

Catalog Tooling

2 Component, Urethane & Epoxy

Casting, Laminating, Adhesive, Complementary Products

Manufactured By:

Tri-Tex
co inc.



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Quality

Toward a full partnership, as a standard practice to sustain the customers' activities, Tri-Tex's operations are done through a continuous total quality controlled program. Tri-Tex is dedicated to offer high quality competitive products.

The keys of success

Enterprise operated by qualified and professional personnel.
Epoxy and Urethane adhesive, formulated and manufactured to meet the customer's needs.
Quick response, just in time and fast delivery.
R & D laboratory as an integrated part of the manufacturing facility.

Specialized fields

east system TM adhesives are adapted and used in the following fields:

- **Aeronautic**
- **Electrical / Electronics**
- **Civil Engineer**
- **Industrial & Tooling**
- **Marine**
- **Architectural Stone (Marble & Granite)**
- **Product Assembly**

Making the Right Choice



Annex 1

October 2008



Tooling Products Selection Table

Product Number		Complementary Products					Adhesives		Casting Epoxies						Laminating Epoxies			Casting Urethanes						General Information										
		Parting Agent	Solvent	Surface Coat	Fast Epoxy 5 Min.	High Heat Surface Coat	Structural Paste	Structural High Heat	General Usage Up to 4 inches	Casting 1 inch Abrasion Resistant	Casting 1 inch High Heat	Casting 2 inches High Heat	Casting 2 inches Multiple Usages	Casting 2 inches Economical	Laminating Clear	High Heat Low Viscosity	Laminating Resin White	Working Time 5 min. Large Volume	Working Time 7 min. Large Volume	Casting Ultra Rapid	Working Time 15 min. Large Volume	Casting Resin General	Thixotropic Vertical / Horizontal	Post-cure	Machineable	Minimum Time (Workable)	Complete Curing	Mixing Ratio (weight)	Viscosity (cps)	Gel Time (min)	Color			
Complementary	10	X																																
	17		X																															
	33			X																			X			24 h	7 d	100 : 8	105,000	25		Gray		
	381					X																		X	X	Post Cure	Post Cure	100 : 10	155,000	60		Gray		
	3/10 R				X																					5 min	15 min	100 : 102	575,000	5		Gray		
Adhesives	375					X																	X			24 h	7 d	100 : 100	900,000	25		Gray		
	3651						X																X			24 h	7 d	100 : 25	325,000	90		Gray		
Casting Epoxies	217								X																X	12 h	7 d	100 : 10	4,500	45		Gray		
	238									X														X	X	Post Cure	Post Cure	100 : 9	6,750	90		Gray		
	242							X																	X	24	7 d	100 : 14	4500	120		Gray		
	260											X													X	24 h	7 d	100 : 7	6500	110		Gray		
	262												X												X	12 h	7 d	100 : 10	8,000	80		Gray		
	2384										X														X	X	Post Cure	Post Cure	100 : 12	13,500	160		Gray	
Epoxies Laminating	103													X												16 h	7 d	100 : 25	1,850	25		Clear		
	126														X											16 h	7 d	100 : 16	1,300	80		Clear		
	129															X										16 h	7 d	101 : 16	2,150	38		White		
Casting Urethanes	U80020																X								X	30 min	7 d	100 : 100	1,250	5		White		
	U80021																		X						X	60 min	7 d	100 : 100	1,250	7		Blue		
	U80022																				X				X	90 min	7 d	99 : 100	1,250	16		Yellow		
	U80030																		X						X	30 min	7 d	100 : 80	750	1		Black		
	U80060																					X			X	90 min	7 d	100 : 100	2,500	10		Amber		



Annex 2 Technical Data Sheet

October 2008



Technical bulletin

TOOLING
217
HIGH ABRASION RESISTANT CASTING SYSTEM

Description:

The 217 is a two component, 100% solid, epoxy system that cures at room temperature. It has a low viscosity, low exotherm and low shrinkage. It will provide a high abrasion resistance surface. Casting can be made up to 2.5 cm (1 inch).

Uses:

May be used for casting of foundry pattern, keller models, stretch press dies, vacuum forms mold, compression molds and other similar applications where a high abrasion resistance is needed.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	100	1.66	14 000-18 000	4.55	22.70		Grey
Hardener	10	17	0.95	50-60	0.45	2.30		Clear
Mix			1.56	4 000-5 000	5.00	25.00		Grey

Gel time:

Minutes	Temp. °C	Mass (gr.)
120-150	22	150

Coverage:

One (1) kg covers approximately 641 cm³ (39 in³).

Typical cured properties:

After 7 days at 22°C (72°F).

