not break down.	
49-71 73 21 11				Dynamic Viscosity	The most encountered form of viscosity coefficient defining.	Also known as absolute viscosity.
49-71 73 21 13				Kinematic Viscosity	Dynamic Viscosity divided by the density of the substance or object.	
49-71 73 23			**Moment of Force**		The tendency of a force to twist or rotate an object.	
49-71 73 25			**Moment of Inertia**		Measure of an object's resistance to changes to its rotation.	
49-71 73 27			**Torque**		The tendency of a force to rotate an object about a point.	
49-71 73 29			**Electromotive Force**		Refers to voltage generated by a battery or by magnetic force.	Typically measured in volts.
49-71 75 00		**Properties of Pressure**			Properties that relate to forces applied to a unit area of surface.	
49-71 75 11			**Absolute Pressure**		Force per unit area applied in a direction perpendicular to the surface of an object.	
49-71 75 13			**Air Pressure**		Measurement of the amount of force applied to an object or system from the surrounding air or air in a container.	Also known as atmospheric pressure.
49-71 75 13 11				Cyclic Static Air Pressure		
49-71 75 13 13				Uniform Static Air Pressure		
49-71 75 15			**Ambient Pressure**		The pressure of the surrounding medium which comes into contact with the object.	
49-71 75 17			**Applied Pressures**		The pressure used to accomplish something, typically to force liquids and gases through channels.	
49-71 75 19			**Atmospheric Pressure**		Measurement of the amount of force applied to an object or system from the surrounding atmosphere or atmosphere in a container.	Also known as air pressure.
49-71 75 21			**Calibrated Pressure**		Pressure which is measured and levied in set levels to accomplish a task or for storage.	
49-71 75 23			**Design Pressure**		Target pressure that an object or system is designed to resist or retain.	
49-71 75 25			**Gage Pressure**		The pressure relative to the local atmospheric or ambient pressure.	
49-71 75 27			**Leakage Under Pressure**		Measurement of the amount of a substance that escapes when under pressure. Usually relates to the containment of the substance.	
49-71 75 29			**Residual Pressure**		Pressure which is left over after some type of pressure release.	
49-71 75 31			**Static Pressure**		Pressure exerted on an object or container when the substance in question is not moving.	
49-71 75 33			**Static Pressure Differential**		Difference between points of static pressure.	
49-71 75 35			**Pressure Drop**		Measurement of the decrease in pressure in a system or container.	
49-71 75 37			**Vacuum Pressure**		Measurement of pressure in a closed loop system.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-71 75 39			Vapor Pressure		The pressure exerted by a vapor in thermodynamic equilibrium with its condensed phases (solid or liquid) at a given temperature in a closed system.	
49-71 75 41			Wind Pressure		Pressure exerted on an object or container by wind that is moving.	
49-71 81 00		Properties of Magnetism			Properties which quantify and qualify attractive and repulsive (magnetic) forces.	
49-71 81 11			Magnetic Flux		Measure of the magnetic field strength existing on a two dimensional surface.	
49-71 81 13			Magnetic Vector Potential		Used to calculate electromagnetism and defined such that the curl of the vector potential is the magnetic field.	Often expressed as Vector Potential.
49-71 81 15			Magnetic Permeance		SI unit "webers per ampere-turn" The quantity of flux for a number of current-turns in a magnetic circuit.	
49-71 81 17			Mutual Inductance		Voltage induced in one electrical circuit by the rate of change of the electric current in another circuit.	
49-71 81 19			Magnetic Potential Difference		Measure of the magnetism of an object, calculated using different voltage charges applied to ions during testing.	
49-71 81 21			Magnetomotive Force		Any physical driving (motive) force that produces magnetic flux.	
49-71 81 23			Magnetic Induction		Production of an electric current across a conductor moving through a magnetic field.	
49-71 91 00		Environmental Properties			Properties that relate to soil, land and troposphere.	
49-71 91 11			Seismic Classification		Used to calculate and compare the severity of earthquakes. Two commonly used scales: magnitude and intensity.	
49-71 91 13			Design Criteria		Refer to the Information Table.	
49-71 91 15			Wind Speed		Refers to a measurement of the motion of air.	
49-71 91 17			Climate Class		Refers to various conditions, including temperature, precipitation, wind, and vegetation common in a particular region.	
49-71 91 19			Ozone Concentration		Refers to the amount of trioxygen (ozone) present in a given environment.	
49-71 91 21			Land Features		A geomorphological unit defined by its surface form and location in the landscape-an element of typography.	
49-71 91 23			Water Body Type		May be fresh or salt water, be moving or contained and vary in size and form.	
49-81 00 00	Performance Properties				Properties that express the behavior of an object in reaction to physical properties and forces.	
49-81 11 00		Testing Properties			Properties that define testing methods and conditions.	
49-81 11 11			Test Method		Describes the type of test to be performed.	
49-81 11 13			Test Authority		Designates the originator of the test or the standard to which the test results are held.	
49-81 11 15			Pre-Test Conditions		Refers to the state of an object being tested prior to any testing being performed.	
49-81 11 17			Test Conditions		Describes the environment and other factors which influence the test OR the testing environment needed to accurately perform the test.	
49-81 11 19			Reference Standard		Accepted results that are incorporated into standards to create a minimum standard of quality.	
49-81 11 21			Inspection Protocol		Rules and procedures governing inspection and investigation of systems or work.	
49-81 11 23			Factory Testing		Quality testing performed before release of the product to the public.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-81 11 23 11				Factory Inspection Method	Rules and procedures governing inspection and investigation of systems before leaving the manufacturing plant.	
49-81 11 23 13				Factory Test Date	Date on which manufacturer testing was done.	
49-81 11 23 15				Factory Test Method	Rules and procedures governing testing of systems before leaving the manufacturing plant.	
49-81 11 23 17				Factory Level of Compliance	Designation set by the manufacturer relating to conformance to quality.	
49-81 11 23 19				Factory Reference Grade	Designator set by the manufacturer describing the quality of the product for a job size.	
49-81 11 25			**Field Testing**		Quality testing performed on site before completion of the project.	
49-81 11 25 11				Field Inspection Method	Rules and procedures governing inspection and investigation of systems on the job site.	
49-81 11 25 13				Field Test Method	Rules and procedures governing testing of systems on the job site.	
49-81 11 25 15				Field Level of Compliance	Designation set by the field tester relating to conformance to manufacturer quality.	
49-81 11 25 17				Field Reference Grade	Designator set by the field tester describing the quality of the product for a job size.	
49-81 15 00		**Tolerance Properties**			Properties that define permissible limits or variations in limit of dimensional and other measured properties.	
49-81 15 11			**Deflection Tolerance**		Measurement of an object or substance to withstand deflection erosion or break down.	
49-81 15 13			**Dimensional Tolerance**		An allowed deviation in size for a manufactured item to still function properly with all other parts.	
49-81 15 13 11				Flatness Tolerance	A specific size range with respect to flatness that an item must fall within in order to be used properly.	
49-81 15 13 13				Length Tolerance	A specific size range with respect to length that an item must fall within in order to be used properly.	
49-81 15 13 15				Thickness Tolerance	A specific size range with respect to thickness that an item must fall within in order to be used properly.	
49-81 15 13 17				Warp Tolerance	A specific size range that an object may warp and still be used properly.	
49-81 15 13 19				Width Tolerance	A specific size range with respect to width that an item must fall within in order to be used properly.	
49-81 15 13 21				Camber	Angle or angles relating to the position or creation of an object.	
49-81 15 15			**Shape Tolerance**		A range of acceptable deviations from the creation intent of an item.	
49-81 15 17			**Installation Tolerance**		A range of acceptable deviations from installation intent.	
49-81 15 19			**Plumbness**		Property of being perfectly vertical or perpendicular to the earth.	
