- Environment
- Fluid Mechanics
- Gas and Compressed Air
- HVAC Systems
- Hydraulics and Pneumatics
- Insulation
- Material Properties
- Mathematics
- Mechanics
- Miscellaneous
- Physiology
- Piping Systems
- Process Control
- Pumps
- Standard Organizations
- Statics
- Steam and Condensate
- Thermodynamics
- Water Systems

One cubic of soil or rock at the borrow expands and does not translate into one cubic of fill in the lorry, stockpiled or placed and compacted on the site.

Bulking or Swell factors for some common materials are indicated below:

Material	Density at the Borrow 10^3 (kg/m^3)	Bulking (Swell) Factor (%)
Basalt	2.4 - 3.1	75 - 80
Clay	1.8 - 2.6	20 - 40
Dolomite	2.8	50 - 60
Earth		20 - 30
Gneiss	2.69	75 - 80
Granite	2.6 - 2.8	75 - 80
Gravel, dry	1.80	20 - 30
Gravel, wet	2.00	20 - 30
Gravel, wet w/clay		50 - 60
Limestone	2.7 -2.8	75 - 80
Loam		15 - 25
Quartz	2.65	75 - 80
Rock		40 - 80
Sand, dry	1.60	20 - 30
Sand, wet	1.95	20 - 30
Sandstone	2.1 - 2.4	75 - 80
Slate	2.6 - 3.3	85 - 90
Soil	1.2 - 1.6	20 - 30

- *1 kg/m^3 = 0.001 g/cm^3 = 0.0005780 oz/in^3 = 0.16036 oz/gal (Imperial) = 0.1335 oz/gal (U.S.) = 0.0624 lb/ft^3 = 0.000036127 lb/in^3 = 1.6856 lb/yd^3 = 0.010022 lb/gal (Imperial) = 0.008345 lb/gal (U.S) = 0.0007525 ton/yd^3*

Example - Swell Factor

After excavation 300 m^3 with bulking factor 40% swells to

The Engineering ToolBox

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Tools and Basic Information for Design, Engineering and Construction of Technical Applications

Metals - Melting Temperatures
Melting temperature of some common metals and alloys

Cooling Loads - Latent and Sensible Heat
Latent and sensible cooling loads to consider in design of HVAC systems

Ammonia - NH_3 - Concentration in Air and Health Symptoms
Ammonia and health symptoms - smell and threat to life

Stress, Strain and Young's Modulus
Stress is force per area - strain is deformation of a solid due to stress

Coefficients of Linear Thermal Expansion
Linear temperature expansion coefficients for some common materials as aluminum, copper, glass, iron and many more

Area Moment of Inertia
Area Moment of Inertia, Moment of Inertia of an Area or Second Moment of Area

Water - Dynamic and Kinematic Viscosity
Viscosity of water at temperatures ranging *0 - 100 °C (32 - 212 °F)* - in Imperial and SI Units

Material Properties
Material properties - density, heat capacity, viscosity and more - for gases, fluids and solids

Unit Converter

Temperature

0.0

- ⊙ °C
- ○ °F

Convert!

Length

1.0

- ⊙ *m*
- ○ *km*
- ○ *in*
- ○ *ft*
- ○ *yards*
- ○ *miles*
- ○ *nautical miles*

Convert!

Volume

1.0

- ⊙ m^3
- ○ *liters*
- ○ in^3
- ○ ft^3
- ○ *us gal*

Convert!

Velocity

1.0

- ⊙ *m/s*
- ○ *km/h*
- ○ *ft/min*
- ○ *ft/s*
- ○ *mph*
- ○ *knots*

Convert!

Pressure

1.0

- ⊙ *Pa* (N/m^2)
- ○ *bar*
- ○ *mm* H_2O
- ○ kg/cm^2
- ○ *psi*
- ○ *inches* H_2O

Convert!

Flow

1.0

- ⊙ m^3/s
- ○ m^3/h
- ○ *US gpm*
- ○ *cfm*

Convert!