	ASTM	
Tensile strength, psi:	D-638	6 100
Heat deflection temperature, 264 psi, °C:	D-648	120
Flexural strength, psi:	D-790	8 700
Compressive strength, psi:	D-695	12 000
Impact resistance, kJ/m ²		43
Linear shrinkage, in/in:	--	0.0003
Thermal expansion coefficient, in/in, °C:	D-696	3.20 x 10 ⁻⁵
Hardness, Shore D:	D-2240	85 - 90
Elongation, %:	D-638	2.5
Water absorption, (immersion 24 hrs), %:	--	0.19

Pretreatment of surfaces:

The surface of the mold should be properly prepared. Wood or plaster molds should be sealed with several coats of nitrocellulose brushing lacquer. Apply three or four coats of Tri-Tex's film forming release agent #10. Gently remove any excess with a brush or a cloth.

Mixing:

1. Mix 217 resin only with 217 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

First aid:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

03/2004

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TRI-TEX CO INC.



Technical bulletin

TOOLING
242
GENERAL CASTING SYSTEM

Description:

The 242 is a two component, 100% solid, grey filled epoxy casting system with a low viscosity, a good pot life, a low exotherm and a very low linear shrinkage. This system is easily machineable and cures at room temperature. Casting can be made up to 10 centimeters (4 inches) thick.

Use:

May be used for casting of foundry pattern, keller models, stretch press dies, vacuum forms mold, Compression molds and other similar applications.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	--	1.72	18 000 - 22 000	4.39	21.93		Grey
Hardener	14	--	0.97	500 - 700	0.61	3.07		Amber
Mix			1.57	3 000 - 6 000	5.00	25.00		Grey

Gel time:

Minutes	Temp. °C	Mass (gr.)
100-120	22	650

Coverage:

One (1) kg covers approximately 592 cm³ (37 in³).

Typical cured properties:

Minimum cure schedule for 16 hours @ 22°C

Tensile strength, psi:	5 200
Heat deflection temperature, °C:	60
Flexural strength, psi:	7 540
Compression strength, psi:	12 760
Linear shrinkage, %:	0.001
Hardness, Shore D:	85 - 90
Elongation, %:	4.8
Water absorption, %:	0.2

Pretreatment of surfaces:

The surface of the mold should be properly prepared. Wood or plaster molds should be sealed with several coats of nitrocellulose brushing lacquer. Apply three or four coats of Tri-Tex's film forming release agent #10. Gently remove any excess with a brush or a cloth.

Mixing:

1. Mix 242 resin only with 242 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

First aid:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

05/2000

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TRI-TEX CO INC.



Technical bulletin

TOOLING
260
MULTIPLE USE CASTING SYSTEM

Description:

The 260 is a two component, grey filled epoxy casting system. It has low viscosity, good pot life, low exotherm and low linear shrinkage. This system is easily machinable and cures at room temperature. Casting can be made up to 5 centimeters (2 inches) thick.

Uses:

Recommended for casting of foundry pattern, keller models, stretch press dies, vacuum forms mold, compression molds and other similar applications.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity Brookfield @ 25 ⁰ C mPa.s (cps)	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	--	1.72	18 000 - 22 000	4.67	23.36		Grey
Hardener	7	--	0.97	80 - 100	0.33	1.64		Amber
Mix			1.63	5 000 - 8 000	5.00	25.00		Grey

Gel time:

Minutes	Temp. °C	Mass (gr.)
90 - 110	22	400

Coverage:

One (1) kg covers approximately 590 cm³ (36 in³).

Typical cured properties:

Minimum cure schedule for 12 hours @ 22°C

Tensile strength, psi:	5 200
Heat deflection temperature, °C:	60
Flexural strength, psi:	7 540
Compression strength, psi:	12 760
Linear shrinkage, %:	0.001
Hardness, Shore D:	85 - 90
Elongation, %:	4.8
Water absorption, %:	0.2

Pretreatment of surfaces:

The surface of the mold should be properly prepared. Wood or plaster molds should be sealed with several coats of nitrocellulose brushing lacquer. Apply three or four coats of Tri-Tex's film forming release agent #10. Gently remove any excess with a brush or a cloth.

Mixing:

1. Mix 260 resin only with 260 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

FIRST AID:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

06-09-97 / 0

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TRI-TEX CO INC.



Technical Dta Sheet

TOOLING
262
ECONOMICAL CASTING RESIN

Description:

The 262 is a two-component, 100% solid, grey filled epoxy casting system with a low viscosity, a good pot life, a low exotherm and a very low linear shrinkage. This system is easily machineable and cures at room temperature. Casting can be made up to 5 centimeters (2 inches) thick.

Uses:

Recommended for casting of foundry pattern, keller models, stretch press dies, vacuum forms mold, compression molds and other similar applications.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	--	1.72	18 000 - 22 000	4.55	22.70		Grey
Hardener	10	--	1.01	900 - 1 000	0.45	2.30		Amber
Mix			1.61	7 000 - 9 000	5.00	25.00		Grey

Gel time:

Minutes	Temp. °C	Mass (gr.)
70 - 80	22	400

Coverage:

One (1) kg covers approximately 590 cm³ (36 in³).

