



GP MAKAKILO QUARRY PRODUCT SELECTION GUIDE




DESCRIPTION	SPECIFICATION STANDARDS	PRODUCT NUMBER	NOMINAL SIZE RANGE	ESTIMATED TONS PER CUBIC YARD*	TYPICAL USES
GRADE A BASALT					
#3A Coarse	ASTM C-33 #5	0101-301	1" - 1/2"	1.48	concrete or asphalt / landscaping material
#3A Fine	NON SPEC	0102-301	3/4" - #4	1.44	concrete or asphalt / landscaping material
#4A Fine	ASTM D-448 #10	0104-301	#4 - 0	1.63	concrete or asphalt / landscaping material
Commercial Chips	ASTM C-33 #8	0103-301	3/8" - #8	1.41	concrete or asphalt / landscaping material
Basalt C-33 Sand	ASTM C-33	0107-301	#8 - #200	1.37	concrete or sand type applications
BWS S4C (Washed)	BWS WSS 209.02	2-0246	3/8" - 0"	1.48	trench backfill
Washed Sand	NON SPEC	2-0262	3/8" - 0"	1.43	trench backfill
*Orca C-33 Sand	ASTM C-33	0108-ORCA	#8 - #100	1.49	concrete or sand type applications

GRADE B BASALT & CINDER					
HDOT Select Borrow	HDOT 703.17	2-0241	2" - 0"	1.61	pavement structure or general fill
#2B Coarse	ASTM C-33 #4	2-0242	1 1/2" - 3/4"	1.40	drainage or stabilization applications
HDOT Base Coarse	HDOT 703.06	2-0251	1 1/2" - 0"	1.58	structural base material
Commercial S4C	NON SPEC	2-0260	3/8" - 0"	1.51	trench backfill
3B Fine	ASTM C33 #67	2-0261	3/4" - #4	1.39	structural / trench backfill
B-Grade 2 1/2" - 0"	NON SPEC	2-0274	2 1/2" - 0"	1.56	general fill
B Surge - Egress	NON SPEC	2-0278EG	5" - 1 1/2"	1.24	ingress / egress
Makakilo Red Cinder (Fine)	NON SPEC	2-0580	3/8" - 0"	1.21	baseball field material

RECYCLED CONCRETE AND ASPHALT					
Recycled Asphalt 6" - 0"	NON SPEC	2-0604A	6" - 0"	1.55	recycled fill material
Recycled Asphalt 1 1/2" - 0"	NON SPEC	2-0604B	1 1/2" - 0"	1.36	recycled fill material
Recycled Concrete #3 Fine	ASTM C-33 #67*	2-0661C	3/4" - #4	1.19	recycled fill material

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 of 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
	The three division 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.hidot.hawaii.gov
	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 packin water supply pipe. www.boardofwatersupply.com

DISCLAIMER:

GRACE PACIFIC CORPORATION DISCALIMS 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 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.