



# Material Safety Data Sheet

24 Hours TELEPHONE (408) 263-2384 June 2011

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## SECTION I: PRODUCT IDENTIFICATION

**PRODUCT NAME:** AGGREGATE BASE CLASS II, BEDDING AND STRUCTURAL BACKFILL MATERIAL  
**SYNONYM:** RECYCLED AGGREGATE, CLASS II BASE ROCK, BEDDING, BACKFILL  
**CHEMICAL FAMILIES:** MIXTURE \*(SEE SECTION II)\*

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## SECTION II: PRODUCT COMPOSITION AND IDENTIFICATION

### FORMULA

NO.	COMPOSITION	PERCENT	CAS
1	MINERAL AGGREGATE	80-89%	8042-42-4
2	ASPHALT CEMENT	1-5%	NONE
3	PORTLAND CEMENT	10-15%	65997-15-1

**DOT PROPER SHIPPING NAME:** = NONE

**DOT HAZARD CLASS:** = NONE

**ACUTE TOXICITY DATA:** = NOT AVAILABLE

**UN / NA NUMBER:** = NONE

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## SECTION III: HEALTH INFORMATION

### EYE CONTACT

DUST PARTICLES MAY CAUSE IRRITATION; INTENSELY HEATED MATERIAL MAY GIVE OFF IRRITATING FUMES FROM PETROLEUM ASPHALT.

### SKIN CONTACT

REPEATED AND/OR PROLONGED CONTACT MAY CAUSE IRRITATION, DRYNESS AND/OR DERMATITIS.

### INHALATION

REPEATED AND/OR PROLONGED INHALATION OF DUST MAY CAUSE RESPIRATORY TRACT IRRITATION.

### INGESTION

INGESTION OF SMALL QUANTITIES OF DUST MAY RESULT IN GASTROINTESTINAL DISTRESS. WASH HANDS AND OTHER SKIN SURFACES BEFORE EATING, DRINKING OR USING TABACCO PRODUCTS.

### SIGN AND SYMPTOMS

IRRITATION AS NOTED ABOVE

### AGGRAVATED MEDICAL CONDITIONS

PREEXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

### OTHER HEALTH EFFECTS

SEE SECTION VI FOR ADDITIONAL HEALTH INFORMATION.

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**SECTION IV: OCCUPATIONAL EXPOSURE LIMITS**

NO	<u>OSHA</u>		<u>ACGIH</u>		OTHER
	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	
1	15 MG/ M3		10 MG/M3 **		
2			10 PPM *		
3	15 MG/ M3		10 MG/M3 **		

\* ASPHALT PETROLEUM FUMES. \*\* TYPICALLY > 1% CRYSTALLINE SILICA

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**SECTION V: EMERGENCY AND FIRST AID PROCEDURES****EYE CONTACT**

GENTLY FLUSH ANY PARTICLES FROM THE EYE(S) WITH LARGE AMOUNTS OF WATER. GET MEDICAL ATTENTION.

**SKIN CONTACT**

NOT EXPECTED TO CREATE SKIN IRRITATION UNDER NORMAL USE CONDITIONS. WASH WITH SOAP AND WATER. SEEK MEDICAL ATTENTION IF SKIN IRRITATION PERSISTS.

**INHALATION**

REMOVE FROM EXPOSURE AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET MEDICAL ATTENTION. REMOVE VICTIM TO FRESH AIR.

**INGESTION**

IN CASE OF INGESTION OF LARGE QUANTITIES OF PRODUCT, SEEK MEDICAL ADVISE.

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**SECTION VI: SUPPLEMENTAL HEALTH INFORMATION**

RECYCLED AGGREGATE BASE CONTAINS NO KNOWN INGREDIENTS OCCURRING IN GRATER AMOUNT THAN 0.1% LISTED IN THE CARCINOGENS MONOGRAPHS OF THE **IARC**, **NTP** ANNUAL REPORT OR **OSHA** LIST OF TOXIC AND HAZARDOUS SUBSTANCES.