Typical cured properties:

Minimum cure schedule for 12 hours @ 22°C

Tensile strength, psi:	5 200
Heat deflection temperature, °C:	60
Flexural strength, psi:	7 540
Compression strength, psi:	12 760
Linear shrinkage, %:	0.001
Hardness, Shore D:	85 - 90
Elongation, %:	4.8
Water absorption, %:	0.2

Pretreatment of surfaces:

The surface of the mold should be properly prepared. Wood or plaster molds should be sealed with several coats of nitrocellulose brushing lacquer. Apply three or four coats of Tri-Tex's film forming release agent #10. Gently remove any excess with a brush or a cloth.

Mixing:

1. Mix 262 resin only with 262 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

FIRST AID:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

06/1997

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TRI-TEX CO INC.



Technical bulletin

TOOLING

238

HIGH HEAT RESISTANT CASTING SYSTEM

Description:

The 238 system is a two component, 100% solid, grey filled epoxy casting system intended for use when heat resistance is required. It can be poured up to a thickness of 2.5 centimeters (1 inch). This system is suitable for continual use at temperatures ranging from 25°C to 150°C. Intermittent use is possible in the 150°C to 175°C range. It will gel at room temperature but must be post-cured to achieve maximum strength.

Use:

Recommended for vacuum forming molds, blow molds, compression molds or any molds to be used at elevated temperatures.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity Brookfield @ 25 ^o C mPa.s (cps)	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	--	1.73	21 000 - 24 000	4.60	22.90		Grey
Hardener	9	--	0.97	20 - 40	0.40	2.10		Clear
Mix			1.62	6 500 - 7 000	5.00	25.00		Grey

Gel time:

Minutes	Temp. °C	Mass (gr.)
90	22	800

Coverage:

One (1) kg covers approximately 615 cm³ (37.5 in³).

Cure schedule:

After gelling at room temperature, the following post-cure schedule is recommended:

Number of hours	Temperature °C
2	65
2	95
2	120
2	150

IMPORTANT : Never sand surfaces before post-cure

Temperature limitations of the mold or model will dictate whether it can be used as the supporting structure during post-cure cycle. If the tool must be withdrawn from the model for the post-cure, a supporting frame must be provided.

Typical cured properties:

According to cure schedule above.

Heat deflection temperature, °C:	150
Linear shrinkage, in/in:	0.0033
Hardness, Shore D:	93

Pretreatment of surfaces:

The surface of the mold should be properly prepared. Wood or plaster molds should be sealed with several coats of nitrocellulose brushing lacquer. Apply three or four coats of Tri-Tex's film forming release agent #10. Gently remove any excess with a brush or a cloth.

Mixing:

1. Mix 238 resin only with 238 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

First aid:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

02/2000

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TRI-TEX CO INC.

Technical bulletin

TOOLING

2384

HIGH HEAT RESISTANT CASTING SYSTEM

"LONG POT LIFE"

Description:

The 2384 is a two component, 100% solid, epoxy system that cures at room temperature. This system is suitable for continuous use at temperatures ranging from 25°C to 150°C. Intermittent use is possible at temperatures ranging from 150°C to 175°C. This system cures at room temperature but must be post-cured to achieve maximum strength. It may be poured up to a thickness of 5 centimetres (2 in.).

Use:

May be used for vacuum forming molds, blow molding, compression press matrix, low production matrix or any tools to be used at elevated temperatures.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity Brookfield @ 25 ^o C mPa.s (cps)	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	100	1.77	30 000 - 40 000	6.70	33.75		Grey
Hardener	12	21	1.01	800 - 1 200	0.80	4.05		Amber
Mix			1.64	12 000 - 15 000	7.50	37.80		Grey

Gel time:

Minutes	Temp. °C	Mass (gr.)
140 - 160	22	650

Coverage:

One (1) kg covers approximately 610 cm³ (37 in³).

Cure schedule:

After curing at room temperature, the following post-cure schedule is recommended:

Number of hours	Temperature °C
2	65
2	95
2	120
2	150

IMPORTANT: Never sand surfaces before post-cure

Temperature limitations of the mold or model will dictate whether it can be used as the supporting structure during post-cure cycle. If the tool must be withdrawn from the model for the post-cure, a supporting frame must be provided.

Typical cured properties:

According to cure schedule above.

Heat deflection temperature, °C:	150
Linear shrinkage, in/in:	0.001
Hardness, Shore D:	90

Pretreatment of surfaces:

The surface of the mold should be properly prepared. Wood or plaster molds should be sealed with several coats of nitrocellulose brushing lacquer. Apply three or four coats of Tri-Tex's film forming release agent #10. Gently remove any excess with a brush or a cloth.

Mixing:

1. Mix 2384 resin only with 2384 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

FIRST AID:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

03/2002

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TRI-TEX CO INC.

Technical Data Sheet

URETHANE

**U80020, U80021, U80022
CASTING URETHANE SYSTEMS**

(Simple mixing ratio – fast gel)

Description:

The U80020, U80021, U80022 have been specially formulated as easy to use duplicating polyurethane casting materials. They are simple to use, have a low viscosity, fast gel time and high hardness. They offer a low shrinkage, a low coefficient of thermal expansion and excellent machinability.

