



TuffTex Materials
RESTORATION MADE EASY

WATERPROOFING & COATING Dictionary

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A

A-Side

One component of a two component system. Side A contains reactive chemicals known as isocyanates.

Accelerator

A chemical or initiator that speeds up a chemical process.

Accelerated Weathering

The process in which materials are exposed to a controlled environment where various exposures such as heat, water, condensation, or light are altered to magnify their effects, thereby accelerating the weathering process for various results.

Acrylic

Chemical polymers that contain the acryloyl group derived from acrylic acid.

Acrylic Coating

A coating system based on an acrylic resin. A solvent or water based coating system that cures by coalescence and air-drying.

Adhere

To cause two surfaces to be held together by adhesion.

Adhesion

Adhesion is the bonding of two surfaces.

Adhesive Strength

The measurement of two surfaces bond ability.

Aggregate

Rock, stone, crushed stone, aluminum oxide, crushed slag, flakes, chips used in and on a coatings system.

Aging

The effect on materials that are exposed to an environment for an interval of time.

Air Entrapment

The inclusion of air in the liquid or coating film.

Airless Spray

A spraying system in which coating is atomized using high hydraulic pressure rather than compressed air.

Aliphatic

Denoting organic compounds in that are ultraviolet resistant. They will not discolor in sunlight.

Ambient Temperature

The temperature of the air; air temperature.

Ambient Temperature Range

The scale of hotness or coldness in the immediate environment.

Amine Catalyst

Amine catalyst is typically contained in the B-side, or resin, of the two-component polyurethane system.

Application Rate

The quantity (mass, volume, or thickness) of material applied per unit area.

Aromatic Solvents

Hydrocarbon solvents- benzene, xylene, toluene and their derivatives.

ASTM

American Standard Testing Method.

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B

B-Side

One component of a two component system typically containing the catalyst or hardener.

Backfill

Refers to the process of, or material used in, refilling a hole or trench

Back Rolling

Rolling wet coating behind a spray or roller application to insure better or even coverage on rough surfaces.

Basecoat

The first layer of a coating, usually after a primer is applied.

Below-grade

The part of a structure that is below ground level.

Bending/Flexural Testing

The measurement of ductility of a material. Bending a sample to a load specification (pass/fail) or, bending a material until it breaks and determining both the load and deflection required to initiate the break limit.

Bitumen

A generic term used to denote any material composed principally of bitumen, typically asphalt or coal tar.

Bleeding

The diffusion of coloring matter through a coating from its substrate (such as bleeding of asphalt mastic through coating).

Blister

The out pocketing of gas in a coating by the local loss of adhesion and lifting of the film from the underlying substrate.

Bond, Chemical

Adhesion between surfaces, usually of similar materials, resulting from a chemical reaction or cross linking of polymer chains.

Bond, Mechanical

Adhesion between surfaces resulting from interfacial forces or a physical interlocking.

Bond, Strength

The stress required to rupture a bond formed by an adhesive between two substrates.

Boxing

Mixing of coatings by pouring from one container to another to help maintain uniform color.

Break Strength

The measurement of a material to withstand a pulling or tensile force.

Brittleness

Materials having very little property of deformation, like plastic is called brittle.

Bubbling

A temporary or permanent defect where air or vapor bubbles are present in the applied film.

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Caulking

The physical process of sealing a joint or juncture; sealing and making weather-tight the joints, seams, or voids between adjacent units by filling with a sealant.

Catalyst

A substance that increases the rate of a chemical reaction.

Chalking

The degradation or migration of an ingredient, in paints, coatings, or other materials.

Chemical Resistance

The strength of a material to protect against chemical attack or solvent reaction. A material's ability to resist corrosive environments.

Coal Tar

A black colored, semi-solid hydrocarbon obtained from the partial evaporation or distillation of coal tars.

Coefficient of friction (COF)

Is the maximum value of the frictional force divided by the normal force. It is determined to be the ease by which two surfaces slide against each other.