Alloy Steel
Steel with properties due to elements other than carbon

AISI/SAE Steel - Numbering System
Steel numbering system

Acetylene

Chemical, Physical and Thermal Properties of Acetylene

Acids - pH Values
Some common acids as sulfuric, acetic and more

Air - Absolute and Kinematic Viscosity
Absolute and kinematic viscosity of air at temperatures ranging *-40 - 1000 °C (-40 - 1500 °F)* at standard atmospheric pressure - Imperial Units

Air - Altitude, Density and Specific Volume
The density and the specific volume of air varies with the elevation above sea level

Air - Density and Specific Weight
Density and specific weight of air at temperatures ranging *-40 - 1000 °C (-40 - 1500 °F)* at standard atmospheric pressure - Imperial and SI Units

Air - Temperature, Pressure and Density
Air density for pressures and temperatures ranging *0 - 1000 psi* and *30 - 600 deg F*

Air Composition
Dry air is a mechanical mixture of nitrogen, oxygen, carbon dioxide and more

Argon
Chemical, Physical and Thermal Properties of Argon

Arsenic - Melting Points of Binary Eutectic Alloys
As - Arsenic - binary eutectic alloys and melting points

BHN - Brinell Hardness Number
The Brinell hardness test of metals and alloys

Bases - pH Values
Some common bases as sodium hydroxide, ammonia and more

Benzene - Liquid Thermal Properties
Density, specific heat, thermal conductivity ...

Benzene - Specific Heat

Specific heat of Benzene Gas - C6H6 - at temperatures ranging 250 - 900 K

Boiling Points Fluids and Gases
The boiling points of some common liquids and gases like acetone, butane, propane, and more

Boiling Points of Water at Various Elevations
Altitude - and boiling points of water

Brix Scale
Specific gravity related to the content of sucrose - used in sugar, fruit juice and wine making industry

Bulk Density of Food Materials
Bulk densities of some common foods

Bulk Modulus - Metals and Alloys
Bulk modulus of some common metals and alloys

Bulk Modulus and Fluid Elasticity
Introduction and definition of Bulk Modulus Elasticity - commonly used to characterize compressibility of fluids

CPVC - Chemical Resistance
Chemical resistance of CPVC - Chlorinated Poly(Vinyl Chloride) - pipes

Calcium Chloride - Water
Freezing point, density, specific heat and dynamic viscosity of Calcium Chloride - Water coolant

Carbon Dioxide - Specific Heat
Specific heat of Carbon Dioxide gas - CO_2 - temperatures ranging 175 - 6000 K

Carbon Dioxide Properties
Properties of saturated liquid Carbon Dioxide - CO_2 - density, specific heat capacity, kinematic viscosity, thermal conductivity and Prandtl number

Carbon Dioxide Properties - old English Units
Properties of saturated liquid Carbon Dioxide - CO_2 - density, specific heat capacity, kinematic viscosity, thermal conductivity and Prandtl number

Carbon Monoxide
Chemical, Physical and Thermal Properties of Carbon Monoxide - *CO*

Carbon Monoxide - Specific Heat
Specific heat of Carbon Monoxide Gas - CO - at temperatures ranging *175 - 6000 K*

Carbon and Low-Alloy Steels Classification
Steel is considered to be carbon steel when no minimum content is specified or required for chromium, cobalt, columbium (niobium), molybdenum, nickel, titanium, tungsten, vanadium or zirconium

Ceramic Material Properties
Physical properties of some common ceramics

Chemical Resistance Polyethylene - PE
Chemical resistance of polyethylene - PEH - pipes

Chemical Resistance of Rubbers and Elastomers
Common rubbers and elastomers - resistance to chemicals - solvents and softeners - swelling properties

Coefficients of Linear Thermal Expansion
Linear temperature expansion coefficients for some common materials as aluminum, copper, glass, iron and many more

Comparing Ethylene Glycol and Propylene Glycol
Comparing the properties of ethylene glycol and propylene glycol

Compositions of Steel
Typical compositions of steels

Compressed Water Properties
Specific volume, enthalpy and entropy of compressed water

Compression and Tension Strength of some common Materials
Some common materials and their average ultimate strength - compression and tension

Concrete Mixtures
Typical cement, sand and gravel mixtures

Concrete Properties
Properties of normal strength Portland cement concrete

Copper - Melting Points of Binary Eutectic Alloys
Cu - Copper - binary eutectic alloys and melting points

Copper Alloys and Typical Applications
Typical use of copper alloys in Architecture, Automotive, Electrical, Building Wire, Energy, Tube, Pipe Fittings, Fuel Gas, Industrial and Marine Applications