Use:

May be used for back filling, foundry pattern, mold cores, negative molds, prototypes and laminating molds.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity Brockfield @ 25° C mPa.s (cps)	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Part A	100	100	1.90	2 000 - 3 000	4.55			Off white (U80020), Blue (U80021) Yellow (U80022)
Part B	100	100	1.90	400 - 1 000	4.55			Amber
Mix			1.90	1 000-1 500	9.10			Off white (U80020), Blue (U80021) Yellow (U80022)

Pot life /Demolding time:

Product #	Pot life (Minutes)	Demolding Time (Minutes)	Temp. °C	Mass (gr.)
U80020	4 - 5	30	22	150
U80021	6 - 7	45 - 60	22	150
U80022	14 - 16	60 - 90	22	150

Coverage:

One (1) kg covers approximately 500 cm³ (30 in³).

Typical cured properties:

Minimum cure schedule for 7 days at 22°C (72°F).

Linear shrinkage, in/in:	0.002 - 0.003
Coefficient of thermal expansion, in/in °C:	3.5 x 10 ⁻⁵
Hardness, Shore D:	83 - 85

Mixing:

1. Mix U80020 Part A only with U80020 Part B. Mix U80021 Part A only with U80021 Part B. Mix U80022 Part A only with U80022 Part B.
2. Do not use damaged or leaking containers.
3. Premix Part A and Part B separately. Then place Part A into the Part B container according to the required mixing ratio.
4. Blend Part A into Part B thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 1 minute or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep Part A and Part B away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured Part A and Part B may irritate sensitive skin. Wear protective clothing, goggles and gloves.

First aid:**Eyes:**

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

06/2000

NOTE:

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TRI-TEX CO INC.

Technical bulletin

URETHANE

U80030

CASTING URETHANE SYSTEMS

(Fast gel time)

Description:

The U80030 is a two component, 100% solid room temperature cure urethane system. It has been specially formulated as easy to use duplicating polyurethane casting materials. It is simple to use, has a low viscosity, fast gel time and demold time. It offers high hardness and impact resistance. This system is designed to be used with automatic dispensing system.

Use:

May be used for back filling, foundry pattern, mold cores, negative molds, prototypes and laminating molds.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity Brookfield @ 25° C mPa.s (cps)	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Part A	100	100	1.02	1 500 - 2 000				Black
Part B	80	66	1.24	100 250				Amber
Mix			1.11	500 - 1 000				Black

Gel time /Demolding time:

Gel time (Seconds)	Demolding Time (Minutes)		
		Temp. °C	Mass (gr.)
45 - 65	10 - 15	22	150

Typical cured properties:

Minimum cure schedule for 24 hours at 22°C (72°F).

Hardness, shore D : 78 - 80

Coverage:

One (1) kg covers approximately 900 cm³ (55 in³).

Mixing:

1. Mix U80030 Part A only with U80030 Part B.
2. Do not use damaged or leaking containers.
3. Premix Part A and Part B separately. Then place Part A into the Part B container according to the required mixing ratio.
4. Fast gel time of this product requires the use of a meter-mix dispenser to blend it .
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep Part A and Part B away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured Part A and Part B may irritate sensitive skin. Wear protective clothing, goggles and gloves.

First aid:**Eyes:**

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

01/2005

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Technical Data Sheet

URETHANE
U80060
CASTING SYSTEM

Description:

The U80060 is a two component urethane casting system that cures at room temperature. It has low viscosity, simple mixing ratio and fast gel time. It offers a good hardness with low shrinkage, excellent dimensional stability, good impact resistance and excellent machinability.

Use:

May be used for batch filling foundry pattern, mold cores, negative mold, prototypes and laminating molds.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Part A	100	100	1.83	2 000 - 3000	4.55			Beige
Part B	100	100	1.83	2 000 - 3000	4.55			Black
Mix			1.83	2 000 - 3 000	9.10			Grey

Pot life /Demold time:

Pot life (Minutes)	Demold time (Minutes)		
		Temp. °C	Mass (gr.)
9-10	60-90	22	150

Coverage:

One (1) kg covers approximately 550 cm³ (33.56 in³).

Typical cured properties:

Minimum cure schedule for 7 days at 22°C (72° F).

Hardness, Shore D:	85
Water absorption %	0.2

Mixing:

1. Mix U80060 Part A only with U80060 Part B.
2. Do not use damaged or leaking containers.
3. Premix Part A and Part B separately. Then place Part A into the Part B container according to the required mixing ratio.
4. Blend Part A into Part B thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 2 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep Part A and Part B away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured Part A and Part B may irritate sensitive skin. Wear protective clothing, goggles and gloves.

First Aid:**Eyes:**

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

05/23/00

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TRI-TEX CO INC.