49-81 15 21			**Squareness**		Shaped like a square.	
49-81 15 23			**Levelness**		Property of being level or parallel to the earth.	
49-81 15 25			**Texture Tolerance**		A range of acceptable deviations from texture intent.	
49-81 21 00		**Function and Use Properties**			Properties that define aspects of functionality and characteristics of the object for a particular service.	
49-81 21 11			**Functional Efficiency**		The ability to perform a regular function including the state or quality of competency in performance.	
49-81 21 13			**Functional Limitations**		Circumstances, restrictions, or constraints on the ability to perform a regular function.	
49-81 21 15			**Method of Operation**		Manner in which a product or system is to be used.	
49-81 21 15 11				Manual Operation	A product or system controlled by hand.	
49-81 21 15 13				Electric Operation	A product or system controlled by electricity, typically an electric motor.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-81 21 15 15				Pneumatic Operation	A product or system controlled by air or gas under pressure.	
49-81 21 17			**Functional Capacity**		Refers to the capability of something to complete a certain task.	
49-81 21 17 11				Maximum Occupancy	The highest number of people a space, facility, or site is permitted to contain, typically per the local fire marshal.	
49-81 21 17 13				Operational Capacity	Refers to the maximum number of people a structure may house or the maximum amount of tasks something can perform without reduction in speed or degradation in quality.	
49-81 21 17 15				Rated Capacity	The maximum load a system or device is designed to support safely.	
49-81 21 17 17				Breaking Capacity	The current a fuse, circuit breaker, or other electrical apparatus is able to interrupt without being destroyed or causing an electric arc with unacceptable duration.	
49-81 21 17 19				Cyclic Capacity	Loads related to reoccurring cycles.	
49-81 21 19			**Code Performance**		Refers to the capability of an item or service to comply with federal, state, and local laws.	
49-81 21 21			**Coverage Rate**		The manufacturer's estimated extents their products or systems can be installed or implemented.	
49-81 21 23			**Ease of**		Measurement of the ability to use something, often the inverse of the difficulty.	
49-81 21 23 11				Ease of adding on	Products, services or facilities that are simple to extend or expand.	
49-81 21 23 13				Ease of application	1. Refers to the ability of a coating to be spread on a surface with minimal effort. 2. Refers to the ability of a service to be incorporated into normal work with minimal effort.	
49-81 21 23 15				Ease of assembly	Products or services that are simple to put together for a common purpose.	
49-81 21 23 17				Ease of installation	Products or services that are simple to place or fix in position ready for use.	
49-81 21 23 19				Ease of moving	Refers to the capability of an object to be pushed, pulled, rolled, slid or swung.	
49-81 21 23 21				Ease of placing	Products or services that are simple to install or place.	
49-81 21 23 23				Ease of relocation	Refers to the capability of an object to be moved from one designated spot to another.	
49-81 21 23 25				Ease of removal	Products or services that are simple to de-install.	
49-81 21 23 27				Ease of storing	Products or services that are simple to keep in a warehouse.	
49-81 21 25			**Serviceability**		Conditions for planned use.	
49-81 21 27			**Suitability**		Properties for a specific purpose.	
49-81 21 27 11				Suitable for Exterior Exposure	Products or services appropriate for outside use.	
49-81 21 27 13				Suitable for Continuous Immersion	Product or services appropriate for continuous exposure to water.	
49-81 21 27 15				Suitable for Ground Contact	Products or services appropriate for below or at grade applications.	
49-81 21 27 17				Suitable for Marine Use	Products or services appropriate for corrosive, salt, or sea water exposure.	
49-81 21 29			**Workability**		Refers to the capability and feasibility of an object to be put to use.	
49-81 21 31			**Weatherability**		Resistance properties for heat, moisture, cold, solar radiation, etc.	
49-81 21 33			**Waste Produced in Use**		Properties of generating excess materials or services.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-81 31 00		**Strength Properties**			Properties that define ability of an object to resist applied force.	
49-81 31 11			**Adhesion Strength**		Measurement of the amount of force a bonding agent can withstand.	
49-81 31 13			**Bendability**		Measurement of the flexibility of an object.	
49-81 31 15			**Bending Moment**		Point in time which a bending or twisting force is applied to an object.	
49-81 31 17			**Bending Radius**		Measurement of the minimum amount an object can be twisted or bent without permanent damage.	
49-81 31 19			**Bending Strength**		Material's ability to resist deformation under load.	Also sometimes called flexural strength.
49-81 31 21			**Bond Strength**		Measurement of the amount of force an adhesive can take before giving way.	
49-81 31 23			**Compressibility**		Ability to be made smaller through condensing.	
49-81 31 25			**Compressive Resistance**		Ability to withstand shrinkage due to climate changes.	
49-81 31 27			**Compressive Strength**		Ability to withstand crushing force.	
49-81 31 29			**Creep Resistance**		Ability to withstand deformation or movement while under stress.	
49-81 31 31			**Ductility**		Measurement of a solid material's ability to be stretched or deformed without breakage.	
49-81 31 33			**Elasticity**		Measurement of a substance or object's ability to return to its original shape after deformation or movement.	
49-81 31 35			**Elongation**		Measurement of the lengthening of an object under stress.	
49-81 31 35 11				Elongation at Yield	Measurement of the difference between the original length of an object and the point at which stress does not increase with strain.	
49-81 31 35 13				Ultimate Elongation	Measurement of the lengthening of an object under stress, as compared to the original length of the object.	
49-81 31 37			**Fastener Pullout Resistance**		Measurement of the ability of a fastener to resist loosening or being pried away.	
49-81 31 39			**Fatigue Strength**		Measurement of the materials ability to resist brittle cracking that can occur under stress.	
49-81 31 41			**Fiber Strength**		Measurement of the ability of a material to resist frays.	
49-81 31 43			**Flexural Strength**		A material's ability to resist deformation under load.	
49-81 31 43 11				Flexural Strength, parallel	Measurement of the force a material can withstand when the materials are parallel to the force being applied.	
49-81 31 43 13				Flexural Strength, perpendicular	Measurement of the force a material can withstand when the materials are parallel to the force being applied.	
49-81 31 45			**Fracture Energy**		Measurement of the energy used to cause a crack or break.	
49-81 31 47			**Fracture Toughness**		Measurement of a cracked or weakened substance to resist crack or breakage.	
49-81 31 49			**Friction**		Measurement of the resistance created when one object moves or slides against another.	
49-81 31 51			**Hardness**		Measurement of an object's ability to resist pressure or scratching.	
49-81 31 53			**Impact Strength**		Measurement of an object's ability to resist sudden shock or force without breakage or destruction.	
49-81 31 55			**Resistance to Intentional Attack**		Measurement of the ability to withstand damage or theft.	
49-81 31 55 11				Theft Resistance	Measurement of the ability to withstand larceny.	
49-81 31 55 13				Ballistic Resistance	Measurement of the ability to withstand ballistics.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-81 31 55 15				Blast Resistance	Measurement of the ability to withstand the force of an explosion.	
49-81 31 55 17				Bullet Resistance	Measurement of the ability to withstand force of bullets by radiating kinetic energy rapidly and not allowing the object to pass through.	
49-81 31 57			**Magnetic Field Strength**		Measurement of the ability of a magnetic field to move a polarized object.	
49-81 31 59			**Modulus of Elasticity**		Measurement of an object's ability to bend or flex when force is applied, while still being able to return to its original shape. Expressed mathematically as "λ"≝stress/strain.	
49-81 31 61			**Peel Strength**		Measurement of the amount of force required to separate a flexible item or substance from something to which it is adhered.	
49-81 31 63			**Proportional Limit**		When force is applied to an object, the point at which stress is no longer proportionate to strain.	
49-81 31 65			**Puncture Resistance**		Measurement of an object's ability to withstand holes or perforations typically made with sharp objects.	
