

Stucco / Plaster Analysis Package

This analysis package is designed to provide a full detailed survey of the quality of a calcined gypsum product from the standpoints of chemical composition with targeted determination of nongypsum impurities, slurry fluidity and the effect of mechanical disintegration, mill grind, rehydration response to set acceleration and compressive strength performance.

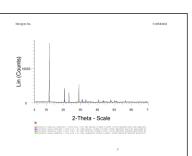
| Stucco Test | Result | |
|--|---|--|
| Gypsum phase analysis (gravimetric) | % free water/soluble anhydrite/hemihydrate/gypsum/other | |
| | (includes overall gypsum purity) | |
| Combined Water (moisture balance) | % free water/combined water | |
| Chloride content (specific ion probe) | ppm Cl ⁻ | |
| Powder X-Ray diffraction mineral | % mineral composition as determined from a database of over | |
| analysis | 34,000 mineral patterns | |
| Whole rock chemical analysis | al analysis % composition identifying 45 elements and 10 oxides | |
| Hand mix water demand | mL/100g | |
| Machine mix water demand (slump test) | mL/100g | |
| Blaine surface area | cm ² /g | |
| Particle Size Analysis (laser diffraction) | Volume % distribution for 0.4μm – 1mm in ASTM sieve format | |
| Mechanical disintegration analysis | Particle size analysis of samples at 3 different levels of | |
| | mechanical mixing | |
| Set curve analysis (as received and with | several parameters measured including: set time, temperature | |
| B levels of added ball milled accelerator) rise, maximum rate of rise etc. | | |
| Vicat set time (as received and with 3 | minutes:seconds | |
| levels of added ball milled accelerator) | | |
| Cube compressive strength (2", in | psi / density | |
| triplicate) | | |

Each analysis package also includes a confidential report on the above findings explaining the significance of the results to a gypsum board plant or plaster operation and recommended next steps.

Typical reports are 10-14 pages in the following format:

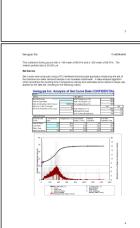




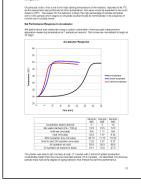


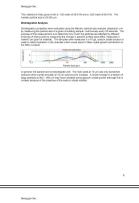




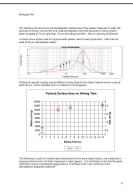












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| water manus than a tigrical leditir studio which may lead to induced distringation performs with equivalent mixing. Studiotive leading of the passer in vision of executions if does not visit a sacily as a tigrical modeling plasser but that this waterly behavior in not as poor as has been observed with some files indistring behavior to gradual property to produce grown to bed. | 00 |
| Water demand was good for board stucco at 72.5 mL / 100 p. | |
| Set performance may be somewhat slow for the amount of accedents that was added, althous bater than measured with the previous telepolar sample. More information is needed here regarding this prycosed specifications for the plant. | er. |
| Chloride anniysis showed high chiaride content for this sample, different than the previous sample. This will need to be revalled further. | |
| XHD results showed no abnormal mineral imputities for a natural gapsum-sample. | |
| Further Analysis / Recommendations | |
| A low gyours feed somple should be recovered for overall guosum purity in order to leade to reach the activates content of the studio. More applicationed measurements of slowly adultion arrhydric species should be ovaluated. | |
| Proposed insepends and times to the kindle and dilyer are recommended in order to fully understand the implications of the measured set ourse possessions. | |
| Charide content will need to be investigated further across more samples. | |
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