Technical bulletin

TOOLING

103

MULTIPLE USE CLEAR LAMINATING RESIN

Description:

The 103 laminating resin is a room temperature cure, two-component, 100% solid epoxy system. It is thixotropic and will not run off when used on vertical surfaces. This system has been formulated to provide strong, tough and dimensionally stable products for tooling applications. It cures well in thin sections, has a low viscosity and a low skin irritation potential, except for sensitive skins. The 103 is a relatively safe system and it is easy to use.

Uses:

Recommended for laminating molds, F.R.P. molds, foundry patterns and foaming molds. Also recommended for duplicating models and to repair panel body of cars and trucks.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	--	1.12	1 500 - 1 800	4.00	16.00		Semi-transparent
Hardener	25	--	1.04	2 000 - 2 200	1.00	4.00		Amber
Mix			1.10	1 700 - 2 000	5.00	20.00		Semi-transparent

Gel time:

Minutes	Temp. °C	Mass (gr.)
20 - 25	22	150

Coverage:

One (1) kg covers approximately 3.5 m² (37 ft²) with 9 ounce fiberglass cloth.

Typical cured properties:

Minimum cure schedule for 7 days @ 22°C (72°F).

Tensile strength, psi:	7 540 - 12 470
Tensile Modulus, psi:	300 000 - 450 000
Tensile Lap Shear (Al./Al. 1/2" overlap), psi:	3 045 - 4 930
Heat deflection temperature, °C:	70
Flexural strength, psi:	17 000 - 20 000
Flexural Modulus, psi:	439 930
Compression strength, psi:	15 000 - 34 000
Hardness, Shore D:	88
Elongation, %:	3.9
Water absorption, %:	0.4-1.0

Pretreatment of surfaces:

The surface of the mold should be properly prepared. Wood or plaster molds should be sealed with several coats of nitrocellulose brushing lacquer. Apply three or four coats of Tri-Tex's film forming release agent #10. Gently remove any excess with a brush or a cloth.

Mixing:

1. Mix 103 resin only with 103 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

First aid:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

03/2000

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TRI-TEX CO INC.

Technical bulletin

TOOLING

126

HIGH HEAT RESISTANT LAMINATING SYSTEM

"LOW VISCOSITY"

Description:

The 126 is a two component, 100% solid, grey filled epoxy system intended for use when heat resistance is required. It is suitable for continuous use at temperatures ranging from 25°C to 150°C. Intermittent use is possible in the 150°C to 175°C range. Laminated tools built with our 126 system can be constructed with regular hand lay-up techniques or vacuum bagged if the tool is small enough to allow the operator to complete bagging and squeezing operations before material starts to gel. The 126 system will cure at room temperature but must be post-cured to achieve maximum strength. Once post-cured, it gives excellent dimensional stability and stiffness.

Use:

Recommended for vacuum forming molds, compression molds or any tools to be used at elevated temperatures.

Due to its low viscosity, it is most suitable for laminating 32 oz fiberglass cloth.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	–	1.32	Brookfield @ 25° C 3 000 - 3 500 mPa.s (cps)	4.30	21.55	235.00	Grey
Hardener	16	–	0.94	20 - 50	0.70	3.45	37.60	Clear
Mix			1.25	1 200 - 1 400	5.00	25.00	272.60	Grey

Pot life /Gel time:

Minutes	Temp. °C	Mass (gr.)
70-80	22	150

Coverage:

One (1) kg covers approximately 0.5 m² to 0.6 m² (5.3 ft² to 6.5 ft²) with 32 ounce fiber glass cloth.

Cure schedule:

After curing at room temperature, the following post-cure schedule is recommended:

Number of hours	Temperature °C
2	65
2	90
2	120
2	150

IMPORTANT : Never sand surfaces before post-cure

Temperature limitations of the mold or model will dictate whether it can be used as the supporting structure during post-cure cycle. If the tool must be withdrawn from the model for the post-cure, a supporting frame must be provided.

Typical cured properties:

According to cure schedule above.

Heat deflection temperature, °C:	130
Linear shrinkage, %:	0.005
Hardness, Shore D:	93

Pretreatment of surfaces:

The surface of the mold should be properly prepared. Wood or plaster molds should be sealed with several coats of nitrocellulose brushing lacquer. Apply three or four coats of Tri-Tex's film forming release agent #10. Gently remove any excess with a brush or a cloth.

Mixing:

1. Mix 126 resin only with 126 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

FIRST AID:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

02/1997

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TRI-TEX CO INC.

Technical bulletin

TOOLING
129
WHITE LAMINATING SYSTEM

Description:

The 129 is a two component, room temperature cure epoxy system conceived to laminate fiberglass. It does not contain solvent (100% solid) or any other volatile product. It offers good wetting properties and rigidity. This system has been developed to meet the most severe standards of the aircraft industry.