Copper Zinc Tin Alloys
Strength of Copper-Zinc-Tin alloys

Cryogenic Fluids - or Liquefied Gas Properties
Cryogenic properties as density, boiling points and heat of evaporation for fluids as hydrogen, methane, oxygen, nitrogen, fluorine and helium

Densities of Miscellaneous Solids
Solids - densities or weights

Densities of some Common Materials
Density in Imperial and SI-units

Density Converter
Online density converter with the most common units

Density of Wood
Density of wood as function of moisture content

Density, Specific Weight and Specific Gravity
An introduction and definition of density, specific weight and specific gravity - formulas with examples

Dielectric Constant of some common Liquids
Common fluids and their dielectric constant or permittivity

Dimethyl Propylmethane - Specific Heat
Specific heat of Dimethyl Propylmethane Gas - C_6H_{18} - at temperatures ranging *250 - 800 K*

Dirt and Mud Densities
Densities - pound per cubic foot and kilograms per cubic meter - dirt and mud

Ditch-Filling Materials - Densities
Weight or density of ditch-filling materials

Dry Air Properties
Dry air properties at temperatures ranging *175 - 1900 K* - specific heat capacity, ratio of specific heats, dynamic viscosity, thermal conductivity, Prandtl number, density and kinematic viscosity

Drying Temperature and Time for some common Products
Drying temperature and time for common foods and products like coffee, fruits, lumber and more

Dust Explosions - Critical Temperatures and Concentrations
Critical temperatures and concentration parameters for some common substances as coal, zinc, uranium and more

Dynamic Viscosity of some common Liquids
Absolute or Dynamic Viscosity viscosity of some common fluids

Dynamic, Absolute and Kinematic Viscosity
Dynamic, absolute and kinematic viscosity - and how to convert between *CentiStokes (cSt), CentiPoises (cP), Saybolt Universal Seconds (SSU) and degree Engler*

Earth or Soil - Weight and Composition
Typical weight and composition of soil or earth

Elastomers
Natural and syntetic rubbers

Elements - Melting Points
Melting points of the elements

Emissivity Coefficients of some common Materials
The radiation heat transfer emissivity coefficient of some common materials as aluminum, brass, glass and many more

Engineering Materials
Comparing some typical properties of common engineering materials like steel, plastics, ceramics and composites

Epoxy - Chemical Resistance
Chemical resistance of Epoxy to common products as Acetic acid, Alcohol, Diesel oil and more

Ethane
Chemical, Physical and Thermal Properties of Ethane - C_2H_6

Ethane - Liquid Thermal Properties
Density, specific heat ....

Ethane - Specific Heat
Specific heat of Ethane Gas - C_2H_6 - temperatures ranging *250 - 900 K*

Ethanol Freeze Protected Water Solutions
Freezing and flash points of ethanol based water solutions - brines

Ethylene - Specific Heat
Specific heat of Ethylene Gas - C_2H_4 - temperatures ranging *175 - 900 K*

Ethylene Glycol Heat-Transfer Fluid
Freezing point, viscosity, specific gravity and specific heat capacity of ethylene glycol based heat-transfer fluids, or brines

Fibers in Polymer Composites
Mechanical properties of fibers used in polymer composites

Flash Point

The flash point indicates how easy a chemical may ignite and burn

Float Glass Weight
Weight of typical float glass thicknesses

Fluids - Latent Heat of Evaporation
Latent heat of vaporization of fluids - alcohol, ether, nitrogen, water and more

Food and Foodstuff - Specific Heats
Specific heats of some common food and foodstuff as apples, bass, beef, pork and much more

Food and Foodstuff - pH Values
Approximate pH values for some common food products as apples, butter, wines and more ..

Freezing and Melting Points of some Common Liquids
Common fluids and their freezing and melting points

Freon Properties
Properties of saturated liquid Freon - CCl_2F_2 - density, specific heat capacity, kinematic viscosity, thermal conductivity and Prandtl number

Freon Properties - old English Units
Properties of saturated liquid Freon - CCl_2F_2 - density. specific heat capacity. kinematic viscosity. thermal conductivity and Prandtl number

Fuels - Densities and Specific Volumes
Densities and specific volumes of some common fuels - anthracite, butane, coke, oil, wood and more

Fuels Properties Database
Online petroleum-based fuels properties database

Gas Data
An online database with gas properties

Gases - Densities
Densities and molecular weights of some common gases - acetylene, air, methane, nitrogen, oxygen and many others ..

