

# 7505E/7530 Epoxy Grout

Three-Component, Low-Exothermic Epoxy Grout

Technical Bulletin # 1612D

## TYPICAL PHYSICAL PROPERTIES

Compressive Strength	(ASTM C-579)	14,000 psi (984 kg/cm <sup>2</sup> ) <small>(Actual field strength may vary, from 10,000 to 14000 psi depending on curing and testing conditions)</small>
Tensile Strength	(ASTM C-307)	2,100 psi (147 kg/cm <sup>2</sup> )
Modulus of Elasticity	(ASTM C-579)	1.8 x 10 <sup>6</sup> psi (1.26 x 10 <sup>5</sup> kg/cm <sup>2</sup> ) <small>(Modulus of elasticity, as measured using ASTM C-579, can vary according to curing conditions and measurement techniques.)</small>
Coefficient of Linear Expansion	(ASTM C-531)	14.6 x 10 <sup>-6</sup> in/in/°F (25.2 x 10 <sup>-6</sup> cm/cm/°C)
Shrink on Cure		.036% (.00036 in/in)
Flexural Strength	(ASTM C-580)	4,700 psi (329 kg/cm <sup>2</sup> )
Adhesive Bond to Concrete, psi	(ASTM C-321)	Better than concrete
Adhesive Bond to Steel	(ASTM C-307)	2,100 psi (147 kg/cm <sup>2</sup> )
Exothermic Temperature Rise		2" Pour, + 20 °F
Approximate Working Life		2 hours at 77°F (25°C)
Sealed Shelf Life, Parts A & B		2 years
Depth of Pour Limitation*		18 in (46 cm)
Cured Density		125 lbs/ft <sup>3</sup> (1948 kg/m <sup>3</sup> )
Viscosity, Centipoise, 77°F (25°C):		
Epoxy Resin (Part A)		1100-1500 cps
Converter (Part B)		400-1000 cps
Flash Point, SETA closed cup:		
Epoxy Resin (Part A)		>210°F (99°C)
Converter (Part B)		>210°F (99°C)
Dielectric Strength		140 volts/mil (5.5kV/mm)

\* Deeper pours can be made. Contact ITW Philadelphia Resins for details

**ESCOWELD®** Industrial Grouts & Polymers



By **ITW Philadelphia Resins**

130 Commerce Drive • Montgomeryville, PA 18936 • Phone: 215-855-8450 • Fax: 215-855-4688

All printed statements, data and recommendations are based on reliable information and are presented without any guarantee or warranty. Statements regarding the use of ITW Philadelphia Resins products and processes are not to be construed as recommendations for use in violation of any applicable laws, regulations or patent rights. © All rights reserved.

## SAFETY INFORMATION

### PART A RESIN

**CAUSES SKIN AND EYE IRRITATION  
MAY CAUSE SKIN SENSITIZATION  
VAPORS IRRITANT AT HIGH CONCENTRATION**

**PRECAUTIONS** – Keep away from heat, sparks and open flames. Avoid eye contact. Avoid contact with skin and clothing. Avoid breathing mists or vapors. Use with ventilation equal to unobstructed outdoors in moderate breeze. Keep container closed. Wash thoroughly after handling.

**FIRST AID** - Wash skin with soap and water. Flush eyes with plenty of water until irritation subsides. Remove to fresh air. If not breathing, apply artificial respiration and **CALL A PHYSICIAN**.

### PART B CONVERTER

**MODERATE EYE IRRITANT  
MODERATE SKIN IRRITANT  
MODERATE RESPIRATORY TRACT IRRITANT**

**PRECAUTIONS** - Do not get in eyes or on clothing. Wear suitable protective clothing and chemical safety goggles. Avoid breathing mists or vapors. Use with ventilation equal to unobstructed outdoors in moderate breeze.

**FIRST AID** - Immediately flush eyes and skin with plenty of water for at least 15 minutes while contaminated clothing and shoes are removed. **CALL A PHYSICIAN**. Launder clothing before reuse. Discard grossly contaminated shoes.

### PARTS A AND B

**FIRE FIGHTING** - Use water-spray to cool fire-exposed surfaces and protect personnel. Extinguish, preferentially with dry chemical, foam, water-spray or water-fog.

**SPILL CONTROL** - Keep public away. Eliminate sources of ignition. Shut off source, if possible to do so safely. Prevent liquid from entering sewers or watercourses. Advise authorities if material has entered a watercourse or sewer or has contaminated soil or vegetation. Contain spilled liquid with sand or earth. Recover by pumping or with suitable absorbent. Consult an expert on disposal of recovered material and ensure conformity with local disposal regulations.