Uses:

Recommended for laminating molds, F.R.P. molds, foundry patterns and foaming molds. Also recommended for duplicating models.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	100	1.44	2 000 - 2 400 Brookfield @ 25 ^o C mPa.s (cps)	4.30	21.55	235.00	White
Hardener	16	23	1.01	1 600 - 1 800	0.70	3.45	37.60	Honey
Mix			1.36	2 000 - 2 300	5.00	25.00	272.60	White

Gel time:

Minutes	Temp. °C	Mass (gr.)
33 - 38	22	150

Coverage:

One (1) kg covers approximately 1.4 m² (15 ft²) with 9 ounce fiber glass cloth

Typical cured properties:

Minimum cure schedule for 48 hours @ 22°C

Tensile strength, psi:	25 085
Flexural strength, psi:	25 000
Compression strength, psi:	23 000
Hardness, Shore D:	90
Coefficient of thermal expansion (°F)	1.20 x 10 ⁻⁵

Pretreatment of surfaces:

The surface of the mold should be properly prepared. Wood or plaster molds should be sealed with several coats of nitrocellulose brushing lacquer. Apply three or four coats of Tri-Tex's film forming release agent #10. Gently remove any excess with a brush or a cloth.

Mixing:

1. Mix 129 resin only with 129 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

FIRST AID:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

04/98

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TRI-TEX CO INC.

Technical bulletin

AUXILIARY PRODUCTS

10

ALL-PURPOSE PARTING AGENT

Description:

Our all-purpose parting agent #10 replaces waxing operation on all surfaces. It provides an exceptionally thin film which assures accurate pick-up of minute details.

Advantages:

- May be used on any non-porous surfaces (see directions below).
- No waxing necessary.
- May be used for room temperature or high heat applications up to 163⁰C.
- Can be thinned to the desired consistency.
- Handles many different release applications.
- No special spray equipment needed.

Directions:

Mix thoroughly before using. May be applied by spray or cloth. Seal all porous surfaces such as wood and plaster with an appropriate sealer.

Spray application: _____ Add solvent like acetone or VM & P Naphta until desired consistency is obtained to accommodate available spray equipment (recommended addition 10%). Apply up to three (3) coats. Remove any excess from corners and minute detail areas between each coat.

Brush or cloth application: Do not dilute the parting agent. Apply three (3) coats directly on the surface and gently remove any excess with a brush or a cloth between each coat.

03/1999

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TRI-TEX CO INC.

Technical Data Sheet

STRUCTURAL ADHESIVES
3/10 REGULAR
FAST SETTING ADHESIVE AT LOW TEMPERATURE

Description:

The 3/10 regular is a two component, 100% solid, epoxy system able to cure at temperatures as low as 0°C (32°F). This system has a simple mixing ratio and an excellent adhesion. It develops its maximum physical properties in thin film very rapidly even at low temperature.

Use:

May be used to bond a wide variety of surfaces such as metals, wood, glass, ceramic, rigid plastics and alkaline surfaces such as concrete.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity Brookfield @ 25 ^o C mPa.s (cps)	Packaging		Color
	By weight # Parts	By volume # Parts			Tubes, gr		
Resin	100	100	1.43	600 000-650 000	125		Black
Hardener	102	100	1.47	520 000-580 000	125		White
Mix			1.45	550 000-600 000	250		Grey

Gel time:

Minutes	Temp. °C	Mass (gr.)
4-5	22	150

Coverage:

1 kg covers approximately 690 cm³ (42 in³).

Physical properties:

Substrate	Temperatures	Cure time	Shear strength, in psi	Type of failure
Alum/alum	25°C (77°F)	15 minutes	1 780	80% cohesive
Alum/alum	25°C (77°F)	1 hour	3 100	100% cohesive
Alum/alum	25°C (77°F)	14 days	3 060	100% cohesive
Alum/alum	-9°C (15°F)	3 days	1 000	--
Steel/concrete	-9°C (15°F)	3 days	400	100% cohesive

Tensile shear values were determined according to ASTM D-1002.

Pretreatment of surfaces:

Surfaces being bonded must be dry, clean and sound. Use sandblasting, needle scalers, a powered grinding tool or scrapers to remove all traces of dirt, oil laitance, curing compound, mold release agent and disintegrated materials. Contaminated surfaces or fissures may also be cleaned with a non-ionic detergent or high pressure water jet.

Mixing:

1. Mix 3/10 regular resin only with 3/10 regular hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

First aid:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

06/2001

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TRI-TEX CO INC.

Technical Data Sheet

STRUCTURAL ADHESIVES

375

GENERAL PURPOSE ADHESIVE

Description:

The 375 is a two component, 100% solid, epoxy system that cures at room temperature. This thixotropic paste bonds to many different substrates while keeping a good adhesion and a good rigidity.

Features:

- Non critical mixing ratio.
- Fast cure time (4 to 8 hours depending on mass).
- Can be sanded, filed, drilled, tapped or machined with conventional tools.