Gases - Dynamic Viscosity
Absolute viscosity of some common gases

Gases - Specific Gravities
Specific gravity of air, ammonia, butadiene, carbon dioxide, carbon monoxide and some other common gases

Gases - Specific Heats and Individual Gas Constants
Specific heat at constant volume, specific heat capacity at constant pressure and individual gas constant - *R* - common gases as argon, air, ether, nitrogen and many more ..

Glycerine - Boiling and Freezing Points
Boiling and freezing points of aqueous solutions of glycerine

Gold - Melting Points of Binary Eutectic Alloys
Au - Gold - binary eutectic alloys and melting points

Helium
Chemical, Physical and Thermal Properties of Helium - *He*

Human Body and Specific Heat
The specific heat of the human body compared with protein and wood

Hydrogen
Chemical, Physical and Thermal Properties of Hydrogen - H_2

Hydrogen - Specific Heat
Specific heat capacity of Hydrogen Gas - H_2 - at temperatures ranging *175 - 6000 K*

ISO Grade Oil Properties
Viscosity and density of ISO Grade oil

Ice - Thermal Properties
Thermal and thermodynamic properties of ice - density, thermal conductivity and specific heat at temperatures from *0 to -100* ^{o}C

Ice - Thickness and Safe Loads
Safe loads for clear solid ice

Identification Tests for Stainless Steels
Magnetic, spark, hardness and acid identification tests of austenitic, martensitic and ferritic stainless steels

Industrial Lubricants - Viscosity ISO-VG Grade
ISO-VG viscosity grades for industrial lubricants

Iron - Melting Points of Binary Eutectic Alloys
Fe - Iron - binary eutectic alloys and melting points

Isopropanol (2-Propanol) based Water Solutions
Freezing and flash points of isopropanol (2-Propanol) based water solutions - brines

Latent Heat of Melting of some common Materials
The latent heat of fusion when changing between solid or liquid state of some common materials as aluminum, ammonia, glycerin, water and more

Lead - Melting Points of Binary Eutectic Alloys
Pb - Lead (Plumbum) - binary eutectic alloys and melting points

Liquid Metals
Boiling points and specific heat

Liquid Water Properties at different Pressures
Liquid water properties at pressure *14.7 psia*, *1000 psia* and *10000 psia*

Liquids - Densities
Densities of some common liquids - acetone, beer, oil, water and more

Liquids - Kinematic Viscosities
Kinematic viscosities of some common liquids - motor oil, diesel fuel, peanut oil and many more

Liquids and Fluids - Specific Gravities - SG
Specific gravities for common fluids and liquids - acetone, alcohol, turpentine, oil and more ..

Liquids and Fluids - Specific Heats
Common liquids and fluids - acetone, oil, paraffin, water and many more - and their specific heats

Lumber Weights
Weights of green, kiln dried and pressure treated lumber boards

Magnesium - Melting Points of Binary Eutectic Alloys
Mg - Magnesium - binary eutectic alloys and melting points

Malleability, Brittlenes and Ductility
Properties regarding plastic deformation

Melting and Boiling Points for some common Materials
Melting points, heat of fusions, boiling points and heat to evaporate some common substances - hydrogen, water, gold and more ..

Melting and Boiling Temperatures - Evaporation and Melting Heat
Melting and boiling point temperatures, latent evaporation and melting heat of some common substances as copper, gold, lead and more - in SI units

Mercury - Properties

Properties of saturated liquid Mercury - *Hg* - density, specific heat capacity, kinematic viscosity, thermal conductivity and Prandtl number

Metal Alloys - Specific Heats
Specific heat of some common metal alloys as brass, bronze and more

Metals - Boiling Temperatures
Metals and their boiling temperatures

Metals - Galvanic Series in Seawater
Galvanic series in seawater

Metals - Melting Temperatures
Melting temperature of some common metals and alloys

Metals - Specific Heats
Commonly used metals - aluminum, iron, mercury and many more - and their specific heats - imperial and SI units

Metals Machinability
Machinability of metals

Metals and Alloys - Densities
Density of some common metals and alloys - aluminum, bronze, copper, iron and more ..