1612D – 4/03

# ESCOWELD®

## Industrial Grouts & Polymers

### The **ESCOWELD®** Extended Aggregate Systems for Machinery Grouting and Foundations are designed to meet your installation and product performance needs.

The performance of any epoxy machinery grout system depends not only on the engineering and physical characteristics of the cured grout, but of the mixing and installation.

The new **ESCOWELD®** Enhanced and Super Aggregate Systems for machinery grouting and foundations offer you many benefits designed to simplify installation while providing excellent performance.

#### Key Benefits:

- **Simpler installation**
- **Greater yield/economy**
- **Excellent performance characteristics**

These unique systems combine The **ESCOWELD® 7505E** Resin/Hardener with **ESCOWELD® 7530** aggregate with precisely graded enhanced aggregates to provide exceptional flow characteristics, while achieving a greater yield per unit. These systems are a cost effective replacement for polymer-modified concrete and essential for deeper pours and foundation rebuilds. A 24-hour cure makes **ESCOWELD®** Enhanced Aggregate and **ESCOWELD®** Super Aggregate Machinery Epoxy Grouting Systems the smart choice for shut-downs and turn-arounds.

#### Features:

- **Greater Yield**, resulting in a lower cost per cubic foot.
- **Convenient Packaging**, to simplify the mixing of liquid components and provide greater mixing precision.
- **Superior Flow Characteristics**, to simplify installation on difficult foundations, assuring proper load-bearing area and reducing the time required for installation.
- **Cleans up with water**, a unique feature with obvious advantages over competitive products that require hydrocarbon-cleaning solvents.
- **Gentle Exothermic Cure**, provides low-stress results.

Other unique features and benefits, which have been offered for over 20 years with the original **ESCOWELD® 7505E/7530** formulation include:

- **Excellent Bonding**, to itself without surface preparation to simplify multiple pour projects.
- **Wide range of pour depths**, from 1 inch to 18 inches. This simplifies and speeds up any job, which would otherwise have required multiple pours and additional surface preparation.
- **24 hour cure**, especially valuable during tight turn-around schedules or emergency repairs.
- **Exceptional dimensional stability**, upon cure.
- **Excellent resistance**, to chemical and physical degradation.

#### Mixing & Installation:

Proper mixing of all components is particularly important in obtaining the maximum strength, flow and adhesive characteristics of epoxy grouts.

Mix the liquid components thoroughly and in correct proportions. The pail for **ESCOWELD® 7505E Part A** has enough room to permit mixing **Part B** directly in that container. Mix aggregate into a combined liquid components in a mechanical mixer. Mixing consistency is the key when adding aggregate.

For optimum results, follow the recommendations for site preparations closely, grout storage, grout mixing, grout placement, grout finishing, etc. See the **ESCOWELD®** Representative in your area for complete details or contact us at [www.escoweld.com](http://www.escoweld.com).



ITW **ESCOWELD®** Epoxy Grout Systems ♦ Montgomeryville, PA

[www.escoweld.com](http://www.escoweld.com)

Rev. 10/03



## Extended Aggregate Systems

Typical Physical Properties	Standard Mix	Enhanced Aggregate Mix	Super Aggregate Mix***
<b>Compressive Strength</b> <b>ASTM C 579</b> Actual field strength may vary from 10,000 to 14,000 psi depending upon curing and testing conditions.	14,000 psi	14,000 psi	16,000 psi
<b>Yield Per Unit</b>	2.4 cu.ft.**	2.9 cu.ft.**	3.4 cu.ft.**
<b>Tensile Strength</b>	2,100 psi	2,000 psi	2,000 psi
<b>Modulus of Elasticity</b> <b>ASTM C 579</b> Modulus of Elasticity as measured by ASTM C579 can vary according to conditions of curing and measuring techniques.	1.8 x 10 <sup>6</sup>	1.9 x 10 <sup>6</sup>	1.9 x 10 <sup>6</sup>
<b>Coefficient of Linear Expansion</b> <b>ASTM C 531</b>	14 x 10 <sup>-6</sup>	12 x 10 <sup>-6</sup>	12 x 10 <sup>-6</sup>
<b>Flexural Strength</b>	4,700 psi	[Not Tested]	[Not Tested]
<b>Adhesive Bond to Concrete</b> <b>ASTM C 307</b>	Better than Concrete	Better than Concrete	Better than Concrete
<b>Adhesive Bond to Steel</b> <b>ASTM C 307+A66</b>	2,100 psi	[Not Tested]	[Not Tested]
<b>Approximate Working Life</b> <b>@ 77°F</b>	2 hours	> 2 hours	> 2 hours
<b>Sealed Shelf Life, Part A &amp; B</b>	2 years	2 years	2 years
<b>Depth of Pour Limitation</b>	18 inches	24 inches*	48 inches*
<b>Cured Density, lbs./cu.ft.</b>	120 lbs./cu.ft.	130 lbs./cu.ft.	136 lbs./cu.ft.
<b>Viscosity, Centipoise @ 77°F</b> Epoxy Resin - Part A Converter - Part B	1,100 - 1,500 cps 700 - 1,200 cps	1,100 - 1,500 cps 700 - 1,200 cps	1,100 - 1,500 cps 700 - 1,200 cps
<b>Flash Point, SETA Closed Cup</b> Epoxy Resin - Part A Converter - Part B	210°F 210+B34	210°F 210°F	210°F 210°F
<b>Dielectric Strength</b>	140 volts/mil	140 volts/mil	140 volts/mil