TRACE AMOUNTS OF THE FOLLOWING MATERIALS KNOWN TO CAUSE CANCER IN HUMANS AND/OR LABORATORY ANIMALS ARE PRESENT:

**LEAD, CHROMIUM, ARSENIC, PETROLEUM ASPHALT**

NONE OF THESE CHEMICALS IS IN A FORM OR CONCENTRATION ABOVE PERMISSIVE HUMAN EXPOSURE LEVELS.

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**SECTION VII: FIRE AND EXPLOSION HAZARD DATA**

**FLASH POINT:** NOT APPLICABLE                      **AUTOIGNITION:** NOT DETERMINED

**EXTINGUISHING MEDIA**

WATER OR FOAM MAY CAUSE FROTHING; IF MOLTEN, USE DRY CHEMICAL, CARBON DIOXIDE, FOAM OR WATER SPRAY. NON-COMBUSTIBLE UNDER NORMAL CONDITIONS.

**FIRE FIGHTING PROCEDURES**

WEAR COMPLETE FIRE SERVICE PROTECTIVE EQUIPMENT INCLUDING A FULL FACE **MSHA/NIOSH** SELF CONTAINED BREATHING APPARATUS. USE WATER TO COOL DOWN FIRE-EXPOSED CONTAINERS AND/OR STRUCTURES OR TO PROTECT PERSONNEL. TOXIC VAPORS MAY BE GIVEN OFF IN A FIRE FROM PETROLEUM ASPHALT.

**HAZARDOUS REACTIONS, FIRE AND EXPLOSION HAZARD**

NO HAZARDOUS REACTIONS. INTENSE HEAT MAY RELEASE CARBON MONOXIDE (CO) CARBON DIOXIDE (CO<sub>2</sub>), SULFUR OXIDES (S<sub>x</sub>O<sub>x</sub>), AND HYDROGEN SULFIDE (H<sub>2</sub>S), AND OTHER PRODUCTS FORMING FLAMMABLE / EXPLOSIVE MIXTURES IN THE AIR. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

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**SECTION IX: EMPLOYEE PROTECTION**

**RESPIRATORY PROTECTION**

IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORDANCE WITH 29 CFR 1910.134, USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

**PROTECTIVE CLOTHING**

AVOID CONTACT WITH EYES. WEAR SAFETY GLASSES OR GOGGLES AS APPROPRIATE. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR GLOVES AND OTHER CLOTHING AS REQUIRED MINIMIZING CONTACT. LAUNDRY CONTAMINATED CLOTHING BEFORE USING. DISCARD LEATHER GOODS WHEN THEY CANNOT BE DECONTAMINATED.

**PERSONAL PROTECTION**

OBSERVE GOOD PERSONAL HYGIENE. WASH THOROUGHLY AFTER WORKING WITH AGGREGATE BASE AND BEFORE EATING (OR SMOKING).

**SECTION X: ENVIRONMENTAL PROTECTION**

**SPILL PROCEDURES**

NO HAZARDS FROM SPILLING SMALL QUANTITIES. SHOVEL OR SCOOP SPILLED MATERIAL BACK INTO ORIGINAL CONTAINER. AS WITH ANY DENSE, GRANULAR MATERIAL.

**WASTE DISPOSAL**

THIS PRODUCT IS NOT DEFINED AS A USEPA DEFINED HAZARDOUS WASTE, BUT SHOULD BE DISPOSED OF AS INDUSTRIAL WASTE.