Cohesion

The degree of internal bonding of one substance to itself.

Coal Tar Bitumen

A trade name for Type III coal tar used as the damp proofing or waterproofing agent in built-up roof membranes, conforming to ASTM D 450, Type III.

Color Retention

The retainage of its original color during weathering or chemical exposure.

Coating

A coating is a covering that is applied to the surface of an object, usually referred to as the substrate.

Compatible Materials

Two or more substances that can be mixed, blended, or attached without separating, reacting, or affecting the materials adversely.

Compressive Strength

Is the maximum compressive stress that a given solid material can sustain without fracture.

Condensation

Water that collects on surfaces when moisture or water vapor is exposed to air of a colder temperature.

Contamination

The process of making a material or surface unclean or unsuited for its intended purpose, usually by the addition or attachment of undesirable foreign substances.

Corrosion Resistance

It is the property of a material to withstand the action of acids, alkalis gases etc., which tend to corrode (or oxidize).

Corrosive

Refers to a substance that has the power to cause irreversible damage or destroy another substance by contact. A corrosive substance may be a solid, liquid, or gas.

Counter flashing

Formed metal sheeting secured on a wall to cover and protect the upper edge of the membrane base from exposure to the weather.

Coverage

The rate at which a coating spreads on a material and is usually expressed in units of square feet per gallon or square meters per liter.

Coving

Refers to any horizontal or vertical moldings that form the surround to other openings.

Cure

The process where a material forms permanent molecular linkages by exposure to chemicals, heat, pressure, or weathering.

Cure Time

The time required to effect curing or reach its desired physical characteristics.

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Damp Proofing

The application applied to a substrate applied and used to prevent moisture seeping from water or from the ground.

Delamination

The separation of the laminated layers of a component or system.

Density

It is defined as mass per unit volume. It is expressed as kg/m³.

Dew Point Temperature

The temperature at which water vapor condenses in cooling air at the existing atmospheric pressure and vapor content.

Dry film thickness (DFT)

The thickness of a coating measured above the substrate after the coating has dried.

Ductility

The property of a material which enables it to be drawn out or elongated to an appreciable extent before rupture occurs.

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E

Efflorescence

Whitish crystalline deposits on the surface of stone, brick, concrete or other masonry surfaces caused by free alkalis leaching from mortar, grout, or adjacent concrete.

Elasticity

The property of a material which enables it to regain its original shape and size after the removal of external load.

Elastomeric

A term for flexible coatings such as acrylic, butyl, polyurethane or silicone.

Elastomeric Coating

A coating system which, when fully cured, is capable of being stretched at least twice its original length (100% elongation) and recovering to its original dimensions.

Elongation

The amount of extension of an object under stress, usually expressed as a percentage of the original length.

EPDM

Ethylene Propylene Diene Monomer.

Epoxy

Any of a class of adhesives, plastics, or other materials that are polymers of epoxides.

Epoxy Injection

The injecting of epoxy adhesives into the cracks to fill them.

Exotherm(ic)

The exuding of heat during a chemical reaction. Exothermic reaction increases in large masses.

Expansion Joint

A structural separation between two building elements that allows free movement between the elements without damage to either structure.

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Film Thickness

Is the depth of the coating applied.

Flaking

The detachment of a uniform layer of a coating or surface material, usually related to internal movement, lack of adhesion, or passage of moisture.

Flame Retardant

A substance which is added to a polymer formulation to reduce or retard its tendency to burn.

Flash Point

The lowest temperature of a liquid at which it gives off vapors sufficient to form an ignitable mixture with air near its surface.

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G

Gel

The initial jelly-like solid phase that develops during the transition from a liquid to a solid. In this state, epoxy is soft, flexible, and has no strength.

Gloss

The ability of a cured material to reflect light.

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H

Hardener

A substance or mixture of substances added to an epoxy resin to promote or control the curing reaction by taking part in it.

Hardness

It is the property of the material which enables it to resist abrasion, indentation, machining and scratching.