Metals and Corrosion Resistance
Common metals and their corrosion resistance to aggressive fluids as acids, bases and more

Metals and Latent Heat of Fusion
Metals and their latent heat of fusion

Methane
Chemical, Physical and Thermal Properties of Methane - CH_4

Methane - Specific Heat
Specific heat of Methane Gas - CH4 - at temperatures ranging 200 - 1100 K

Methanol - Thermophysical Properties
Thermophysical properties methanol

Methanol Freeze Protected Heat-Transfer Fluids
Freezing and flash points of methanol or methyl based heat-transfer fluids - brines

Mineral Density
Densities of common minerals

Minerals and some other materials - Specific Gravities
Specific gravity of some common minerals and other materials

Mixtures of Metals and Melting Points
Mixtures of metals and their melting points

Moh's scale of mineral hardness
Qualitative ordinal scale that characterizes the scratch resistance of various minerals

Moisture Content
Wet and dry basis

Molar Specific Heat - Gases
Molar specific heats of some common gases at constant volume

Molecular Weight - Gases and Vapors
Molecular mass of common gases and vapors

Molybdenum - Melting Points of Binary Eutectic Alloys
Mo - Molybdenum - binary eutectic alloys and melting points

Nickel - Melting Points of Binary Eutectic Alloys
Ni - Nickel - binary eutectic alloys and melting points

Nitrogen
Chemical, Physical and Thermal Properties of Nitrogen - N_2

Nitrogen - Specific Heat
Specific heat of Nitrogen Gas - N_2 - at temperatures ranging *175 - 6000 K*

Octane - Liquid Thermal Properties
Density, specific heat, thermal conductivity ...

Oils - Melting Points
Melting point of oils

Oxygen
Chemical, Physical and Thermal Properties of Oxygen - O_2

Oxygen - Specific Heat
Specific heat of Oxygen Gas - O_2 - at temperatures ranging *175 - 6000 K*

Oxygen Solubility in Fresh and Sea Water
Solubility of oxygen in equilibration with air in fresh and sea (salt) water - pressures ranging *1 - 4 bar abs*

Particle Sizes
Sizes of airborne particle as dust, pollen bacteria, virus and many more

Plastic Materials Commonly Used in Valves
An introduction to plastic materials commonly used in valves

Plastic Recycling Labels
Recyclable symbols for plastic bottles, containers and packaging

Plastics Abbreviations
Plastic abbreviations in common use

Polyester - Chemical Resistance
Chemical resistance of Polyester to common products like Acetic acid, Diesel oil and more

Polymers - Physical Properties
Density, tensile strength, elongation, Youngs modulus, Brinell hardiness of some common polymer plastic materials

Polypropylene PP - Chemical Resistance
Chemical resistance of PolyPropylene - PP - to some common acids, bases, organic substances and solvents

Polyurethane - Chemical Resistance
Chemical resistance of polyurethane - PUR

Porosity
Volume not occupied by solid material

Pressure and Boiling Points of Water
Boiling points of water at pressure ranging *0.5 - 1000 psia*

Propane
Chemical, Physical and Thermal Properties of Propane - C_3H_8

Propane Butane Mix - Evaporation Pressure

Evaporation pressure of Propane Butane mixtures

Properties of Air at Moderate Pressure - ranging *-100 to 1000°F*
Dynamic viscosity. thermal conductivity. specific heat capacity and Prandtl number - old English units

Properties of Water
Properties of water, saturated liquid - Imperial Units

Properties of Water - Imperial Units
Properties of water - temperature, pressure, specific volume, density and vapor pressure

Propylene Glycol based Heat-Transfer Fluids
Freezing points of propylene glycol based heat-transfer fluids suitable for the food processing industry

Radiation Emissivity of some common Materials
Radiation emissivity of some common materials - Water, Ice, Snow, Grass ..