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**SECTION XI: SPECIAL PRECAUTIONS**

WHEN ASPHALTIC PRODUCTS ARE HEATED, THEY OFTEN GIVE OFF SMALL AMOUNTS OF HYDROGEN SULFIDE (H<sub>2</sub>S). H<sub>2</sub>S IS AN EXTREMELY FLAMMABLE, HIGHLY TOXIC GAS. BREATHING H<sub>2</sub>S MUST BE AVOIDED. MINIMIZE BREATHING OF VAPORS, FUMES OR MIST; WHEN POSSIBLE, USE VENTILATION OR WORK UPWIND OF SOURCE OF VAPORS, FUMES AND MIST. LAUNDER CONTAMINATED CLOTHING BEFORE USING. DISCARD LEATHER GOODS WHEN THEY CANNOT BE DECONTAMINATED. OBSERVE GOOD PERSONAL HYGIENE. WASH THOROUGHLY AFTER WORKING WITH ASPHALT AND BEFORE EATING (OR SMOKING).

INDIVIDUALS MAY BE SUFFOCATED IF TRAPPED BENEATH SUFFICIENT QUANTITIES OF SPILLED MATERIALS.

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**SECTION XII: TRANSPORTATION REQUIREMENTS**

<b>DOT PROPER SHIPPING NAME:</b>	NONE		
<b>DOT HAZARD CLASSIFICATION:</b>	NONE	<b>UN/NA NUMBER:</b>	NONE

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**SECTION XIII: OTHER REGULATORY CONTROLS**

RECYCLED AGGREGATE BASE CONTAINS APPROXIMATELY 50% BY VOLUME OF ASPHALT PAVEMENT ASPHALTIC CEMENT IS LISTED ON THE EPA / TSCA INVENTORY OF CHEMICAL SUBSTANCES.

**PROTECTION OF STRATOSPHERIC OZONE (SEC. 611, CAAA, 1990)**

THIS PRODUCT DOES NOT CONTAIN NOR WAS DIRECTLY MANUFACTURED WITH ANY CLASS I OR CLASS II OZONE DEPLETING SUBSTANCES. (PER 40 CFR PART 82)

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE ATTACHED ENVIRONMENTAL DATA SHEET (EDS) SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

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**SECTION XIV: STATE REGULATORY INFORMATION**

THIS PRODUCT CONTAINS A CHEMICAL OR CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND / OR REPRODUCTIVE TOXICITY. (CA 65) (EDS) SHOULD ALWAYS BE COPIED AND SENT WITH THE MDS.

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**SECTION XV: SPECIAL NOTES**

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO **Z-BEST PRODUCTS** AND BELIEVED TO BE CORRECT. **Z-BEST PRODUCTS** MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. **Z-BEST PRODUCTS** ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

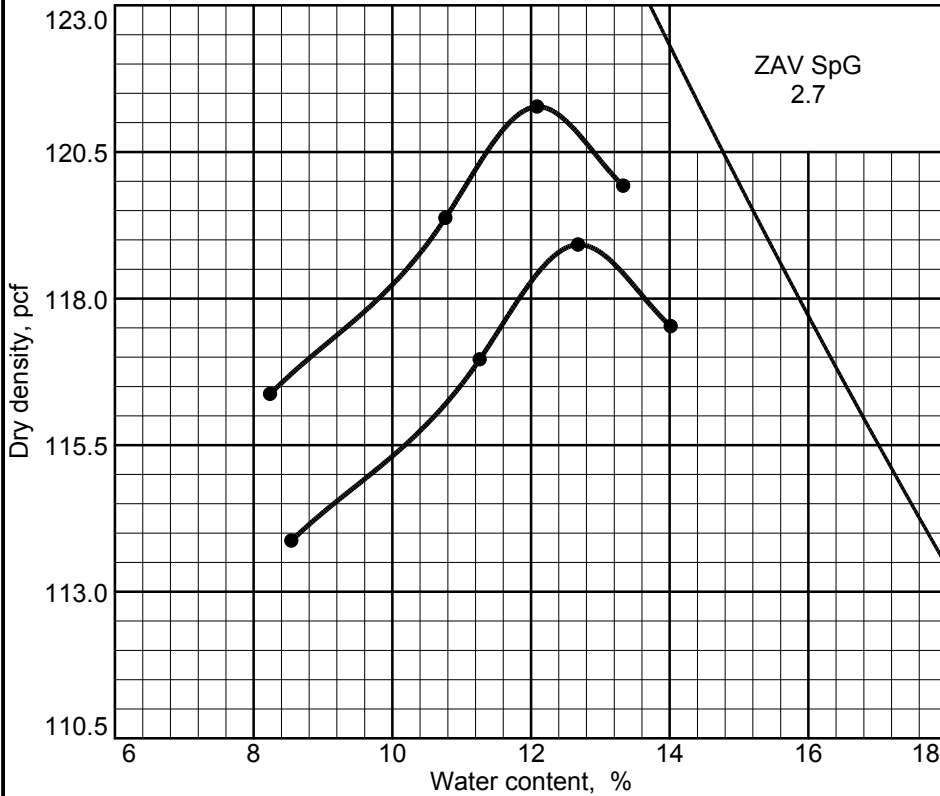
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DATE REVIEWED: June 2011  
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**READ OUR PRODUCT SAFETY INFORMATION AND PASS IT ON (PRODUCT LIABILITY LAW REQUIRES IT)**