\* Deeper Pours can be made, but and ESCOWELD® Representative should be contacted for specific instructions.

\*\*Typical physical properties as expressed for the ESCOWELD® Enhanced Aggregate and Super Aggregate mixtures are approximate based on the averages of multiple field samples tested.

\*\*\* The Super Aggregate System is designed for use as a polymer alternative to concrete when installing new foundations or rebuilding existing only. Contact your ESCOWELD® Representative when considering this system for your next application.



Extended Aggregate Systems  
Mix Data

PRC Part #	Mix Type	Enhanced	Super	Standard
	Component	Quantity	Quantity	Quantity
7575UN	Escoweld 7505E Liquids A&B, 40#/unit	1	1	1
7530A	Escoweld 7530 Engineered Aggregate, 53#/bag	4	4	5
	<b>Coral 1/4 - 3/8 Aggregate, 50#/bag *</b>	2	3	0
	Mixed Yield (Cu. Ft.)**	2.9	3.4	2.4
	Flowability	Good	Fair/Poor	Excellent

**NOTES:**

**\* This product is not available through Philadelphia Resins**

**Coral 1/4 - 3/8 Aggregate, 50# bags are available through:**

**Sheridan White Rock Company  
Attention: Pam Vance  
P.O. Box 485  
Sheridan, AR 72150  
Phone: 870-942-2488  
Fax: 870-942-7012**

**Contact Sheridan for cost information**

**\*\* Yields on extended aggregate mixtures are approximate and may vary slightly**

Sheridan White Rock Co.  
 P.O. Box 485  
 Sheridan, AR 72150

ANALYTICAL LABORATORIES LTD. 557 S. EASTMAN ST. VANCOUVER, BC V6C 1R6  
 WHOLE ROCK ICF ANALYSIS  
 GEM QUALITY FILE # 96-0874  
 106-23121 PLAZA POINT, VANCOUVER, BC V6C 1R6  
 ANALYZED BY: R.V. COLEMAN

SAMPLE#	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ba	Ni	Zr	Y	Hf	Mo	Ba	LOI	SUM
%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
A1 QUARTZITE	97.51	.20	.54	.02	.05	.05	.05	.06	<.01	<.01	.002	98	<20	<10	44	<10	<50	<10	.6	99.13
RE A1 QUARTZITE	97.46	.20	.50	.01	.05	.06	.05	.08	.02	<.01	.003	100	<20	<10	41	<10	<50	<10	.5	98.96
BS CLAY	35.38	5.16	1.99	9.87	20.89	.77	1.80	.23	.11	.05	.001	288	20	1616	50	<10	<50	<10	23.3	99.18
BLT 40-60 SILTCA	78.54	12.02	.37	.08	1.15	3.21	3.44	.06	.02	<.01	.006	1844	28	322	57	<10	<50	<10	.7	99.84
LJ SILTCA	97.88	.25	.22	.08	.13	.07	.08	.27	<.01	<.01	.001	266	<20	16	179	<10	<50	<10	1.1	100.16
WV CLAY	56.88	24.71	2.09	.32	.63	.16	4.46	.32	.01	.04	.002	93	<20	29	260	35	<50	<10	8.1	99.57
IN CLAY	54.33	15.23	4.96	2.86	3.53	1.46	2.67	.61	.17	.07	.006	533	31	246	110	23	<50	10	12.4	100.44
1H 1/4 X 8	72.28	13.64	1.93	.56	2.50	3.11	4.38	.25	.07	.03	.003	1531	<20	342	132	13	<50	<10	1.4	100.48
1H 4 X 20	73.22	13.98	1.23	.32	2.16	3.18	4.51	.16	.05	.02	.003	1727	<20	431	86	<10	<50	<10	1.3	100.49
YH GRAVEL	73.16	11.49	2.90	.60	1.79	2.46	4.59	.36	.11	.04	.005	980	<20	256	145	22	<50	<10	1.6	99.31
STANDARD SD-15	49.73	12.35	7.05	7.05	5.68	2.36	1.94	1.64	2.86	1.35	1.068	2173	71	385	790	19	<50	10	5.9	99.51

.200 GRAM SAMPLES ARE FUSED WITH 1.2 GRAM OF LiBO2 AND ARE DISSOLVED IN 100 MLS 5% HNO3. Ba IS SUM AS BaSO4 AND OTHER METALS ARE SUM AS OXIDES.  
 - SAMPLE TYPE: ROCK - SAMPLES DESTROYED - RE-TESTS RETURNED AND 'RE' ARE REJECT RETURNS.