49-81 31 65 11				Static Puncture Resistance	Measurement of an object's ability to withstand holes or perforations caused by continuous, similar, pressures or abuse.	
49-81 31 65 13				Dynamic Puncture Resistance	Measurement of an object's ability to withstand holes or perforations caused by unpredictable or varying pressures or abuse.	
49-81 31 67			**Release Strength**		Measurement of the amount of energy needed to release or detach something.	Typically expressed in Pounds per Square Inch (PSI).
49-81 31 69			**Shear Strength**		Measurement of the amount of force required to cause breakage or fracture when applied perpendicular to an object.	
49-81 31 71			**Stiffness**		Measurement of the ability of an object to resist bending or compression.	
49-81 31 73			**Strain**		Damaging force or twisting of an object.	
49-81 31 75			**Stress**		Force or twisting of an object.	
49-81 31 77			**Stress Rating**		Measurement of the speed at which force or twisting is applied to an object.	
49-81 31 79			**Surface Tension**		Measurement of the ability of a liquid to resist force of another substance.	
49-81 31 81			**Tear Resistance**		Measurement of the ability of an object or substance to withstand ripping.	
49-81 31 83			**Tear Strength**		Measurement of the force required to rip an object or substance.	
49-81 31 85			**Tensile Strength**		Measurement of the ability of an object or substance to withstand breakage apart under applied force.	
49-81 31 87			**Ultimate Strength**		Maximum amount of force an object or substance can withstand before breakage.	
49-81 31 89			**Uniform Wind Load Resistance**		Measurement of the amount of wind force an object can withstand before permanent damage.	
49-81 31 91			**Vibration**		Movement of an object caused by movement of internal or connected object(s) or substance(s).	
49-81 31 93			**Wind Uplift Resistance**		Measurement of the amount of vertical pressure caused by wind force that an object can withstand before being pulled away from its intended place.	
49-81 31 95			**Yield Strength**		Measurement of the point at which the force put on an object is greater than its modulus of elasticity. At this point, pressure applied to the object is greater than that which would allow it to revert to its original shape or form.	
49-81 41 00		**Durability Properties**			Properties that define ability of an object to maintain resistance to the effects of applied force.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-81 41 11			Abrasion Resistance		Able to withstand force or friction.	
49-81 41 13			Abuse Resistance		Able to withstand impacts or malicious tampering.	
49-81 41 15			Acid Resistance		Able to withstand corrosive chemicals.	
49-81 41 17			Alkali Resistance		Able to withstand caustic chemicals.	
49-81 41 19			Animal Resistance		Able to withstand attacks, penetration, and habitation by various types of fauna.	
49-81 41 21			Bacteria Resistance		Able to withstand microorganisms.	
49-81 41 23			Chemical Resistance		Able to withstand synthetic materials.	
49-81 41 25			Corrosion Resistance		Able to withstand salt water, dissimilar metals, rust, oxidation and similar effects.	
49-81 41 27			Crack Resistance		Able to withstand pressure or impacts without rupturing.	
49-81 41 29			Decay Resistance		Able to withstand deterioration.	
49-81 41 31			Degradation Resistance		Able to withstand less than ideal conditions.	
49-81 41 33			Delamination Rate		Measurement of the pace at which composite or concrete materials begin to separate their layers.	
49-81 41 35			Fade Resistance		Able to withstand loss of color or saturation due to ultraviolet light or similar causes.	
49-81 41 37			Fatigue Resistance		Able to withstand heavy duty use without compromise or failure.	
49-81 41 39			Friction Coefficient		Value which describes the ratio of the force of friction between two bodies and the force pressing them together.	Also expressed as coefficient of friction (COF) and frictional coefficient.
49-81 41 41			Fungus Resistance		Will not support growth or life of spore-producing organisms feeding on organic matter.	
49-81 41 43			Impact Resistance		Able to withstand collisions, crashes, and hits.	
49-81 41 45			Indentation Resistance		Able to withstand impacts without compromising finished surfaces.	
49-81 41 47			Infrared Resistance		Able to withstand exposure to radiation and light.	
49-81 41 49			Insect Resistance		Will not support growth or life of bugs.	
49-81 41 51			Lubricity		Slippery or smooth.	
49-81 41 53			Maintenance Durability		Able to prolong service life through upkeep.	
49-81 41 55			Mechanical Durability		Able to operate for a long time without loss of performance.	
49-81 41 57			Microorganism Resistance		Able to withstand bacteria.	
49-81 41 59			Mildew Resistance		Containing inhibitors and fungicide to prevent growth.	
49-81 41 61			Ozone Resistance		Able to withstand exposure to atmospheric gasses.	
49-81 41 63			Plant growth Resistance		Will not support growth or life of flora.	
49-81 41 65			Stain Resistance		Able to withstand or prevent patches or marks that are not easily removed.	
49-81 41 67			Termite Resistance		Treatment, typically for wood, to prevent infestation.	
49-81 41 69			Thermal Shock Resistance		Will not crack due to rapid temperature change.	
49-81 41 71			Ultraviolet (UV) Resistance		Able to withstand electromagnetic radiation with a wavelength shorter than visible light, and longer than X-rays.	
49-81 41 73			Wear Coefficient		Value typically represented with "K" determined by calculating volume, hardness, loads, and sliding distances.	
49-81 41 75			Wear Rate		Vi =ki F s. where F is the normal load, s the sliding distance, Vi the wear volume and ki the specific wear rate coefficient.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-81 51 00		**Combustion Properties**			Properties that define the burning or oxidation of a substance, in gaseous, liquid, or solid form and the results of such burn.	
49-81 51 11			**Artificial Heat Source**		Able to raise temperatures through chemical action, fuels, or energy.	
49-81 51 13			**Combustibility**		Capable of igniting and burning.	
49-81 51 15			**Fire Resistance Rating**		The duration a material or system can withstand standard tests.	
49-81 51 17			**Fire Severity**		Refers to the amount of damage caused by a fire in a given area.	
49-81 51 19			**Fire Source**		Process or event capable of causing a fire or explosion. sparks, static electricity, and hot surfaces are all possible ignition sources.	
49-81 51 21			**Fire Type**		One of five categories classifying the fuel used to begin or sustain a fire. These assist firefighters in finding the correct type of extinguishing agent. Class A: ordinary combustibles; Class B: flammable liquids; Class C: flammable agents; Class D: combustible metals; Class K: cooking oil or fats.	Also expressed as fire class.
49-81 51 23			**Flame Propagation**		Measurement of the spread of flame from its origin.	
49-81 51 25			**Flame Spread Index**		Classification method for measuring the propagation of fire on a scale from 0 to 100 where asbestos-cement board has a value of 0 and red oak wood has a value of 100.	
49-81 51 27			**Flammability**		Describes how easily something will burn.	
49-81 51 29			**Ignitibility**		Describes how easily something will ignite.	
49-81 51 31			**Heat Release Rate**		The amount of energy (fire intensity) released by burning materials.	
49-81 51 33			**Smoke Density**		Describes the concentration of smoke produced, by burning something, in a given atmosphere.	
49-81 51 35			**Smoke Developed Index**		Classification method for measuring the concentration of smoke emitted by a burning material. This is based on a scale of 0 to 100 where asbestos-cement board has a value of 0 and red oak wood has a value of 100.	
49-81 51 36			**Smoke Developed Rating**		Numeric value assigned to measure the concentration of smoke emitted by a burning material; for use with the smoke developed index.	
49-81 51 37			**Smoke Produced**		Measurement of the amount and potency of smoke output.	
49-81 51 39			**Surface Burning Characteristics**		A ranking derived by laboratory standard test methodology of a material's propensity to burn rapidly and spread flames.	Also expressed as flame spread.
