PHYSICAL PROPERTIES

Material Compatibility
Wind/Blasts/Shock
Sound Absorption, Barrier, Transmission
Color/Stan
Pop-outs
Skid Resistance
Other
Computer Software
Sustainability
Repair, Rehabilitation
Economy, Cost, Life-Cycle
Marine
Mix Design
STR Mix Design
Block Mix Design
Low Density Mix Design
Flowable Fill Mix Design
Asphalt Mix Design
Aggregate-Coarse: LWA
Aggregate-Fine: LWA
Air less than 8%
Air more than 8%
Cement: I, II, III
Cement: IV, V, K
Fiber (Plastic/Metal)
Fly Ash, Silica Fumes
Foam (Aluminum Powder)
Ground Blast. Furnace Slag
No-Fines
Prescribed Aggregate, vacuum saturation, Hydrothermal
Reversed Blend
Rubberized Asphalt
Slump
Temperature: High-Low
Water Cement Ratio
Storm water filtration
Autoclave Curing
Hot & Cold Weather Curing
Moist Curing
Steam Curing
Internal/Self Curing
Marketing: History, Overview
USF/APPLICATION
Lightweight Masonry
CMU "Block"
Stone Masonry Veneer
Wall Systems (Fences)
Concrete Brick
Floor & Roof Systems
Retaining Wall Units (SRW)
Chimney Block
Productivity
24" Unit – Super Block
Mortar
Pavers
SLR Lightweight Concrete Bldg.
Components & Misc. Uses
Concrete
Beams
Columns, Corners
Walls
Concrete Homes
Floors (slabs) Lift Slabs
Ferroconcrete, Shotcrete/Gunite
Pavement, Slab on Grade
Domes
Roof
Hydrobolic Parabolid, Shells
Exposed Aggregate Concrete
Elevated Structures
Self Compacting
Parking Structures
Bridges
Aqueous Environment
Brick, Dolomite, Gritstone
Environmental Engineering Structures
Sanitary
Building
Fill on Metal Deck, Composites
Concrete Frame
Construction Activities
Pumping, Handling, Placing
Finishing
Presstrest (Double Tee, I-Beams, Folded/Flat Plates)
Presstrest Misc. R/R ties, Poles, Rails
Tilt-up
Precast (Vaults, Tanks, Ornamental, Wall Panels, Etc.
Artificial Stone
Refract. Fireplace Logs, Hi-temp
Pipe
Asphalt Pavement, Overlays
Low-Density, Wood Floors, Roof
Chloride Ion
Influence of Moisture
Vibration Damping
Seismic
Cyclic & Rate of Loading
Thermal Movement
Strength to Age
Depth to Length
Strength to Age
Strength to Weight
Dimensional/Volume Stability
Creep
Shrinkage, Drying, Plastic
Thermal Movement
Cyclic & Rate of Loading
Dynamic Modulus (Pulse Velocity)
Fatigue
Seismic
Vibration Damping
Influence of Moisture
Absorption
Chloride Ion
Corrosion of Reinforcement
Efflorescence
Permeability
Porosity
internal curing
Floor coverings
Durability/Deterioration
Abrasion Resistance (Ice)
Carbonation
Chemical
Contact & Transition Zone
Cracking (Micro-cracking)
Elastomeric Compatibility
Freeze/Thaw
SPECS/STANDARDS/CODES
Microscopy (Microstructures)
Wind/Blasts/Shock
Sound Absorption, Barrier, Transmission
Color/Stan
Pop-outs
Skid Resistance
Other
Computer Software
Sustainability
Repair, Rehabilitation
Economy, Cost, Life-Cycle
Marine
Mix Design
STR Mix Design
Block Mix Design
Low Density Mix Design
Flowable Fill Mix Design
Asphalt Mix Design
Aggregate-Coarse: LWA
Aggregate-Fine: LWA
Air less than 8%
Air more than 8%
Cement: I, II, III
Cement: IV, V, K
Fiber (Plastic/Metal)
Fly Ash, Silica Fumes
Foam (Aluminum Powder)
Ground Blast. Furnace Slag
No-Fines
Prescribed Aggregate, vacuum saturation, Hydrothermal
Reversed Blend
Rubberized Asphalt
Slump
Temperature: High-Low
Water Cement Ratio
Storm water filtration
Autoclave Curing
Hot & Cold Weather Curing
Moist Curing
Steam Curing
Internal/Self Curing
Marketing: History, Overview
USF/APPLICATION
Lightweight Masonry
CMU "Block"
Stone Masonry Veneer
Wall Systems (Fences)
Concrete Brick
Floor & Roof Systems
Retaining Wall Units (SRW)
Chimney Block
Productivity
24" Unit – Super Block
Mortar
Pavers
SLR Lightweight Concrete Bldg.
Components & Misc. Uses
Concrete
Beams
Columns, Corners
Walls
Concrete Homes
Floors (slabs) Lift Slabs
Ferroconcrete, Shotcrete/Gunite
Pavement, Slab on Grade
Domes
Roof
Hydrobolic Parabolid, Shells
Exposed Aggregate Concrete
Elevated Structures
Self Compacting
Parking Structures
Bridges
Aqueous Environment
Brick, Dolomite, Gritstone
Environmental Engineering Structures
Sanitary
Building
Fill on Metal Deck, Composites
Concrete Frame
Construction Activities
Pumping, Handling, Placing
Finishing
Presstrest (Double Tee, I-Beams, Folded/Flat Plates)
Presstrest Misc. R/R ties, Poles, Rails
Tilt-up
Precast (Vaults, Tanks, Ornamental, Wall Panels, Etc.
Artificial Stone
Refract. Fireplace Logs, Hi-temp
Pipe
Asphalt Pavement, Overlays
Low-Density, Wood Floors, Roof
Chloride Ion
Influence of Moisture
Vibration Damping
Seismic
Cyclic & Rate of Loading
Thermal Movement
Strength to Age
Depth to Length
Strength to Age
Strength to Weight
Dimensional/Volume Stability
Creep
Shrinkage, Drying, Plastic
Thermal Movement
Cyclic & Rate of Loading
Dynamic Modulus (Pulse Velocity)
Fatigue
Seismic
Vibration Damping
Influence of Moisture
Absorption
Chloride Ion
Corrosion of Reinforcement
Efflorescence
Permeability
Porosity
internal curing
Floor coverings
Durability/Deterioration
Abrasion Resistance (Ice)
Carbonation
Chemical
Contact & Transition Zone
Cracking (Micro-cracking)
Elastomeric Compatibility
Freeze/Thaw
Carbonation of Reinforced Concrete – Its Causes and Management

Richardson M.G.

Civil Engineering Dept University College Dublin, Ireland

Paper

1988

Yes

Hazardous Soil
Liquid Burnable Material (waste)
Tires
Wood
Absorption/adsorption
Alkali Silica Reactivity
Angle of Internal Friction Φ
Chemical Analysis, Composition
Chemical Leachate
Color
Dust Control
In-situ Density
Freeze/Thaw Durability
Gradation, Size, Fine Modulus
Hazardous

LW Aggregate Properties

Unit Weight (loose, rodded)

Tumble Abrasion (LA)