Uses:

- Adhesive: Bonds to materials such as aluminum, steel, glass, porcelain, concrete and other cured epoxy systems.
- Molds: To reset or rethread screws and bolts in holes of molds or to fill-in pores and holes in wood or steel.
- Other: May also be used to rebuild machinery, as a patching compound for wood or metal reservoirs, to repair radiators or for general automobile and truck bodywork.

Typical uncured properties

Components	Mixing Ratio		Specific Gravity	Viscosity Brookfield @ 25 ^o C mPa.s (cps)	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	100	1.55	800 000-1 000 000	2.00	5.00	25.00	Light grey
Hardener	100	100	1.56	800 000-1 000 000	2.00	5.00	25.00	Dark grey
Mix			1.55	800 000-1 000 000	4.00	10.00	50.00	Dark grey

Gel time:

Minutes	Temp. °C	Mass (gr.)
23-25	22	150

Coverage:

1 kg covers approximately 1 m² (10.76 ft²) with a thickness of 0.3 cm (1/8 in).

Typical cured properties:

Minimum cure schedule 7 days @ 22°C (72°F).

	ASTM	
Flexural strength, psi	790-70	6 800
Compression strength, psi	695-68	14 645
Hardness, Shore D:		88-89
Tensile strength, psi	D-1002	2 016

Cure schedule:

After gelling at room temperature, the following post-cure schedule is recommended:

Time	Temperature °C
6 hrs	25
30 min.	60
10 min.	100

Pretreatment of surfaces:

Surfaces being bonded must be dry, clean and sound. Use sandblasting, needle scalers, a powered grinding tool or scrapers to remove all traces of dirt, oil laitance, curing compound, mold release agent and disintegrated materials.

Mixing:

1. Mix 375 resin only with 375 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapours and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

First aid:**Eyes:**

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

Revision Date: 10/2004

Replacing: 03/1998

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Technical Data Sheet

STRUCTURAL ADHESIVES
3651
HIGH HEAT RESISTANT ADHESIVE

Description:

Our 3651 epoxy system is a two component, 100% solid, thixotropic paste that cures at room temperature. This smooth thixotropic paste can be easily applied on vertical surfaces. This system is suitable for continual use at temperatures ranging from 25°C to 150°C. Intermittent use is possible in the 150°C to 175°C range. It will gel at room temperature but must be post-cured to achieve maximum strength. Once cured, it offers a good chemical resistance.

Uses:

May be used as a structural adhesive for various substances such as wood, metal, many plastics, etc. where high heat resistance is required.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	100	1.67	Brookfield @ 25 ^o C 300 000-350 000 mPa.s (cps)	4.00	20.00		Off-White
Hardener	25	25	1.67	300 000-350 000	1.00	5.00		Dark grey
Mix			1.67	300 000-350 000	5.00	25.00		Grey

Gel time:

(Minutes)	Temp. °C	Mass (gr.)
70-90	22	150

Coverage:

1 kg covers approximately 8 ft² (0.75 m²) at 1/32 in. (0.8 mm) thickness.

Cure schedule:

After gelling at room temperature, the following post-cure schedule is recommended:

Number of hours	Temperature °C
2	65
2	95
2	120
2	150

Typical cured properties:

According to cure schedule above.

	ASTM	
Tensile strength, psi:	D-638	11 500
Tensile lap shear, psi:	D-1002	3 000
Flexural strength, psi:	D-790	17 500
Compression strength, psi:	D-695	27 800
Heat deflection temperature, 264 psi, °C:	D-648	120
Impact resistance, IZOD:	D-256	0.23
Hardness, Shore D:	D-2240	90 - 93
Elongation, %:	D-638	5.8
Water absorption, %:	--	0.2

Pretreatment of surfaces:

Surfaces being bonded must be dry, clean and sound. Use sandblasting, needle scalers, a powered grinding tool or scrapers to remove all traces of dirt, oil laitance, curing compound, mold release agent and disintegrated materials.

Mixing:

1. Mix 3651 resin only with 3651 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

First aid:**Eyes:**

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

03/2002

NOTE:

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TRI-TEX CO INC.

Technical Data Sheet

AUXILIARY PRODUCTS

17
SOLVENT

Description:

Our #17 is a relatively low-odor blend of organic solvents. It provides excellent solvency for a wide range of uncured epoxy systems and other polymeric materials.

Use:

Specially blended solvent for use in the cleanup and removal of wet epoxy systems from tools and equipment.

Typical properties:

Color:	Clear
Specific gravity @ 25°C:	0.88
Initial boiling point, °C:	102
Flash point, P.M.C.C., °C:	13

Caution:

DO NOT use on skin.

DO NOT store near heat, sparks or fire sources. Ground any container of 20 Liters or more to avoid static discharges.

AVOID inhaling vapors.

USE only in well ventilated areas.

05/99

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Technical Data Sheet

TOOLING

33

GREY EPOXY SURFACE COAT

Description:

Our 33 epoxy system is a grey, thixotropic, fast setting surface coat. It has been formulated to stay in place on vertical surfaces and to give excellent edge coverage over sharp angles. It is a very low odor and low toxicity system.