49-81 51 41			**Explosion Proof**		Refers to an item intended to resist explosion or resist causing an explosion.	Changed from Explosion Resistant
49-81 51 43			**Fire Resistance**		Refers to the degree of which something is able to withstand or resist burning or ignition.	
49-81 51 45			**Ignition Resistance**		Materials that will not catch fire in accordance with standard tests such as ASTM E84.	
49-81 51 47			**Critical Radiant Flux**		The numeric value assigned to a material when tested in accordance with ASTM E–648 by an independent laboratory.	
49-81 61 00		**Properties of the Envelope**			Properties Between Inside and Outside Environment. Refer to other categories for Structural, Moisture/Permeability, Combustion and Fire Resistance, Acoustics, Impact Resistance.	
49-81 61 11			**Absorptance**		Measurement of the ability of an object to absorb radiation.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-81 61 13			**Air Infiltration**		Measurement of the ability of air to permeate a given area.	
49-81 61 15			**Air Tightness**		Not allowing air to pass through or permeate.	
49-81 61 17			**Air Leakage**		Measurement of the amount of air seeping out of a given area.	
49-81 61 19			**Water Penetration**		Measurement of the ability of water to permeate a given area.	
49-81 61 21			**Condensation Resistance Factor (CRF)**		Determined by the manufacturer and expressed in values from 0 to 100.	
49-81 61 23			**R-Value**		Related to one component, relative but not specific to an assembly. Ratio of the temperature difference across an insulator and the heat flux (heat flow per unit area,) through it .	
49-81 61 25			**R-Value Système International (RSI)**		A measure of thermal resistance in SI units.	
49-81 61 27			**U-Value**		Overall conductance. Thermal resistance of entire assembly including outside and inside, fenestration, and percentage of openings. Sometimes called U-Factor.	
49-81 61 29			**USI**		Metric U-Value. Inverse of RSI.	
49-81 61 31			**Insulation Density**		Measurement of the substantiality of insulation. This relates heavily to the R-value of the insulation.	
49-81 61 33			**Insulation Profile**		Refers to the general shape of a piece of insulation or insulation assembly.	
49-81 61 33 11				Tapered	Shaped in such a way as to gradually narrow or become smaller.	
49-81 61 33 13				Flat	Shaped in such a way as to provide the most consistent R-value across a given area.	
49-81 61 35			**Properties of Openings**		Descriptors that provide information about various access points and holes.	
49-81 61 35 11				Opening Type	Generally identifies a basic opening and how attached hardware may interact with surrounding elements.	
49-81 61 35 13				Opening Number	Numerical identifier used to refer to a certain type of opening.	
49-81 61 35 15				Opening Transmittance	Measurement of how far an opening extends in all directions.	
49-81 61 35 17				Opening Reflectance	Measurement of the light bouncing off of an opening.	
49-81 61 35 19				Opening Emittance	The ability of an opening to reduce absorbed heat.	
49-81 61 35 21				Opening Conductivity	Measurement of how well the opening conducts electricity.	
49-81 61 37			**Solar Heat Gain Coefficient (SHGC)**		Visual Transmission of solar radiation (visual light admitted versus rejected) is calculated using SHGC.	
49-81 61 39			**Shading Coefficient**		The ratio of total solar transmittance for the specified glazing system to the total solar transmittance for the standard reference glazing (1/8" clear).	
49-81 61 41			**Heat Transfer Coefficient**		Heat transfer coefficient is the inverse of thermal insulance.	
49-81 61 43			**Specific Heat**		Percentage of higher or lower value based on the proportion of solid versus openings. The ratio of the amount of heat required to raise the temperature of a unit mass of a substance by one unit of temperature to the amount of heat required to raise the temperature of a similar mass of a reference material, usually water, by the same amount.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-81 61 45			Internal Thermal Energy		Is the part of the total internal energy of a thermodynamic system or sample of matter that results in the system's temperature.	
49-81 61 47			Linear Thermal Expansion Coefficient		Relates the change in a material's linear dimensions to a change in temperature.	
49-81 61 49			Long-Term Thermal Resistance (LTTR)		Refers to the rating given to an object with regard to its R-value based on a 15 year time-weighted average.	
49-81 61 51			Specific Heat Input		A measured amount of heat energy going into a system.	
49-81 61 53			Thermal Break		An element of low thermal conductivity placed in an assembly to reduce or prevent the flow of thermal energy between conductive materials.	
49-81 61 55			Thermal Conductance		The act and measurement of continuous heat transfer.	
49-81 61 57			Thermal Conductivity		Refers to the capability of a material or object to transfer heat.	
49-81 61 59			Thermal Diffusivity		Is the thermal conductivity divided by density and specific heat capacity at constant pressure.	
49-81 61 61			Thermal Insulance		Measure of the ability of a material to contain and not transfer heat.	
49-81 61 63			Wind Uplift Resistance		The ability to resist a net upward force on the roofing system.	
49-81 71 00		Properties of Permeability and Moisture Resistance			Properties of objects, surfaces or membranes that define the characteristics and the degree to which it can be pervaded by a liquid or gas (as by osmosis or diffusion).	
49-81 71 11			Condensation Resistance		Ability to reduce collection of condensation on the surface of an object.	
49-81 71 13			Freeze-Thaw Resistance		Ability to reduce the slowing or stopping effects of being frozen then thawed.	
49-81 71 15			Frost Resistance		Ability to reduce the slowing or stopping effects of frost.	
49-81 71 17			Gas Permeability		Ability of gasses to seep into the system.	
49-81 71 19			Percent Perviousness		Rating of the object or substance's permeability.	
49-81 71 21			Magnetic Permeability		Measure of the ability of a material to support the formation of a magnetic field within itself.	
49-81 71 23			Moisture Absorption Resistance		The ability of a substance or object to reduce absorbing moisture from its surroundings.	
49-81 71 25			Moisture Content		The amount of moisture that makes up a particular substance or object.	
49-81 71 27			Pollutant Permeability		Measure of the ability of an object or material to resist infiltration of pollution.	
49-81 71 29			Porosity		The ratio of the total amount of void space in a material (due to poses, small channels, and so on) to the bulk volume occupied by the material.	
49-81 71 31			Resistance to Rising Damp		The ability of a substance or object to reduce absorbing moisture generated from below that increases and raises the liquid level.	
49-81 71 33			Vapor Permeability		The rate water vapor is allowed through a surface.	
49-81 71 35			Vapor Resistance		The ability of a substance or object to reduce vapor infiltration.	
49-81 71 37			Velocity Permeability		The varying value of permeability with respect to varying velocity.	
49-81 71 39			Water Absorption		Measurement of the amount of water typically absorbed by an object during normal operation.	
49-81 71 41			Water Absorption Resistance		The ability of a substance or object to reduce water absorption.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-81 71 43			**Water Imperviousness Resistance**		Measure of how resistant to water an object or substance is.	
49-81 71 45			**Water Permeability Resistance**		Measure of how resistant to water an object or substance is.	
49-81 71 47			**Surface Water Absorption**		Measure of how much water is absorbed through a surface.	
49-81 81 00		**Acoustic Properties**			Properties that define the behavior or quality of sound in relation to an object or substance, or the response of an object to sound.	
49-81 81 11			**Acoustic Impedance**		At a particular frequency indicates how much sound pressure is generated by a given air vibration at that frequency.	
49-81 81 13			**Reverberation Time**		the persistence of sound in a particular space after the original sound is removed.	
49-81 81 15			**Noise Level**		The amplitude of undesired background noise.	
49-81 81 17			**Noise Reduction Coefficient (NRC)**		A scalar representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.	
49-81 81 19			**Acoustical Absorption**		Material property that changes the acoustic energy of sound waves into another form, often heat, as opposed to sound energy that material reflects or conducts. Acoustic absorption is represented by the symbol A in calculations.	
