



April 1, 2022

ORCA WASHED GRAVEL 1/2" x No.4 (12.5 x 4.75mm)

The Orca concrete aggregates are produced at the Orca Quarry, Port McNeill, B.C., in a modern and efficient washing and processing plant opened in March 2007 and distributed via ocean-going ships or barges.

The California Department of Transportation has established that aggregates from this source are innocuous with respect to Alkali Silica Reactivity and has approved them for use in reduced mineral admixture concrete.

Caltrans # 19-Can-01

<https://mets.dot.ca.gov/aml/InnocuousAggList.php>

PERCENTAGE PASSING

Sieve Size	Orca Gravel (Typical Values)	Specifications			
		CALTRANS Per: 90-1.02C (4)(b) 2015		ASTM C33-03 Type 7	
19.0 mm (3/4")	100	100		100	
12.5 mm (1/2")	90	82 - 100		90 - 100	
9.5 mm (3/8")	60	X = 60	45 - 75	X = ± 15	40 - 70
4.75 mm (#4)	8	0 - 15		0 - 15	
2.36 mm (#8)	3	0 - 6		0 - 5	

TYPICAL PROPERTIES

Testing		Specifications			
Test Name	Orca Value	CTM	ASTM	Caltrans	ASTM
Specific Gravity, bulk SSD	2.879		C127		
Absorption	0.7	206	C127		
Dry Rodded Unit Weight, pcf	111.3	212	C29		
Cleanness Value	91	227		75 Min.	
Durability	85	229			
Soundness, Coarse	0.2%	214	C88	10% Max	12% Max
Soundness, Fine	0.2%	214	C88	10% Max	12% Max
Los Angeles Abrasion (500 Revs)	11%	211	C131	45% Max	50% Max
Materials Finer Than No. 200	0.5%		C117		1% Max
Lightweight Pieces (Coal or Lignite)	0.1%		C123		0.5% Max
Lightweight Pieces (Chert & Shale)	0.4%		C123		5% Max
Clay Lumps, Coarse	0.0%		C142		5% Max
Alkali Silica Reactivity	Innocuous		C1567		0.10% Max
Alkali Silica Reactivity	Innocuous		C1293		0.04% Max
Alkali Silica Reactivity	Innocuous		C1260		0.04% Max

Special Notes*

1) **This material carries an Environmental Product Declaration**

This declaration has been prepared in accordance with ISO 14025, ISO 21930, and ASTM International's EPD program operator rules.



Index List (<https://www.astm.org/CERTIFICATION/EpdAndPCRs.html>)

Specific EPD (https://www.astm.org/CERTIFICATION/DOCS/344.EPD_Polaris_Materials_final.pdf)

2) **This product is recognized by NSF International**

This product complies with NSF/ANSI 61, 372 and all other applicable requirements



3) All testing has been performed at accredited 3rd party laboratories in accordance with applicable ASTM and CalTrans methods.



A handwritten signature in black ink, appearing to read 'SDryden'.

Scott Dryden

President & CEO
Orca Sand & Gravel LP.