

GP MAKAKILO QUARRY **PRODUCT SELECTION GUIDE**

| DESCRIPTION             | SPECIFICATION STANDARDS | PRODUCT NUMBER | NOMINAL SIZE RANGE | ESTIMATED TONS PER CUBIC YARD* | TYPICAL USES                           |
|-------------------------|-------------------------|----------------|--------------------|--------------------------------|--|
| <b>GRADE A BASALT</b>   |                         |                |                    |                                |  |
| #2A Coarse              | ASTM C-33 #4            | 0202           | 1 1/2" - 3/4"      | 1.50                           | concrete or asphalt applications       |
| #3A Coarse              | ASTM C-33 #5            | 0203           | 1" - 1/2"          | 1.46                           | concrete or asphalt applications       |
| #3A Fine                | ASTM C-33 #67           | 0204           | 3/4" - #4          | 1.48                           | concrete or asphalt applications       |
| #4A Mesh Fine           | ASTM D-448 #10          | 0206           | #4 - 0             | 1.54                           | concrete or asphalt applications       |
| Commercial Chips        | ASTM C-33 #8            | 0208           | 3/8" - #8          | 1.43                           | concrete or asphalt applications       |
| Primary Crusher A Surge |                         | 0212           | 4" Minus           | 1.50                           | drainage or stabilization applications |
| Basalt Sand             | ASTM C-33               | 0222           | #8-#100            | 1.38                           | masonry or custom applications         |

|                                    |                       |      |               |      |  |
|------------------------------------|-----------------------|------|---------------|------|--|
| <b>GRADE B BASALT &amp; CINDER</b> |                       |      |               |      |  |
| #3B Coarse                         |                       | 0240 | 1" - 1/2"     | 1.27 | drainage or stabilization applications |
| Government Select Borrow           | State DOT Sub-base    | 0241 | 2" - 0"       | 1.49 | pavement structure or general fill     |
| #2B Coarse                         |                       | 0242 | 1 1/2" - 3/4" | 1.27 | drainage or stabilization applications |
| BWS S4C                            | BWS S4C               | 0246 | 3/8" Maximum  | 1.55 | trench backfill                        |
| Government Base Course             | State DOT Base Course | 0251 | 1 1/2" - 0"   | 1.49 | pavement structure                     |
| Commercial S4C                     |                       | 0260 | 3/8" - 0"     | 1.55 | trench backfill                        |
| #3B Fine                           |                       | 0261 | 3/4" - 3/8"   | 1.30 | structural foundations/trench backfill |
| Primary Crusher B Surge            |                       | 0278 | 5" Minus      | 1.40 | specialized applications               |
| Molokai Cinder #4 Fine             |                       | 0580 | #4 - 0"       | 1.10 | custom applications                    |
| Molokai Cinder #3 Fine             |                       | 0581 | 3/4" - 3/8"   | 0.84 | custom applications                    |

|                                      |  |      |             |      |  |
|--------------------------------------|--|------|-------------|------|--|
| <b>RECYCLED CONCRETE AND ASPHALT</b> |  |      |             |      |  |
| Recycled Asphalt #3 Fine             |  | 0604 | 3/4" - 3/8" | 1.15 | structural foundations/trench backfill |
| Recycled Select Borrow               |  | 0641 | 2 1/2" - 0" | 1.31 | pavement structure or general fill     |
| Recycled Base Course                 |  | 0651 | 1 1/2" - 0" | 1.31 | pavement structure                     |
| Recycled #3 Fine                     |  | 0661 | 3/4" - 3/8" | 1.15 | structural foundations/trench backfill |

**STANDARDS & SPECIFICATIONS**

Grace Pacific Corporation uses standards and specifications set by various agencies to grade our products. These standards ensure the easy classification and grading of materials. Grace Pacific Corporation uses standards set by the following organizations:



ASTM continues to be the standards forum of choice of a diverse range of industries that come together under the ASTM umbrella to solve standardization challenges. Standards developed at ASTM are the work of over 30,000 ASTM members. These technical experts represent producers, users, consumers, government and academia from over 100 countries. [www.astm.org](http://www.astm.org)



The three divisions of DOT; Airports, Harbors and Highways, work with their Federal counterparts; Federal Aviation Administration, U.S. Coast Guard and Federal Highways Administration, to keep Hawaii coordinated with overall U.S. standards. The D.O.T. sets and/or administers standards for its various divisions, and these standards are included in their job specifications and RFQ's. [www.state.hi.us/dot](http://www.state.hi.us/dot)



The Board of Water Supply (BWS) manages Oahu's municipal water resources and distribution system. The board is charged with providing water to the City and County of Honolulu, and to ensure the quality and consistency of the water supply. In this role, it has set out guidelines for backflow prevention and issued the BWS S4C standard for soil used in packing water supply pipe. [www.hbws.org](http://www.hbws.org)

**DISCLAIMER:**

GRACE PACIFIC CORPORATION DISCLAIMS ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF OUR PRODUCTS FOR A PARTICULAR PURPOSE. We urge you to consult your project and/or soil engineer(s) before selecting any material.

**MATERIAL DESCRIPTIONS**

**BASALT**

Basalt is the most common type of solidified lava; a dense dark gray fine-grained igneous rock composed chiefly of calcium-rich plagioclase feldspar and pyroxene. On Oahu, all mined rock is basalt, the result of Hawaii's volcanic origins.

**CINDER**

Our cinder comes from Molokai. Geologic Cinder is defined as porous red cinder fragments of dark lava. It is often used around baseball diamonds, or as a landscaping material.

**RECYCLED PRODUCTS**

Concrete and asphalt are crushed and mixed with virgin basalt material. The result is a product that is an acceptable substitute for 100% virgin material in many applications.

\* PER ASTM C-29 SPECIFICATION.