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# COMPACTION TEST REPORT



**Curve No.**

**Test Specification:**

ASTM D 1557-00 Method C Modified  
Oversize correction applied to each point

Hammer Wt.: 10 lb.  
 Hammer Drop: 18 in.  
 Number of Layers: five  
 Blows per Layer: 56  
 Mold Size: .075 cu.ft.

**Test Performed on Material**

Passing 3/4 in. Sieve

**Soil Data**

NM \_\_\_\_\_ Sp.G. 2.7  
 LL \_\_\_\_\_ PI \_\_\_\_\_  
 %>3/4 in. 6.9 %<#200 2.8  
 USCS \_\_\_\_\_ AASHTO \_\_\_\_\_

**TESTING DATA**

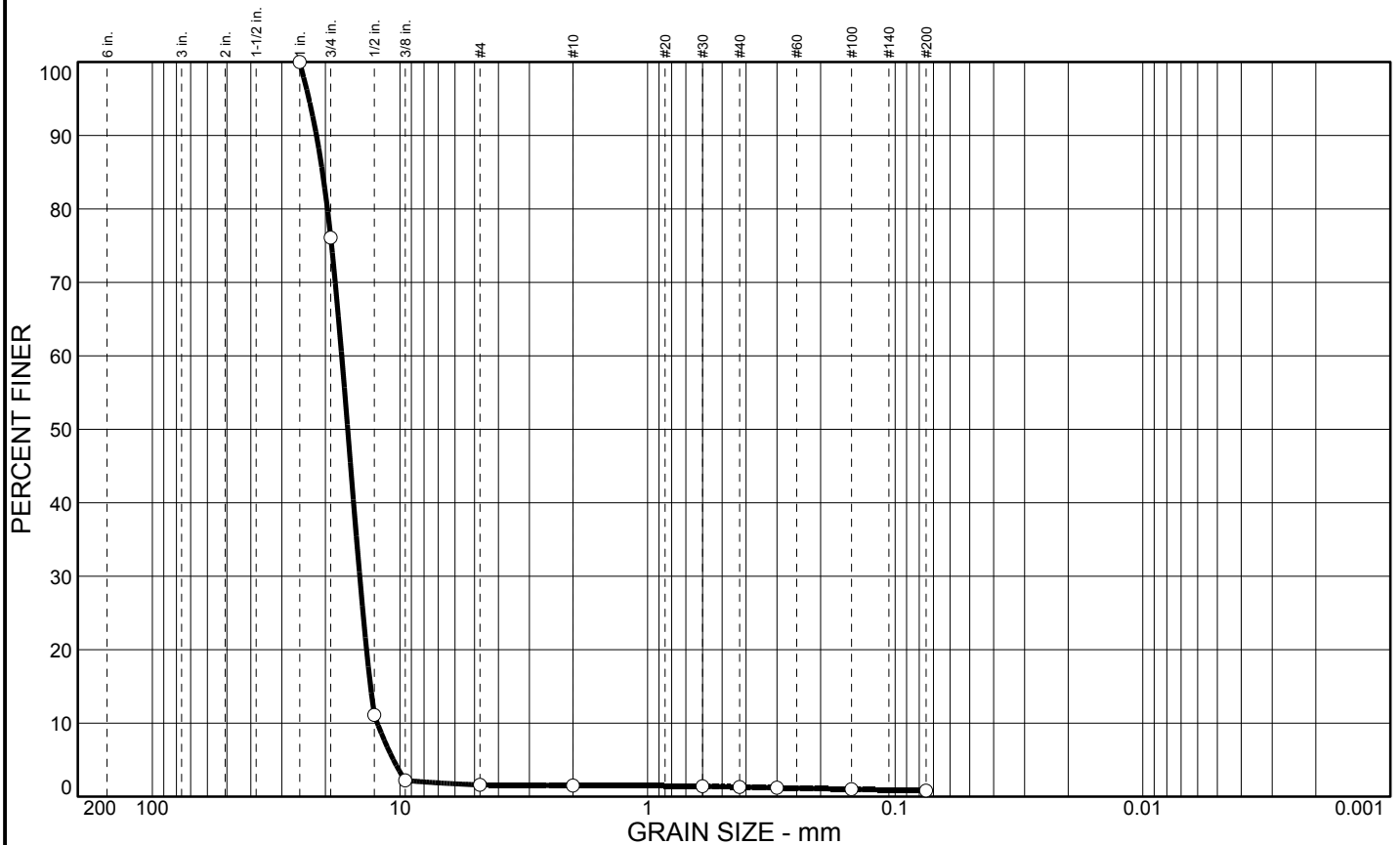
	1	2	3	4	5	6
<b>WM + WS</b>	15.87	16.16	16.16	15.38		
<b>WM</b>	6.11	6.11	6.11	6.11		
<b>WW + T #1</b>	1159.20	1050.60	1117.50	1061.30		
<b>WD + T #1</b>	1062.00	954.80	1003.70	993.50		
<b>TARE #1</b>	198.80	199.30	191.70	200.00		
<b>WW + T #2</b>						
<b>WD + T #2</b>						
<b>TARE #2</b>						
<b>MOISTURE</b>	10.8	12.1	13.3	8.2		
<b>DRY DENSITY</b>	119.4	121.3	119.9	116.4		

ROCK CORRECTED TEST RESULTS	UNCORRECTED	Material Description