Use:

This surface coat is for use with our 102 general purpose laminating resin.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity ASTM D-2393 Brookfield @ 25 ^o C mPa.s (cps)	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	100	1.62	550 000 - 650 000	4.63	23.15		Grey
Hardener	8	13	1.02	100 - 200	0.37	1.85		Amber
Mix			1.55	90 000 - 120 000	5.00	25.00		Grey

Gel time (ASTM D-2471):

Minutes	Temp. °C	Mass (gr.)
23 - 25	22	150

Coverage:

One (1) kg covers approximately 2 m² (21 ft²).

Typical cured properties:

Minimum cure schedule for 8 to 12 hours @ 22°C

	ASTM	
Tensile strength, psi:	D-638	6 200
Heat deflection temperature, 264 psi, °C:	D-648	85
Flexural strength, psi:	D-790	10 900
Flexural modulus, psi:	D-790	60 x 10 ⁶
Compression strength, psi:	D-695	13 300
Compression modulus, psi:	D-695	50 x 10 ⁶
Linear shrinkage, in/in:	D-2566	0.001
Hardness, Shore D:	D-2240	85 - 90
Elongation, %:	D-638	3.8

Pretreatment of surfaces:

The surface of the mold should be properly prepared. Wood or plaster molds should be sealed with several coats of nitrocellulose brushing lacquer. Apply three or four coats of Tri-Tex's film forming release agent #10. Gently remove any excess with a brush or a cloth.

Mixing:

1. Mix 33 resin only with 33 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

FIRST AID:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

01/2004
04-11-97

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TRI-TEX CO INC.

Technical bulletin

TOOLING

381

HIGH HEAT RESISTANT SURFACE COAT

“ALUMINUM FILLED, LONG POT LIFE”

Description:

The 381 is a two component, 100% solid, epoxy system that cures at room temperature. This system is appropriate for a continuous use at temperatures between 25°C and 150 °C. An intermittent use is also possible at temperatures between 150°C and 175 °C. It will gel at room temperature but must be post-cured to achieve maximum strength. It is easy to brush and provides a smooth surface free of voids and pin holes. It is thixotropic and will not run off when used on vertical surfaces.

Use:

Designed for vacuum-form molds, stretch dies, nesting fixtures, compression press matrix, low production matrix or any other high heat mold applications.

Typical uncured properties:

Components	Mixing Ratio		Specific Gravity	Viscosity	Packaging			Color
	By weight # Parts	By volume # Parts			Kg			
Resin	100	100	1.66	580 000-650 000	4.55	22.73		Grey
Hardener	10	16	1.02	50 - 100	0.45	2.27		amber
Mix			1.57	130 000-180 000	5.00	25.00		Grey

Gel time:

Minutes	Temp. °C	Mass (gr.)
50 - 60	22	150

Coverage:

One (1) kg covers approximately 0.4 m² (4.3 ft²) with a 1.66 mm (1/16 in.) thickness.

Cure schedule:

After gelling at room temperature, the following post-cure schedule is recommended:

Number of hours	Temperature °C
2	65
2	90
2	120
2	150

IMPORTANT : Never sand surfaces before post-cure

Temperature limitations of the mold or model will dictate whether it can be used as the supporting structure during post-cure cycle. If the tool must be withdrawn from the model for the post-cure, a supporting frame must be provided.

Typical cured properties:

According to cure schedule above.

Heat deflection temperature, 264 psi. °C:	130
Linear shrinkage, %:	0.2
Hardness, Shore D:	90

Pretreatment of surfaces:

The surface of the mold should be properly prepared. Wood or plaster molds should be sealed with several coats of nitrocellulose brushing lacquer. Apply three or four coats of Tri-Tex's film forming release agent #10. Gently remove any excess with a brush or a cloth.

Mixing:

1. Mix 381 resin only with 381 hardener.
2. Do not use damaged or leaking containers.
3. Premix resin and hardener separately. Then place the hardener into the resin container according to the required mixing ratio.
4. Blend the hardener into the resin thoroughly using a paddle attached to a low speed heavy duty electric drill at 300-600 rpm. Continue to mix for a minimum of 3 minutes or until the mix becomes homogeneous.
5. Never dilute with solvents.

Cleaning of tools:

Tools and equipment should be cleaned immediately after use with Tri-Tex's #17 solvent or with Tri-Tex's "Clean tool" #4 for a safer use.

Storage:

Keep containers closed until just before use at a temperature above 15°C.

Caution:

Keep resin and hardener away from eyes and skin. Avoid breathing of vapors and use good ventilation. Like any reactive material, uncured resin and hardener may irritate sensitive skin. Wear protective clothing, goggles and gloves.

FIRST AID:

Eyes:

Flush immediately with plenty of water for 15 minutes and obtain medical aid.

Skin:

Clean skin with warm water and a soft soap. Never use solvents to remove material from skin.

04/2002

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TRI-TEX CO INC.



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