Hydrostatic Pressure

The exertion of force on an underground structure by the water that surrounds it.

Humidity

The amount of moisture contained in the atmosphere.

Humidity (Relative)

The ratio of the amount of moisture contained in the atmosphere to the amount of moisture that can be carried in the atmosphere at a given temperature.

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Impact Resistance

The ability of a roofing material to resist damage (e.g., puncturing) from falling objects, application equipment, foot traffic, etc. The impact resistance of the roofing assembly is a function of all of its components, not just the membrane itself.

Infiltration

A situation in which water or another substance has leaked into a structure.

Inorganic

Any chemical or compound that is derived from minerals, does not contain carbon, and is not classified as organic; being or composed of materials other than hydrocarbons and their derivatives; not of plant or animal origin.

Intercoat Adhesion

The adhesion between successive coats of paint.

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Lap

Part of layered coating, waterproofing, or flashing component that overlaps or covers any portion of the same or another type of adjacent component.

Lateral Pressure

Soil pressure on the exterior of a structure.

Latex

a synthetic product consisting of a dispersion in water of polymer particles, used to make paints, coatings, etc.

Membrane

A flexible or semi-flexible material, which functions as the waterproofing component in a roofing or waterproofing assembly whose primary function is the exclusion of water.

Meter

Unit of length measurement in the metric system, equal to 39.37 inches.

Mil

One mil is equal to 0.001 inches, indicates the thickness of a membrane.

Modulus of Elasticity (or Young's Modulus)

A measurement of the rate of change of strain as a function of stress. It represents the slope of the straight-line portion of a stress-strain curve.

Mohs Hardness

A number that relates to the hardness of other key minerals.

Moisture Vapor Transmission Rate (MVTR)

Also water (WVTR) a measure of the passage of water vapor through a substance. It is a measure of the permeability for vapor barriers.

Muriatic Acid

Concentrated hydrochloric acid often diluted and used for etching concrete

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N

Nonvolatile

The portion of the coating left after the solvent evaporates; solids

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O

Orange Peel

Uneven surface with pits, like the skin of a lemon or orange.

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P

Pan

The bottom flat part of a roofing panel which is between the ribs of the panel.

Parapet Wall

A perimeter wall immediately adjacent to the roof which extends above the roof.

Peel Strength

Measurement of the bond strength of a material, typically an adhesive.

Penetration

Any object passing through the roof or deck

Pin-holing

Small, sunken area that forms on a coating film after a bubble ruptures. They are caused by trapped solvents, air moisture, and improper surface preparation.

Plasticity

Property of a material which enables the formation of permanent deformation.

Pliability

The material property of being flexible or moldable.

Ply

A layer of felt, ply sheet, or reinforcement in a membrane or coating system.

Polyurethane

A synthetic resin in which the polymer units are linked by urethane groups.

Porosity

Porosity indicates the degree by which the volume of a material is occupied by pores.

Positive Hydrostatic Pressure

Movement of water toward gravity.

Pot Life

Is the length of time in which multiple part coatings or materials can be used or applied to a surface. Pot life begins when the mixing is complete, and ends when the mix is unsuitable for application or has set.

Potable Water

Water fit or suitable for drinking: potable water.

Pounds per Square Inch (PSI)

PSI stands for pounds per square inch.

Primer

The first coat applied to a surface, formulated to have good bonding, wetting and inhibiting properties.

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S

Safety Data Sheet (SDS)

A document containing a chemical product's physical data, potential hazards, handling and required safety precautions.

Sealant

A material used to block the passage of fluids through the surface or joints or openings in materials, a type of mechanical seal.

Shrinkage

The decrease in volume, or contraction, of a material by the escape of any volatile substance, or by a chemical or physical change in the material.

Shear Strength

The strength of a material or component against the type of yield or structural failure when the material or component fails in shear.

Shore A & D Hardness

A measurement of a material's hardness on a durometer scale. Both the Shore A and Shore D instruments are made by the Shore Instrument Manufacturing Company.

