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## Data in Brief

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## Data Article

# Experimental datasets on properties of river sand as an aggregate in replacement of crushed rock for interlocking stones production



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## ARTICLE INFO

## Article history:

Received 9 May 2018

Received in revised form

15 August 2018

Accepted 22 August 2018

Available online 28 August 2018

## Keywords:

River sand

Crushed stone as fine aggregate

Cement

Compressive strength

Experimental procedures

## ABSTRACT

The data explored the assessment of the quality of river sand as an aggregate in replacement of crushed stones which are widely used by majority of manufacturers in production of interlocking stones. Experimental tests carried out on river sand and crushed rock as aggregates include: Grain size distribution, Specific gravity, moisture content determination and Bulk density to determine the quality behavior parameters and (compressive strength) to determine the strength parameters. The data of the experiments are presented in Tables and Bar charts.

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## Specification Table

|                            |   |
|----------------------------|---|
| Subject area               | Building Construction, Building Materials Science |
| More specific subject area | Building Materials Development                    |
| Type of data               | Table, Figure                                     |

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<https://doi.org/10.1016/j.dib.2018.08.056>

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|                       |   |
|-----------------------|---|
| How data was acquired | The data were obtained through experimental tests and procedures under conducive atmospheric condition in the laboratory and simple statistical tools were employed for the analyses. |
| Data format           | Raw data obtained were processed and analysed.  |
| Experimental factors  | Various tests on Physical properties and strength parameters of aggregate samples such as moisture content, Bulk Density, Specific gravity, Sieve                                     |
| Experimental features | Analysis and compressive strength were carried out. Engineering properties of River Sand and Crushed Rock with various laboratory tests.  |
| Data source location  | Ota, Atan, Ado-odo Local Government Area, Ogun State, Nigeria.  |
| Data accessibility    | The data is available with the article  |

### Value of the data

- The data can be used as a clear indication for finding result comparison from other countries where the use of the said materials is prevalent.
- The data can be adopted for governmental policy on low-cost housing scheme production for the benefit of low-income earners.
- The data provided conducive room for further studies on the reliability of local building materials in the building industries.
- The data provided detailed experimental procedures on how river sand could be used instead of crushed stone thereby reducing its production cost.

## 1. Data

The data assessed the usefulness of available river sand in replacement of crushed stones in the production of interlocking stone. Related articles are [1–4]. The data presented in Tables 1–9 were obtained from the analyses of property parameters of river sand and crushed rock to determine its suitability for construction activities. The behaviour of 100% RS, 50%/50% RS/CR, 100% CR as indicated in Tables 1–9 illustrated that all the specimens met required standards but River sand had the highest value [5–10]. The variance in the value of aggregates in moisture content determination, specific gravity and bulk density determination were equally illustrated in the tables. Data of grading sizes parameters are shown in Figs. 1–3 and they were all in conformity with the standard requirements [8–10].

**Table 1**  
Moisture content determination of 100% river sand.

| Tin no             | 1A (g)                 | 1B (g)      |
|--------------------|------------------------|-------------|
| Tin + Wet Soil     | 68                     | 80          |
| Tin + Dry Soil     | 67                     | 79          |
| Weight of Tin      | 34                     | 40          |
| Weight of Water    | 1.0                    | 1.0         |
| Weight of dry soil | 33                     | 39          |
| M.C. %             | <b>3.00</b>            | <b>2.60</b> |
|                    | Average: - <b>2.80</b> |             |

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