Refractive Index of some common Liquids, Solids and Gases
Some common fluids and their refractive indexes

Refrigerant R22 - Properties
Properties of Refrigerant R22 - saturated liquid and saturated vapor - both imperial and metric units

Refrigerants - Environmental Properties
Physical and environmental properties of some common refrigerants

Refrigerants - Physical Properties
Physical properties of some common refrigerants - molecular weight, boiling, freezing and critical points

SAE Multigrade Oil Properties
Viscosity and density of SAE Grade oil

STP - Standard Temperature and Pressure & NTP - Normal Temperature and Pressure
The definition of STP - Standard Temperature and Pressure and NTP - Normal Temperature and Pressure

Saturated Ice and Vapor
Thermodynamic properties - specific volume, enthalpy and entropy - of saturated ice and steam

Saturated Salt Solutions and Air Humidity
Salts can be used maintain particular values of relative humidity

Sea Water Properties
Sea water properties - specific volume, specific heat and absolute viscosity

Silicone - Chemical Resistance
Chemical resistance of silicone

Silver - Melting Points of Binary Eutectic Alloys
Ag - Silver - binary eutectic alloys and melting points

Slurry - Density
Calculating density of slurries

Sodium Chloride - Water
Freezing point, density, specific heat and dynamic viscosity of Sodium Chloride - Water coolant

Soft and Hard Water
Hard and soft water

Softwood Lumber Standard
Nominal and minimum-dressed sizes of lumber

Solids - Melting and Solidifying Points
Melting and solidifying temperatures of some common substances - alcohol, aluminum, water, wax and more

Solids - Specific Heats
A comprehensive list of some common solids as brick, cement, glass and many more - and their specific heats - imperial and SI units

Solids and Metals - Specific Gravities
Specific gravity for some common solids and metals as aluminum, asbestos, brass, calcium and many others

Solubility of Gases in Water
Solubility diagrams of gases like Carbon dioxide, Argon, Methane and other gases in water at different temperatures

Specific Gravity - Liquids
Specific gravity of some common liquids and fluids as alcohol, oils, benzene, water and many more

Specific Heat Converter
Online specific heat calculator with the most common units

Specific Heat Polymers
Specific heat epoxy, PET, polycarbonate ..

Specific Heat Ratio of Air

Specific Heat Ratio of air at temperatures from *-40 - 1000 ^{o}C (-40 - 1500 ^{o}F)* at standard atmospheric pressure - Imperial and SI Units

Specific Heat of some common Substances
Specific heat of wet mud, granite, sandy clay, quartz sand and more

Speed of Sound in Air

Speed of sound in air at temperatures from *-40 - 1000 ^{o}C (-40 - 1500 ^{o}F)* at standard atmospheric pressure - Imperial and SI Units

Stainless Steels Classifications
Stainless steels are commonly grouped into martensitic stainless steels, ferritic stainless steels, austenitic stainless steels, duplex (ferritic-austenitic) stainless steels, and precipitation-hardening stainless steels

Stone Masonry
Typical strength

Sulfur Dioxide - Liquid Thermal Prorties
Density, specific heat, thermal conductivity ...

Surface Tension of Water in contact with Air

Surface tension of water in contact with air for temperatures ranging *0 - 100 ^{o}C (32 - 212 ^{o}F)* - in imperial units (BG units) and SI units

Temperature and Strength of Metals
Influence of temperature on the strength of metals

Tensile Modulus - Modulus of Elasticity or Young's Modulus - for some common Materials
Young's Modulus - Tensile Modulus or Modulus of Elasticity - for some common materials like steel, glass, wood ..

Thermal Conductivity Coefficients Plastics
Conductivity for some common plastics

Thermal Conductivity Common Liquids
Common fluids and their thermal conductivity

Thermal Conductivity of Metals
Thermal conductivity of some common metals

Thermal Conductivity of some common Materials and Gases
Thermal conductivity of some common materials and gases - like insulation products, aluminum, asphalt, brass, copper, steel ...

Thermal Expansion Metals

Thermal expansion of some common metals

Thermoplastic Pipes - Temperature and Strength Derating
Increased temperature derates the strength of thermoplastic piping materials

Thermoplastics - Physical Properties
Physical properties of some common thermoplastics - ABS, PVC, CPVC, PE, PEX, PB and PVDF

Timber Section Sizes
Basic size, area, moments of inertia and section modulus - metric units

Toluene - Liquid Thermal Properties
Density, specific heat, thermal conductivity ...