49-81 81 21			**Sound Absorption**		Property of any material that changes the acoustic energy of sound waves into another form, often heat, which it to some extent retains, as opposed to that sound energy that material reflects or conducts.	
49-81 81 23			**Sound Absorption Average (SAA)**		Value given to indicate the ability of a particular item to absorb acoustical noise.	
49-81 81 25			**Sound Attenuation**		Measurement of the ability of a particular substance to dissipate acoustical energy.	
49-81 81 27			**Sound Energy Density**		Measure to describe the sound field at a given point as a sound energy value. Typically designated by W or E.	
49-81 81 29			**Sound Energy Flux**		the average rate of flow of sound energy for one period through any specified area.	Usually referred to as acoustic intensity.
49-81 81 31			**Sound Frequency**		An audio frequency (abbreviation: AF) or audible frequency is characterized as a periodic vibration whose frequency is audible to the average human. It is the property of sound that most determines pitch and is measured in hertz (Hz).	
49-81 81 37			**Sound Intensity**		The sound power Pac per unit area A. The usual context is the noise measurement of sound intensity in the air at a listener's location.	
49-81 81 39			**Sound Isolation**		Refers to the capability of an object to dampen or lessen acoustic noise.	
49-81 81 41			**Sound Power**		Sound power or acoustic power Pac is a measure of sonic energy E per time t unit.	
49-81 81 43			**Sound Pressure**		The local pressure deviation from the ambient (average, or equilibrium) atmospheric pressure caused by a sound wave.	Also referred to as acoustic pressure.
49-81 81 45			**Sound Speed**		The distance travelled during a unit of time by a sound wave propagating through an elastic medium.	Also referred to as speed of sound.
49-81 81 47			**Sound Reflectance**		Rating referring to the act of acoustical waves bouncing off of surfaces that do not absorb 100% of the sound.	Also referred to as an echo.
49-81 81 49			**Sound Transmission Class (STC)**		An integer rating of how well a material or assembly attenuates airborne sound.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-81 81 51			Speech Intelligibility		Measurement of the ease of which spoken words are understood.	
49-91 00 00	Properties of Facility Services				Properties of systems used in facility services, often comprised of a number of individual component objects -- these properties tend to apply to whole systems, component properties are typically classified elsewhere.	
49-91 11 00		General Properties of Facility Services			General properties defining aspects of systems for Facilities Services.	
49-91 11 11			Accuracy		Acceptable deviation from a perfect value for a specific metric..	
49-91 11 13			Area Covered		A two dimensional metric or a percentage of a total area.	
49-91 11 15			Capacity		A measure of maximum size expressed in units appropriate for the object.	
49-91 11 17			Components		Individual parts or assemblies of parts which can be organized to form a larger or more functional object.	
49-91 11 19			Connections		Something that ties together or otherwise attaches two systems or objects.	
49-91 11 21			Constituents		Optional constituent features, parts or finishes.	
49-91 11 23			Parts		Items which can be a larger, more useful object.	
49-91 11 25			System Equipment		An object which typically performs a function in combination with other objects to perform a more complex function.	
49-91 11 27			Equipment Type		Describes the type of equipment in question.	
49-91 11 29			System Name		Generic descriptive title or trade name for a system.	
49-91 11 31			Controls		Parts or equipment which regulate the operation of equipment or system.	
49-91 11 33			Flow Factor		Rate of flow of water in cubic meters per hour at a pressure drop of one kilogram per square centimeter across the valve.	The metric equivalent of flow coefficient.
49-91 11 35			Flow Configuration		A standard order of components and the path of flow between them.	
49-91 11 37			Flow Direction		A path of system function described as a vector in the context of the system.	
49-91 11 39			Flow Conversion Method		A set of rules or accepted practices to change the flow in a system.	
49-91 11 41			Design Flow Rate		An ideal level of movement described in units of movement per units of time appropriate for the system.	
49-91 11 43			Instrumentation		Measurement equipment.	
49-91 11 45			Inputs		A node or terminal or other type of information gathering interface.	
49-91 11 47			Outputs		A node or terminal or other type of information expending interface.	
49-91 11 49			Loss Method		A set of rules or accepted practices to address loss.	
49-91 11 51			Mode		General, sometimes generic preset value for variables within a system.	
49-91 11 53			Number of Elements		A numerical value of the number of distinct elements in a system.	
49-91 11 55			Service Connections		Access points for measurement or maintenance.	
49-91 11 57			Sensor Type		The class of monitoring instrument .	
49-91 11 59			Sensor Zone		The area applicable to a specific sensor.	
49-91 11 61			Sensor Detail Text		Words or codes that relay information picked up by a sensor.	
49-91 11 63			Sensor Location		The logical or physical site of a sensor.	
49-91 11 65			System Type		Describes the type of system in question.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-91 11 67			**Service Type**		Describes the type of service being performed.	
49-91 11 69			**System Limitations**		Describes the limitations of system in question.	
49-91 11 71			**Zone**		A logical or physical area.	
49-91 21 00		**Properties of Fire Protection Systems**			System or component properties uniquely found in Fire Protection Systems.	
49-91 21 11			**Fire Protection Class**		A classification designator that relays any fire resistance or proofing.	
49-91 21 13			**Sprinkler Type**		Describes the general function or shape of the sprinkler.	
49-91 23 00		**Properties of Plumbing Systems**			System or component properties uniquely found in Plumbing Systems.	
49-91 23 11			**Domestic Cold Water**		Non-heated water supplied in a building and primarily used for drinking, food preparation, sanitation, and hygiene.	
49-91 23 13			**Domestic Hot Water**		Water supplied to a building, heated, and primarily used for drinking, food preparation, sanitation, and hygiene.	
49-91 23 15			**Sanitary Water**		Water supplied that is free of disease and defects that may cause infections.	
49-91 23 17			**Waste Water**		Water used in buildings and then drained from sinks, tubs, showers, dishwashers, clothes washers, and toilets.	
49-91 23 19			**Storm Water**		Water collected or observed as a result of weather conditions.	
49-91 23 21			**Fire Department Water**		Supply of water for use by fire personnel for use in suppression of fire incidents at a building.	
49-91 23 23			**Plumbing Volume**		The volume of liquid contained in the system.	
49-91 23 25			**Plumbing Fixture Units**		The sum of the fixture units in the system.	
49-91 25 00		**Properties of HVAC Systems**			System or component properties uniquely found in HVAC Systems.	
49-91 25 11			**HVAC System Type**		Describes the type of HVAC system in question.	
49-91 25 13			**HVAC Efficiency**		Describes the energy efficiency of the HVAC system.	
49-91 25 15			**HVAC Loads**		Describes the total draw on an HVAC system.	
49-91 25 15 11				Design HVAC Load per area	Total HVAC load for the space. This value can be specified, calculated by the heating and cooling loads analysis tool, or read from a gbXML file.	
49-91 25 15 13				Actual HVAC Load	Total heating load for the space calculated by the integrated heating and cooling loads analysis tool.	
49-91 25 15 15				Design Other HVAC Load per area	Total Other load for the space. This value can be specified, calculated by the heating and cooling loads analysis tool, or read from a gbXML file.	
49-91 25 15 17				Actual Other HVAC Load	Total Other load for the space calculated by the integrated heating and cooling loads analysis tool.	
49-91 25 15 19				Calculated Heating Load	Total heating load for the space. This value can be calculated by the integrated heating and cooling loads analysis tool or read from a gbXML file. “Not Computed” displays prior to the project receiving loads analysis results.	
49-91 25 15 21				Design Heating Load	Total heating load for the space. This value can be specified, calculated by the integrated heating and cooling loads analysis tool, or read from a gbXML file.	
49-91 25 15 23				Calculated Cooling Load	Total cooling load for the space. This value can be calculated by the integrated heating and cooling loads analysis tool or read from a gbXML file. “Not Computed” displays prior to the project receiving loads analysis results.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-91 25 15 25				Design Cooling Load	Total cooling load for the space. This value can be specified, calculated by the integrated heating and cooling loads analysis tool, or read from a gbXML file.	