DATE RECEIVED: FEB 26 1996 DATE REPORT MAILED: March 5/96 SIGNED BY: [Signature] D. TOYE, C. LEONG, J. WANG; CERTIFIED S.C. ASSAYERS

SPECIFIC GRAVITY AND ABSORPTION OF COARSE AGGREGATE  
ASTM C 127

**Project:** SHERIDAN WHITE ROCK  
**Location:**  
**Sample No.:** CA-2  
**Soil Description:** -3/8 WASHED GRAVEL

**Project No.:** 6461  
**Date:** 12/7/99  
**Sample Depth:**

**Bulk Specific Gravity:** 2.6  
**Bulk Specific Gravity (SSD):** 2.6  
**Apparent Specific Gravity:** 2.6  
**Absorption:** 0.6g  
**Moisture Content:** 0.6g

<b>Date:</b> 12-7-99	<b># of Pages:</b> 2
<b>To:</b> Hollis	<b>From:</b> Leslie
<b>Co:</b> Sheridan White Rock Co.	<b>Co:</b> ANDERSON ENGINEERING CONSULTANTS, INC.
<b>Phone:</b>	<b>Phone:</b> 501/455-4545
<b>Fax #:</b> 501/452-7012	<b>Fax #:</b> 501/455-4552



**MIXING INSTRUCTIONS FOR ESCOWELD® 7505E/7530  
Standard Mix, Enhanced Mix, and Super Aggregate System**

ESCOWELD® 7505E/7530 can be mixed using three different recipes to create three different products dependent on the application.

Standard Mix	Enhanced Mix	Super Aggregate System
<p>1 unit 7505E Liquid (Parts A &amp; B) 5 bags 7530 Aggregate Yield = 2.4 cubic feet</p>	<p>1 unit 7505E Liquid (Parts A &amp; B) 4 bags 7530 Aggregate 2 bags Coral Pea Gravel Yield == 2.9 cubic feet</p>	<p>1 unit 7505E Liquid (Parts A &amp; B) 4 bags 7530 Aggregate 4 bags Coral Pea Gravel Yield = 3.4 cubic feet</p>
<p>Standard Mix can be poured to depths of 18 inches. For depths greater than 8 inches contact your ESCOWELD Distributor. Enhanced mix may be recommended. When flow ability is a consideration either Standard Mix or Enhanced Mix should be used. Mix parts 7505E Liquid A &amp; B in the 5-gallon bucket provided. Mix for three minutes with a Jiffy mixer blade at 200 - 300 rpm. Pour the mixed 7505E mixture into the mortar mixer and start the paddles. Add the five (53 lb.) bags of 7530 Aggregate and mix for two minutes. Empty the mortar mixer into a wheelbarrow and repeat the procedure for additional units.</p>	<p>Enhanced Mix can be poured to depths of 24 inches. For depths greater than 8 inches contact your ESCOWELD Distributor. When flow ability is a consideration either Standard Mix or Enhanced Mix should be used Mix parts 7505E Liquid A &amp; B in the 5-gallon bucket provided. Mix for three minutes with a Jiffy mixer blade at 200 - 300 rpm. Pour the mixed 7505E mixture into the mortar mixer and start the paddles. Add the four (53 lb.) bags of 7530 Aggregate and two (50 lb.) bags of Coral Pea Gravel and mix for two minutes. Empty the mortar mixer into a wheelbarrow and repeat the procedure for additional units.</p>	<p>Super Aggregate Mix can be poured to a depth of 48 inches. When flow ability is not a consideration Super Aggregate Mix can be used. Typical applications for Super Aggregate Mix are where depths of over 24 inches are required. Contact your local Distributor before using Super Aggregate Mix. Mix parts 7505E Liquid A &amp; B in the 5-gallon bucket provided. Mix for three minutes with a Jiffy mixer blade at 200 - 300 rpm. Pour the mixed 7505E mixture into the mortar mixer and start the paddles. Add the four (53 lb.) bags of 7530 Aggregate and four (50 lb.) bags of Coral Pea Gravel and mix for two minutes. Empty the mortar mixer into a wheelbarrow and repeat the procedure for additional units.</p>