

Terms Commonly Used in the Stabilisation and Road Recycling Industry

The following terms are used in the National AustStab Guidelines have been derived from industry practice and AS1348.1-1986 Road and Traffic Engineering - Glossary of terms, Part 1 - Road Design and Construction.

Term	Definition	Term	Definition
Accelerated Loading Facility (ALF)	A mobile loading frame which can apply power-driven rolling wheel loads to sections of pavement in a manner which simulates the long-term characteristics of traffic and which is used to study the response of the pavement to this loading.	compaction test (laboratory)	A laboratory test to determine the maximum dry density of a soil or pavement material under specified test conditions.
acidic soil	A soil having a pH value less than 7.0. (See also alkaline soil)	compaction test (field)	To compare field compaction with maximum dry density of the soil or pavement material.
additive	A substance added to a material for the purpose of improving its properties.	Dynamic Cone Penetration test (DCP)	A test in which the effort to push or drive a standard steel cone into soil at a controlled rate is used as a measure of certain soil properties, such as the field CBR.
alkaline soil	A soil having a pH value greater than 7.0. (See also acidic soil)	deep-lift	A pavement construction technique whereby stabilisation is carried out to depths in excess of 250-mm.
anisotropic	Having properties that are different in different directions.	field density	The density of earthworks or pavement material measured insitu.
Benkelman beam	An instrument for measuring the deflection of a pavement caused by the passage of a dual-tyred single axle carrying a standard axle load.	Maximum Dry Density (MDD)	The greatest dry density of a soil obtained when a soil or pavement material is compacted in a specified manner over a range of moisture content. The moisture content at which this density is reached is called the optimum moisture content. Two amounts of compactive effort are commonly specified, referred to as standard and modified.
binder	A material used for the purpose of binding particles together as a coherent mass.	design life	Time period during which the quality of a pavement, e.g. riding quality, is expected to remain acceptable.
Ground Blast Furnace Slag (GBFS)	A ground non-metallic product, consisting essentially of silicates and alumino silicates of lime, developed simultaneously with iron in a blast furnace.	design traffic	Cumulative traffic, expressed in terms of equivalent standard axle loads, predicted to use a road over time.
bound material	Granular material to which cement, bitumen or similar binders are added to produce structural stiffness.	equilibrium moisture content	The moisture content which is reached in a soil in a particular environment after moisture movements have ceased.
California Bearing Ratio (CBR)	A measure of the bearing capacity of a soil or granular material obtained from a standard soil test.		
cohesive soil	A soil whose relevant behaviour characteristics are derived largely or entirely from the cohesive bonds associated with the fine fraction.		

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Term	Definition
Equivalent Standard Axle(s) (ESA)	The number of standard axle loads which are equivalent in damaging effect on a pavement to a given vehicle or axle loading.
Fly Ash (FA)	A fine powder of pozzolanic material extracted from the flue gases of a boiler fired with pulverised coal.
gap graded material	Graded material in which one or more of the intermediate sizes are absent.
graded material	Material having a wide and substantially continuous distribution of sizes from coarse to fine, the largest size being several times larger than the smallest size.
isotropic	Having properties that are equal in all directions.
layer	A sequence of one pavement material placed during one construction operation.
leaching	The removal of soluble material and colloids by percolating water.
load equivalency factors	The ratio of the number of repetitions of the standard axle load which the pavement can sustain to the number of repetitions of another axle load which the same pavement can sustain for given damage criteria.
modification	The improvement of the properties of a material by the addition of small quantities of an additive by the stabilisation process.
moisture content	The quantity of water which can be removed from a material by heating the water to 105°C until no further significant change in mass occurs, usually expressed as a percentage of the dry mass
non-cohesive soil	A soil in which the fine fraction is lacking, resulting in a loss of the cohesive bonds associated with this fraction.
Nuclear Density Meter (NDM)	An instrument for the non-destructive determination of the density and moisture content of material using a radioactive source for its operation.
Optimum Moisture Content (OMC)	That moisture content of a material at which will produce the maximum dry density under a standard test.
orthotropic	A material having different stiffness properties in two or more directions at right- angles to each other.

Term	Definition
Plasticity Index (PI)	The numerical difference between the value of the Liquid Limit and the value of the Plastic Limit of a soil.
pozzolan	A siliceous or alumino siliceous material which in itself possesses little or no cementitious value but which in finely divided form may be mixed with lime or portland cement to form a cementitious material.
recycling	The reuse of pavement material by insitu or plant mixing, with or without the addition of new material components.
reflection cracking	A visible crack in the pavement surfacing resulting from the movement associated with cracks in the underlying pavement layer.
rehabilitation	The restoration (eg stabilisation) of a distressed pavement so that it may be expected to function at a satisfactory level of serviceability for a further design period.
relative compaction	The percentage ratio of the field dry density to maximum dry density.
sprayed seal	A thin layer of bituminous material sprayed onto a pavement surface and having a layer of aggregate rolled in.
stabilised soil	A material which has been modified to improve or maintain its load carrying capacity. Modification may be by the addition of other natural materials such as sand, loam or clay or of manufactured materials such as cement, lime, and bitumen.
Standard Axle Load (SAL)	A load of 8 tonnes applied over a single axle with a dual wheel at each end.
subbase	The material layer on the subgrade below the base either for the purpose of making up additional pavement thickness required over the subgrade, or to prevent intrusion of the subgrade into the base, or to provide a working surface on which the remainder of the pavement can be constructed.
subgrade	The trimmed or prepared portion of the formation on which the pavement is constructed.

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