49-91 25 15 27				Zone Cooling Load	Total cooling load for the zone. This value can be specified, calculated by the integrated heating and cooling loads analysis tool, or read from a gbXML file.	
49-91 25 17			**HVAC Airflow**		Describes the direction air moves within a building or HVAC system.	
49-91 25 17 11				Specified Supply Airflow	Supply airflow introduced in the space. This value can be specified, calculated by the integrated heating and cooling loads analysis tool, or read from a gbXML file.	
49-91 25 17 13				Calculated Supply Airflow	Total airflow required to head and cool the space. This value can be calculated by the integrated heating and cooling loads analysis tool or read from a gbXML file.	
49-91 25 17 15				Actual Supply Airflow	Total supply airflow in the space. This value is the sum of the airflow for all supply air terminals in the space.	
49-91 25 17 17				Return Airflow	Determines how the return airflow is calculated for the space.	
49-91 25 17 19				Specified Exhaust Airflow	Total exhaust airflow for the space.	
49-91 25 17 21				Actual Exhaust Airflow	Total exhaust airflow for the space.	
49-91 25 19			**Air Volume Calculation Type**		A set of rules governing air volume calculation.	
49-91 25 21			**HVAC Capacity**		Total capacity that an HVAC unit can support (when installed) OR total capacity that an HVAC unit needs to support (pre-installation).	
49-91 25 21 11				Capacity Unit	Designator for a unit of capacity.	
49-91 25 21 13				Heating Capacity	Required units of measurement needed to calculate total heating requirements for an HVAC system.	
49-91 25 21 15				Cooling Total Capacity	Required units of measurement needed to calculate total cooling requirements for an HVAC system.	
49-91 25 21 17				Cooling Sensible Capacity	Required units of measurement needed to calculate acceptable cooling requirements for an HVAC system.	
49-91 25 21 19				Cooling Latent		
49-91 25 21 21				Cooling Sensible Heat Ratio (SHR)		
49-91 25 23			**HVAC Conditioning**		The act of altering the temperature and/or air quality in a given space.	
49-91 25 23 11				Conditioning Unit	Identifier for an HVAC conditioning unit.	
49-91 25 23 13				Condition Heated	A value indicating heat put into a space.	
49-91 25 23 15				Condition Cooled	A value indicating heat removed from a space.	
49-91 25 23 17				Condition Heated and Cooled	A value indicating heat put into and/or removed from a space.	
49-91 25 23 19				Unconditioned	A value indicating no thermal treatment of atmosphere in a space.	
49-91 25 23 21				Vented	A value indicating a pumped removal of air in a space.	
49-91 25 23 23				Naturally Vented Only	A value indicating a natural removal of air in a space.	
49-91 25 25			**HVAC Controls**		Controls for HVAC systems.	
49-91 25 25 11				HVAC Fan Control	Controls for HVAC fans.	
49-91 25 25 13				HVAC Pump Control	Controls for HVAC pumps.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-91 25 25 15				HVAC Valve Control	Controls for HVAC valves.	
49-91 25 27			**K Coefficient**		A value designating insulating properties of a material.	
49-91 25 29			**HVAC Calculated Results**		Calculated values relating to loads for HVAC.	
49-91 25 29 11				Peak Cooling Total Load	Total cooling load for all spaces in the building. This includes conduction, ventilation, pipe and duct gains, and sensible and latent loads.	
49-91 25 29 13				Peak Cooling Month and Hour	Date used to calculate peak calculations.	
49-91 25 29 15				Peak Cooling Sensible Load	Seasonal sensible cooling load high point for the building.	
49-91 25 29 17				Maximum Cooling Capacity	The maximum cooling capacity required, determined by sum of the peak cooling loads for the zones in the building. This recognizes that the peak load may occur at a different times depending on conditions, such as the location of zones within the building (north-facing vs. south facing).	
49-91 25 29 19				Peak Cooling Airflow	Seasonal high point for cooling airflow for the building.	
49-91 25 29 21				Peak Heating Load	Total heating load for all spaces in the building. This includes conduction, ventilation, pipe and duct gains, and sensible and latent loads.	
49-91 25 29 23				Peak Heating Airflow	Seasonal high point for heating airflow for the building.	
49-91 25 31			**HVAC Checksums**		Calculated values relating to loads for HVAC.	
49-91 25 31 11				Cooling Load Density	Total Cooling Load for the building divided by the Occupied Analytical Area in the building.	
49-91 25 31 13				Cooling Flow Density	Cooling Airflow divided by the Occupied Analytical Area of the building.	
49-91 25 31 15				Cooling Flow/Load	Cooling Airflow divided by the Total Cooling Load of the building.	
49-91 25 31 17				Cooling Area/Load	Analytical Area of the zone divided by the Total Cooling of the building.	
49-91 25 31 19				Heating Load Density	Total Heating Load for the building divided by the Occupied Analytical Area in the building.	
49-91 25 31 21				Heating Flow Density	Heating Airflow divided by the Occupied Analytical Area of the building.	
49-91 25 33			**Minimum Efficiency Reporting Value (MERV) Rating**		A measurement designed by ASHRAE which relates to the effectiveness of air filters.	
49-91 25 35			**Manufacturer's coil bypass factor**		A measurement of the amount of air that is not totally conditioned due to poor cooling coil.	
49-91 31 00		**Properties of Integrated Automation Systems**			Network and other properties of Integrated Automation Systems.	
49-91 31 11			**Standard Network Variable Type (SNVT)**		Designation given to communication devices made by different manufacturers to determine interoperability and compatibility.	
49-91 31 13			**Control Type**		Describes the type of control used to manage different aspects of an automated system.	
49-91 31 15			**Expected Engineering Units**		The assumed unit of measure to be used within a system.	
49-91 31 17			**Node ID**		Identification given to a certain node or node type for ease of inspection and/or location and maintenance.	
49-91 31 19			**Domain Address**		The main identifier for a particular system.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-91 31 21			**Subnet Address**		A subset identifier, typically an extension or branch off of the domain address.	
49-91 41 00		**Properties of Electrical Systems**			Properties defining supply, demand and characteristics of Electrical Power, features of Electrical Systems and Electrical Components.	
49-91 41 11			**Amperage**		Refers to the flow of electric charge through a medium, measured in amperes.	
49-91 41 13			**Voltage**		Measurement of the difference in electrical potential energy per unit charge, measured in volts.	
49-91 41 13 11				Voltage Drop	The difference between the voltage applied and the voltage consumed on the circuit.	
49-91 41 15			**Electrical Source**		Describes or denotes the origin of power.	
49-91 41 17			**Electrical Power Factor**		The difference between Apparent Load and True Load, expressed as a decimal.	
49-91 41 19			**Electrical Power Factor State**		Lagging or Leading, depending on whether the load is inductive or capacitive.	
49-91 41 21			**Properties of Electrical Currents**		Properties defining characteristics for observed or planned electrical currents.	
49-91 41 21 11				Current Draw	Amount of current used to supply a device or system.	
49-91 41 21 13				Electrical Current Density	Electric current per unit area.	
49-91 41 21 15				True Current		
49-91 41 21 17				True Current and Phase		
49-91 41 23			**Properties of Electrical Loads**		Properties defining or classifying the things that draw current.	
49-91 41 23 11				Load Classification	Designation denoting the type of load.	
49-91 41 23 13				True Load		
49-91 41 23 15				Balanced Load	Indicates whether the load is distributed evenly between the phases.	
49-91 41 25			**Properties of Electrical Panels**		Properties describing electrical panels.	
49-91 41 25 11				Panel Name	Alpha designator given to denote a panel.	
