



## Storage and Handling Procedures for Thawing Drums of Frozen Glycol Ethres – DOWANOL\* Eph and PPh

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[DOWANOL Eph glycol ether](#) and [DOWANOL PPh glycol ether](#) have freezing points of 54°F (12°C) and 52°F (11°C), respectively, and will freeze stored below these temperatures. This is a common occurrence and will not impact the quality of the material if thawing is done under recommended practices.

Two recommended options for thawing drums of frozen DOWANOL Eph glycol ether and DOWANOL PPh glycol ether are described below as standard distribution practices. To ensure no moisture pick-up, the drums should remain sealed during the thawing process. In addition, it is also recommended that the drum thaw completely before drawing a sample, as any impurities present will tend to thaw first.

- Place the sealed drums in a warm room for 24 hours. Since the drums are filled at 140°F (60°C), expansion is not expected to be a problem.
- Put the sealed drums in a steam-heated drum heater for 24 hours. As above, since the drums are filled at 140°F (60°C) expansion should not be a concern.
- As an option to prevent freezing of drummed material, the Dow Chemical Company has found that certain blends of DOWANOL Eph glycol ether and DOWANOL PPh ether, either with each other or with DOWANOL TPM glycol ether, form eutectic mixtures, which have a much reduced freezing point. The following tables give the freezing points associated with a number of blends. While we are not at this time equipped to do the blending ourselves, it may be an option to consider in the future if there is interest. Please call 1-989-636-4785 if you are interested in this option.

Wight fraction  
DOWANOL Eph/PPh glycol ether

70/30  
30/70  
45/55

Weight fraction  
DOWANOL PPh/TPM glycol ether

80/20  
70/30  
60/40

Freezing Point,

°F	°C
26°F	-3°C
18°F	-7°C
-6°F	-21°C

Freezing Point,

°F	°C
36°F	2°C
26°F	-3°C
19°F	-7°C

As an alternative, drums of frozen material may be placed in a warm room, e.g. 85°F (29°C). It is calculated that material in a drum would take 2-3 days to melt under these conditions. If the drum is returned to a cold environment, e.g. 30°F (-1°C), the material will refreeze in approximately 3-4 hours.