U.S Standard Atmosphere
Properties of US standard atmosphere ranging *-5000 to 250000 ft* altitude

UNS - Unified Numbering System
Unified Numbering System - UNS - for metals and alloys

Vapor Pressure Supercooled Water
Undercooled water and vapor pressure

Vapour Pressure
Vapour and saturation pressure for some common liquids

Vinyl Ester - Chemical Resistance
Chemical resistance of Vinyl Ester to common products as Acetone, Alcohol, Diesel oil and more

Viscosity Converting Chart
A viscosity converting table between units like *Centiposes, milliPascal, CentiStokes and SSU*

Viscosity of Foods
Absolute or dynamic viscosity of some common foods

Viscosity of Sugar Solutions
Dynamic viscosity of sucrose solutions at different temperatures

Water - Density and Specific Weight

Density and specific weight of water at temperatures *0 - 100 ^{o}C (32 - 212 ^{o}F)* - Imperial and SI Units

Water - Dynamic and Kinematic Viscosity

Viscosity of water at temperatures ranging *0 - 100 ^{o}C (32 - 212 ^{o}F)* - in Imperial and SI Units

Water - Saturation Pressure and Specific Weight

Vapor pressure and specific weight for water at temperatures ranging *32 - 212 ^{o}F* - Imperial Units

Water - Specific Heats at High Temperatures
Specific heat of water at higher temperatures - Imperial units

Water - Specific Volume and Weight Density

Specific volume and weight density of water at temperatures ranging *32 - 700 ^{o}F* - Imperial Units

Water - Speed of Sound

Speed of sound in water at temperatures between *32 - 212 ^{o}F (0 - 100 ^{o}C)* - imperial and SI units

Water - Temperature and Specific Gravity

Specific gravity of water ranging *32 - 600 ^{o}F*

Water - Thermal Properties

Thermal properties of water - density, freezing temperature, boiling temperature, latent heat of melting, latent heat of evaporation, critical temperature and more

Water Content in Foods and other Products
Products and water content before and after drying - common material like foods, cork, grain, soap, peat, wood and more

Water Saturation Pressure
Water saturation pressure at temperatures ranging *0 - 100 °C* and *32 - 700 °F* - Imperial and SI Units

Water Vapor - Specific Heat
Specific heat of Water Vapor - H_2O - at temperatures ranging *175 - 6000 K*

Weight and Strength of Stone
Sandstone, Granite, Limestone, Marble and Slate

Weight of Bricks
Density of bricks

Wood Densities
Density of wood as apple, ash, cedar, elm and more

Wood Species - Weight at various Moisture Contents
Weight of green and air-dry fuel wood

Wood and Combustion Heat Values
Firewood and combustion heat values - Pine, Elm, Hickory and many more species

Wrought and Cast Copper Alloys - Properties Database
A searchable database of properties for wrought and cast copper alloys

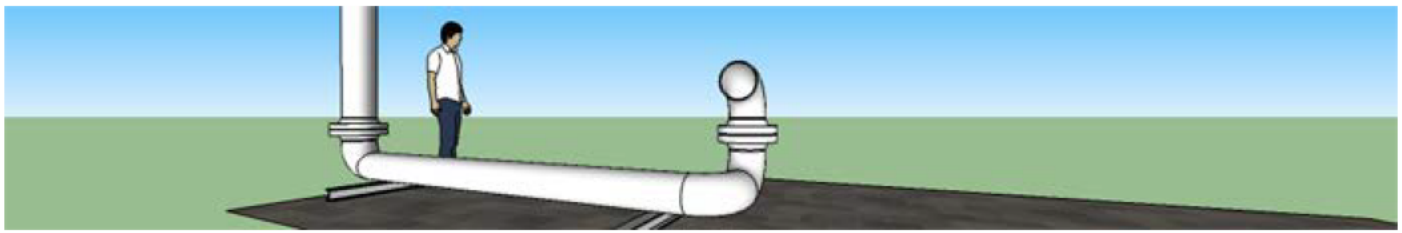
Young Modulus of Elasticity for Metals and Alloys
Elastic properties and Youngs modulus for common metals and alloys as cast iron, carbon steel and more

n-Butane
Chemical, Physical and Thermal Properties of n-Butane

Search the Engineering ToolBox

Search - *"Search is the most efficient way to navigate the Engineering ToolBox!"*

Engineering ToolBox - SketchUp Extension - Online 3D modeling!



Add standard and customized parametric components - like flange beams, lumbers, piping, stairs and more - to your SketchUp model with the Engineering ToolBox - SketchUp Extension/Plugin - enabled for use with the amazing, fun and free SketchUp Make and SketchUp Pro . Add the Engineering ToolBox extension to your SketchUp from the Sketchup Extension Warehouse!

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