49-91 41 25 13				Panel Number	Numeric designator given to denote a panel.	
49-91 41 25 15				Number of Poles	Number of poles present on an electric panel.	
49-91 41 25 17				Maximum Number of Pole Breakers	Maximum number of pole breakers that can be present on a panel.	
49-91 41 25 19				Main Ratings		
49-91 41 25 21				Apparent Load and Phase		
49-91 41 27			**Properties of Circuits**		Properties that describe circuits.	
49-91 41 27 11				Circuit Name	Alpha designator given to denote a circuit.	
49-91 41 27 13				Circuit Number	Numeric designator given to denote a circuit.	
49-91 41 27 15				Circuit Load Name	Alpha designator given to denote a circuit load.	
49-91 41 27 17				Dedicated Circuit	Designator given to denote a circuit functioning and supplying power for a given task.	
49-91 41 27 19				Wire Type	Denotes the function or material of the wire.	Typically expressed in alpha-numeric abbreviation.
49-91 41 27 21				Wire Size	Designator that denotes the size of the diameter of the wire; not the length.	Typically expressed in gauge units.
49-91 41 27 23				Number of Runs	The number of parallel conductors required to supply the circuit.	
49-91 41 27 25				Number of Hot Conductors	Denotes the number of positive connectors in a circuit.	
49-91 41 27 27				Number of Neutral Conductors	Denotes the number of neutral connectors in a circuit.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-91 41 27 29				Number of Ground Conductors	Denotes the number of grounded connectors in a circuit.	
49-91 41 29			**Estimated and Connected Demands**		Properties that denote the assumed and observed power requirements for components in an electrical system.	
49-91 41 29 11				HVAC Total Estimated Demand	Denotes the summed estimated power requirement for HVAC systems.	
49-91 41 29 13				HVAC Total Connected	Denotes the summed observed power requirement for HVAC systems.	
49-91 41 29 15				Lighting Total Estimated Demand	Denotes the summed estimated power requirement for lighting systems.	
49-91 41 29 17				Lighting Total Connected	Denotes the summed observed power requirement for HVAC systems.	
49-91 41 29 19				Power Total Estimated Demand	Denotes the summed estimated power requirement for all parts of a system.	
49-91 41 29 21				Power Total Connected	Denotes the summed observed power requirement for all parts of a system.	
49-91 41 29 23				Other Total Estimated Demand	Denotes the summed estimated power requirement for other systems.	
49-91 41 29 25				Other Total Connected	Denotes the summed observed power requirement for other systems.	
49-91 41 29 27				Total Estimated Demand	Denotes the summed estimated power requirement for all systems.	
49-91 41 29 29				Total Connected	Denotes the summed observed power requirement for all systems.	
49-91 41 31			**Dielectric Constant**		Denotes the object or substance's potential for storing electrical energy.	
49-91 41 33			**Earth Ground Resistance**		Denotes the resistance of earth to electricity.	
49-91 41 35			**Electrical Admittance**		Denotes the electrical receptiveness of an object or substance.	
49-91 41 37			**Electrical Capacitance**		Denotes the total allowable electrical capacity of an object or substance.	
49-91 41 39			**Electrical Charge**		Denotes the amount or type of observed or measured current.	
49-91 41 41			**Electrical Charge Density**		Denotes the amount of electric charge in something.	
49-91 41 43			**Electrical Conductance**		Denotes how easily something conducts electricity.	Units: siemens (SI).
49-91 41 45			**Electrical Conductivity**		Denotes how easily something conducts electricity.	
49-91 41 47			**Electrical Field Strength**		Denotes the intensity of an electric field.	
49-91 41 49			**Electrical Flux Density**		Denotes the flux of an electric field. Flux is proportional to the number of electric field lines going through a virtual surface.	
49-91 41 51			**Electrical Frequency**		Denotes the frequency of electronic pulses per second.	Units: Hertz.
49-91 41 53			**Electrical Inductance**		Denotes the capability of a change in current to create a change in the circuit and nearby connected circuits.	Units: henry (SI).
49-91 41 55			**Electrical Insulation**		Denotes the capability of an object or substance to totally resist electric charge.	
49-91 41 57			**Electrical Potential Difference**		Denotes the measured voltage of something. Calculated by dividing the electric potential energy of a particle by the charge of a particle.	Also known as voltage. Units: volts.
49-91 41 59			**Electrical Reluctance**			

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-91 41 61			**Electrical Resistance**		The relation between electric voltage over a material and electric current through the material. State R1 vertical resistance, R2 resistance towards ground, R3 surface resistance.	
49-91 41 63			**Electrical Susceptance**		The imaginary part of admittance.	Units: siemens (SI).
49-91 41 65			**Electrical Permittivity**		Denotes the capability of an object or substance to resist internal electric fields.	
49-91 41 67			**Electrical Phase**		Denotes the frequency of oscillation for a sine wave of electricity.	
49-91 41 69			**Input Impedance**		Denotes impedance as noted by a power source connected to the network.	
49-91 41 71			**Output Impedance**		Denotes impedance exhibited by output terminals to an AC of a particular frequency as a result of resistance, inductance and capacitance.	
49-91 41 73			**Self Inductance**		Denotes the capability of a change in the circuit to create a voltage within the circuit.	
49-91 41 75			**Solid State**		Electricity containing components which do not move.	
49-91 41 77			**Surge Content**			
49-91 51 00		**Properties of Lighting Systems**			Properties defining Lighting Systems or Lighting Components.	
49-91 51 11			**IEEE Illumination Levels**		Groups of lighting organized by intensity.	
49-91 51 13			**Average Estimated Illumination**		Denotes the estimated lighting levels in an observed space.	
49-91 51 15			**Footcandles**		The illuminance cast on a surface by one-candela source one foot away.	
49-91 51 17			**Glare**		Minimum amount of glare to trigger the shades to close.	
49-91 51 19			**Glare Index**		A rating that denotes the presence of inhibiting or disruptive glare.	
49-91 51 21			**Index of Refraction**		Measurement of how much a ray of light bends.	
49-91 51 23			**Illuminance**		Illuminance level that the lights are maintained if daylighting controls present.	
49-91 51 25			**Light Absorption**		Denotes the amount of incident light absorbed by an object or substance.	
49-91 51 27			**Light Brightness**		Denotes the intensity of illumination as perceived by the human eye.	
49-91 51 29			**Lighting Calculation Workplane**		The level used as the base for calculating Illumination.	
49-91 51 31			**Light Emission**		The act of illuminating or a measure of illumination.	
49-91 51 33			**Light Exposure**		A measurement of how much light is encountered.	
49-91 51 35			**Light Illuminance**		The act of illuminating or a measure of illumination.	
49-91 51 37			**Light Polarization**		A property of certain types of light waves that describe the orientation of their oscillation.	
49-91 51 39			**Light Reflectance**		Measurement of light waves not absorbed by an object or substance.	
49-91 51 41			**Light Refractive Index**		Measurement of how much a ray of light bends.	
49-91 51 43			**Light Source**		The source of observed illumination.	
49-91 51 45			**Light Transmission**		Light which is not absorbed or reflected when travelling through an object or substance.	
49-91 51 47			**Lighting Controls**		Describes the types of controls to manage illumination.	
49-91 51 47 11				Light Control ID	Identifier used to refer to a particular lighting control.	
49-91 51 49			**Luminance**		Measurement of the amount of radiance put off by an object or coating.	
49-91 51 49 11				Lumens Per Lamp	Refers to the amount of light emitting from a source.	Unit: lm.

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-91 51 49 13				Luminous Efficacy	Denotes how well a source of lighting produces visible light.	
49-91 51 49 15				Luminous Flux	Measure of the perceived power of light.	
49-91 51 49 17				Luminous Intensity	Measure of the illumination power of a light source.	Unit: candela (cd).