Maximum dry density = 121.3 pcf	118.9 pcf	Gray Well-Graded GRAVEL w/ Sand (Recycled AB)
Optimum moisture = 12.1 %	12.7 %	

**Project No.** 731-003      **Client:** Zanker Road Landfill  
**Project:** Class II AB  
**Source:** Class II AB

**Remarks:**  
 This material is cohesionless & free-draining and, per ASTM, is unsuitable for D1557. Although, a well-defined curve is shown the maximum density should be considered approximate.

# Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
0	98.4	0.8	0.8					

SIEVE inches size	PERCENT FINER			SIEVE number size	PERCENT FINER			SOIL DESCRIPTION
1"	○	100.0		#4	○	1.6		○ Gray Poorly Graded GRAVEL
3/4"		76.1		#10		1.5		
1/2"		11.1		#30		1.4		
3/8"		2.2		#40		1.3		
GRAIN SIZE				#50		1.2		
D60		17.2		#100		1.0		
D30		14.5		#200		0.8		
D10		12.3						
COEFFICIENTS								
C <sub>c</sub>		1.00						
C <sub>u</sub>		1.39						
								REMARKS: ○

○ Source: (In House 3/25/11)

<b>COOPER TESTING LABORATORY</b>	Client: Zanker Road Landfill Project: 3/4" Drain Rock Project No.: 731-009
	Figure