Spalling

Any disruption of the normal surface to concrete. Once water permeates a concrete surface and freezes, it will expand causing surface deterioration (spalling).

Specific Gravity

Is a measurement of the density of a material relative to another material.

Split-Slab

This term refers to concrete. One slab serves as a slab on grade that is waterproofed with drainage systems. This first slab can be suspended too. The second slab goes over the first completing the 'split' which defines this process.

Shear

A pull directed across the adhesive, forcing the substrates to slide past each other.

Shelf Life

The expiration time that a packaged material can be stored under specific temperature conditions and remain stable for use.

Substrate

The surface of any area to which a coating or other material is applied.

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I

Tack-free

Refers to a coating condition whereby a coating is completely dry with little or no moisture left after application on the surface to be protected.

Tack-free time (TFT)

The time at which a coating is deemed to be properly adhered and capable of providing maximum protection to a surface without being disrupted or damaged.

Tear Strength

The tensile force required to rupture a pre-slit woven fabric sample under controlled conditions.

Technical Data Sheet (TDS)

A TDS sheet(s) include product composition, methods of use, operating requirements, common applications, warnings and pictures of the product.

Tensile Elongation

The stretching that a material undergoes as it is pulled in tension.

Tensile Strength

The force required to pull something such as rope, wire, or a structural beam to the point where it breaks.

Thixotropic

Property of a paste or fluid to thicken or set up to a paste or semi-gel when allowed to stand.

Total Solids by Weight

Percent ratio of the mass of the non-fluid particles or dissolved solids in a given mixture relative to the total mass of solution.

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U

Ultimate Tensile Strength (UTS)

Is the maximum stress that a material can withstand while being stretched or pulled.

Ultraviolet Resistance

Is the ability to withstand the degradation that can be caused by exposure to ultraviolet light.

UV Stable

Materials that do not degrade under UV Light, are called UV Stable.

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V

Vapor Barrier

A barrier used to prevent water vapor diffusion or transfer.

Viscosity

A measure of a fluid's resistance to flow.

VOC-compliant

Is an abbreviation of the term "volatile organic compound-compliant."

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W

Wall Deflection

The degree to which a basement wall is shifted due to outside pressure. This can result in cracks and water seepage.

Wall Drainage Board

A mechanism used to divert water from a structure, this board is often made from plastic and is propped at an angle against the exterior wall of a structure.

Water Absorption

The amount of weight gain (%) experienced in a polymer after immersion in water for a specific length of time under controlled environment.

Water Repellant

Refers to the coating applied to a surface to prevent water from seeping into a substrate or surface

Water Vapor Transmission Rate (WVTR)

Measures the passage of water vapor through a substance of a given unit area and unit time.

Weather ability

The ability of a material to withstand, resist or endure harsh atmospheric weather conditions, such as extremely hot or cold temperatures, humidity, salt air or similar corrosive conditions.

Wet Film Thickness (WFT)

Is the thickness of any coating film that is liquid-based. Wet thickness is at its peak right after the application of the coating. It decreases once volatile and solvents from the coating film undergo evaporation. While measuring wet film thickness, it is necessary to identify the amount of material that needs to be applied to achieve a particular dry film thickness that will give the best protection against damage, wear and corrosion.

Wetting

The more viscous a fluid, and the higher its surface tension, the more difficult it is for the liquid to "wet" materials. Certain additives reduce surface tension, or viscosity and improve wetting properties, allowing the material to flow out more.

Working Life

The period of time during which any material after mixing with a curing agent, remains workable and suitable for use.

Wicking

The flow of moisture through the small interconnected pores in concrete.

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X

Xylene

A volatile liquid hydrocarbon obtained by distilling wood, coal tar, or petroleum, used in fuels and solvents and in chemical synthesis.

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Y

Young's Modulus (or Modulus of Elasticity)

A measurement of rate of change of strain as a function of stress.

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