49-91 51 51			**Reflectance**		Amount of light not absorbed and reflected back at the viewer.	
49-91 51 51 11				Ceiling Reflectance	Amount of light not absorbed but reflected by a ceiling or ceiling finish.	
49-91 51 51 13				Wall Reflectance	Amount of light not absorbed but reflected by a wall or wall finish.	
49-91 51 51 15				Floor Reflectance	Amount of light not absorbed but reflected by a floor or floor finish.	
49-91 51 51 17				Solar Reflectance	Amount of sunlight not absorbed but reflected.	
49-91 51 51 19				Solar Reflectance Index (SRI)	Incorporates both solar reflectance and emittance in a single value to measure the ability to reject solar heat.	
49-91 51 53			**Room Cavity Ratio**		This parameter is automatically calculated based on room dimensions to determine illumination calculations. Room Cavity Ratio = 5 x height(length + width)/(length x width), where height is the difference between the Lighting Calculation Workplane and the either the Limit Offset or level of an upper room bounding component, whichever is lower.	
49-91 51 55			**Translucence**		Denotes an object or substance that allows some but not all light to pass through.	
49-91 51 57			**Transparency**		Denotes an object or substance that allows all light to pass through.	
49-91 51 59			**Opacity**		Often a measure of translucence, this also refers to the amount of light passing through an object.	
49-91 51 61			**Ultraviolet Light**		Harmful light known to cause cancer.	
49-91 51 63			**Visible Light**		Light which the human eye can perceive.	
49-91 51 65			**Visible Light Transmittance**		The act of allowing visible light to pass through an object or substance.	
49-91 61 00		**Properties of Communication Systems**			Properties defining the performance and attributes of Communication Systems or Communication Systems Components.	
49-91 61 11			**Cable Category**		Defines categories of unshielded twisted pair cable systems, with different levels of performance in signal bandwidth, attenuation, and cross-talk.	
49-91 61 13			**Cable Classification**		A category assigned to cabling based on its intended use.	
49-91 61 15			**Cable Listing**			
49-91 61 17			**Cable Material**		Refers to both the material of the cable and the cable insulation.	
49-91 61 19			**Cable Rating**		A designation assigned to cabling based on its properties.	
49-91 61 21			**Cable Terminations**		Typically a connector, this is where a cable ends.	
49-91 61 23			**Cable Type**		Denotes the type of cabling.	
49-91 61 23 11				Unshielded Twisted Pair (UTP)	Twisted Pair wiring which does not have any type of shielding, typically used for telephony and computer networking.	
49-91 61 23 13				Twisted Pair	Wiring in which two conductors of a single circuit are twisted together for the purposes of canceling out electromagnetic interference from external sources.	
49-91 61 25			**Fiber Count**		Numeric value denoting the number of fibers in a cable.	
49-91 61 27			**Fiber Type**		Denotes the type of fiber used in cabling.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-91 61 27 11				Fiber Optic	A transmission line using light to transmit information through optical fiber lines.	
49-91 61 27 13				Nonconductive	A type of fiber with no electrically conductive components.	
49-91 61 27 15				General Purpose	A commonly used fiber, not specifically tailored for a certain attribute or use.	
49-91 61 27 17				Communications Plenum	Fiber used in plenum spaces, which typically has some fire safety attributes.	
49-91 61 27 19				Communications Riser	Fiber used in vertical applications, which typically has some fire safety attributes.	
49-91 61 29			**Shielding**		Protection from magnetic and electromagnetic forces.	
49-91 61 31			**Signal Set Choice**			
49-91 61 33			**Signal Type**		Describes the nature of the transmission of information.	
49-91 61 33 11				Broadband	Telecommunications signal or device of greater bandwidth than another standard or usual signal or device.	
49-91 61 33 13				Modulated	A signal with varying properties.	
49-91 61 35			**Signal-to-Noise Ratio**		A comparison of the level of a desired signal to the level of background noise.	
49-91 61 37			**Transmission Performance Rating**		Refers to the quality of the signal.	
49-91 71 00		**Properties of Safety and Security Systems**			Properties describing the performance and features of safety and security systems and their components.	
49-91 71 11			**Alarm Type**		Denotes the type of alarm for ease of reference.	
49-91 71 13			**Status Code**		A set of values denoting a particular event or alert.	
49-91 71 15			**Audit Trail**		Describes the path of responsibility for a particular event.	
49-91 71 17			**System Status**		Denotes the current status of the system.	
49-91 71 19			**Backup Battery Capacity**		Amount of energy stored for use in case of loss of power.	
49-91 71 21			**Control Point**		Designated area or station that administers or manages a system.	
49-91 71 23			**Display Type**		Denotes the type of screen or visual image producer for ease of reference.	
49-91 71 25			**Fail-Safe Capability**		Describes the appropriateness and reliability of a fail-safe contingency.	
49-91 71 27			**Logic Points**		Points which can gather information from other points for ease of reporting.	
49-91 71 29			**Report Type**		Denotes the type of reporting done or to be done.	
49-91 71 31			**Reporting Area**		Denotes the space that a particular report references.	
49-91 71 33			**Termination Point**		The point at which something ends.	
49-91 71 35			**Time Stamp**		Notation that describes a particular, specific, point in time.	
49-91 81 00		**Properties of Energy Systems**			Properties describing the supply, demand and flow of Energy and other characteristics of Energy Systems.	
49-91 81 11			**Energy Consumption**		Energy used during a function or operation.	
49-91 81 13			**Energy Demand**		Total energy consumption for an economic sector per unit of time.	
49-91 81 15			**Energy Unit**		Refers to the type of measurement given to denote energy.	

Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Definition	Notes and Alternate Terms
49-91 81 17			**Energy Per Unit Area Time**		Stefan-Boltzmann Law: The total energy radiated per unit surface of a black body per unit time is directly proportional to the fourth power of the black body's thermodynamic temperature T.	
49-91 81 19			**Energy Density**		Amount of energy stored in a given system of region of space per unit volume.	
49-91 81 21			**Energy Efficiency**		The goal of efforts to reduce the amount of energy required to proved services and products. Usually expressed in the first and second laws of thermodynamics.	
49-91 81 21 11				Energy Efficiency Measurement	Protocol established by the government, non-profit or for profit organization to establish a baseline for energy consumption in an artifact.	
49-91 81 21 13				Energy Efficiency Verification	Compare the costs and installations of energy efficiency program activities to an established baseline.	
49-91 81 21 15				Water Efficiency	The accomplishment of a function, task, process, or result with the minimal amount of water feasible.	
49-91 81 21 17				Fuel Efficiency	The efficiency of a process that converts chemical potential energy contained in a carrier fuel into kinetic energy or work.	
49-91 81 23			**Heat Flux Density**		The amount of power or heat flow that is exchanged across a unit area of a system.	
49-91 81 25			**Impact Energy Absorption**		System that absorbs a high force or shock applied over a short time period when two or more bodies collide.	
49-91 81 27			**Potential Energy**		Energy from restoring forces that try to have an effect on an object.	
49-91 81 29			**Power Output**		Energy generated by a source, less any losses due to efficiency.	
49-91 81 31			**Radiance**		Measure of the quantity of radiation that passes through or is emitted from a surface and falls within a given solid angle in a specified direction.	Units: water per steradian per square meter.
49-91 81 33			**Radiant Intensity**		Measure of the intensity of electromagnetic radiation.	
49-91 81 35			**Irradiance**		Total quantity of solar energy that hits a surface during a specific time period.	
49-91 81 37			**Specific Energy**		Energy per unit mass.	Units: J/kg.
49-91 81 39			**Total Solar Energy**		Total radiant heat and light absorbed from the sun in the Earth's atmosphere, oceans and land masses.	
49-91 81 41			**Total Solar Energy Reflectance**		Measurement of the amount of solar energy not absorbed by a substance.	