

Advanced Materials**TDT 178-57****ACCELERATOR FOR REN:C:O-THANE[®] POLYUREA SYSTEMS****DESCRIPTION:**

TDT 178-57 is a concentrated catalyst for accelerating the cure of polyurea systems. TDT 178-57 is a liquid which is easily blended into the hardener components of REN:C:O-THANE[®] Polyurea.

APPLICATIONS:

For use only with RP 6442, RP 6443 and RP 6444 and their various custom-colored products. Not recommended for use with REN:C:O-THANE[®] polyurethane systems.

MIXING INSTRUCTIONS:

TDT 178-57 accelerator should be added to the hardener components (amine) of REN:C:O-THANE[®] polyureas. Only a small amount of accelerator is required to increase the speed of the curing process. TDT 178-57 accelerator will reduce the working life of the system you are using. This reduction in working life is dependent upon added accelerator concentration, shop temperature, material temperature, and quantity of the polyurea being mixed.

The effect of the TDT 178-57 accelerator varies between the REN:C:O-THANE[®] systems as well. Begin your evaluation by adding no more than 0.2% TDT 178-57 to the hardener component you wish to try. (That is: 0.2 grams TDT 178-57 to 100 grams of REN:C:O-THANE[®] hardener.) The quantity of 0.2 grams equals two or four eyedropper drops. Mix thoroughly before adding the required REN:C:O-THANE[®] resin amount (see container label or data sheet for the system you are using).

Cure a test part alongside an unaccelerated sample to gage the effect the addition has made. You should look for an increase in hardness build-up and a reduction in demold time.

Another good tactic is to add a small amount of TDT 178-57 accelerator and increase the starting temperature of the resin, hardener, and/or mold about 10 to 20°F over ambient temperature.

Accelerator additions of greater than 1.5% are likely to yield erratic results and very short working times. You should carefully evaluate your cured part against your performance requirements to determine if the accelerator addition produces acceptable parts in your applications.

COMPARISON OF "GEL" AND "HARDNESS BUILD-UP" OF RENSHAPE SOLUTIONS' POLYURETHANE MATERIALS, USING ACCELERATORS:

Product	Percent (%) Accelerator	T-CAM Gel (4 oz.)	SHORE HARDNESS AT 77°F (IN HOURS)					
			1	2	4	8	16	24
RP 6442	0	36 mins.			34 A	60 A	71 A	80 A
RP 6442	0.1	14 mins.		20 A	54 A	71 A	79 A	85 A
RP 6442	0.5	14 mins.	20 A	25 A	71 A	80 A	83 A	87 A
RP 6443	0	23 mins.		65 A	76 A	88 A	92 A	95 A
RP 6443	0.1	16 mins.	46 A	77 A	81 A	89 A	93 A	94 A
RP 6443	0.5	8.6 mins.	75 A	84 A	89 A	94 A	95 A	95 A
RP 6444	0	28 mins.		20 D	33 D	46 D	45 D	58 D
RP 6444	0.1	16 mins.	15 D	26 D	41 D	51 D	49 D	58 D
RP 6444	0.5	7 mins.	35 D	45 D	54 D	54 D	53 D	60 D

GEL TIMES = 4 fl. oz. (150g)

HARNNESS = 60g. in aluminium dish (1/4" thick sample)

TEST TEMPERATURE = 74°F (60% R.H.)

STORAGE/HANDLING INFORMATION:**TDT 178-57 Accelerator**

Store at 70-90°F. This product is moisture-sensitive and packaged under a blanket of dry nitrogen. Maintain factory seal. After use, reblanket with dry nitrogen and tightly reseal.

In accord with good industrial practice, handle with due care. Avoid dusty conditions, use adequate ventilation. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

SHELF LIFE:

Provided materials are stored under the recommended storage conditions in their original containers, they will remain in useable condition for at least two years from date of shipping.

PACKAGING:

This product is available in the following package size(s):

- TDT 178-57 available in quart units weighing 1.5 pounds.

Please call Customer Service (800-367-8793) for price and availability.

SAFETY/HANDLING PRECAUTIONS:

Do not use or handle this product until the Material Safety Sheet has been read and understood.

TDT 178-57 Accelerator

WARNING! Causes skin and eye irritation. May cause allergic skin reaction.

Avoid contact with eyes, skin, and clothing.

Avoid prolonged or repeated contact with skin.

Wash thoroughly after handling.

FIRST AID:

In case of contact with :

Skin : Immediately wash with soap and water. Remove contaminated clothing and launder before reuse.

Destroy contaminated shoes.

Eyes : Immediately flush with water for at least 15 minutes. Call a physician.

Ingestion : If conscious, give plenty of water to drink. Do not induce vomiting. Call a physician.

Inhalation : Remove to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

Other : Referral to physician is recommended if there is any question about the seriousness of any injury.

PRECAUTION NOTE :

Thermosetting systems generate heat when curing. The amount of heat and the period of time in which heat is released vary significantly between systems. Additionally, ambient or compound temperature, amount of material mixed, and construction and shape of the mold or container can also be factors in the temperature profile of a mixed system.

In some cases, the thermosetting reaction can be vigorous, generation heat sufficient to cause decomposition of the system with subsequent liberation of large volumes of acrid smoke.

A good rule of thumb is never mix more material than can be applied during the stated pot life or gel time. Also take care when using materials in applications other than stated on the product Data Sheet, i.e., a laminating resin for casting.

Please feel welcome to call our Product Information Department or your local Ren representative for instructions before you start your job.

Caution To protect against any potential health risks presented by our products, the use of proper personal protective equipment (PPE) is recommended. Eye and skin protection is normally advised. Respiratory protection may be needed if mechanical ventilation is not available or is insufficient to remove vapors. For detailed PPE recommendations and exposure control options consult the product MSDS or a Huntsman EHS representative.

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