

## TYPE

Hexa methoxy methyl melamine

## FORM OF DELIVERY (f.o.d.)

72% active on silica

## USES

Hexa methoxy methyl melamine (HMMM) as crosslinker for adhesion promoting and reinforcing systems in rubber applications

## PRODUCT DATA

The data are determined by our quality control for each lot (batch) before release.

### Determined per batch:

#### Appearance

[White free flowing powder] Pass

#### Ash content

Microwave [%] 24 - 28  
800°C

#### Water content

Karl-Fischer [%] <= 4

#### Particle size

Wet sieve test [%] >= 99.7  
through 80 mesh

## PROPERTIES AND USES

CYREZ 400 offers several advantages over the older hexa methylene tetramine (HEXA or HMT) system. CYREZ resins are not corrosive to steel cord, polyester cord or metal molds. This property is important when considering adhesion promoters. CYREZ resins are much more suitable as methylene donors, as opposed to HMT which produces ammonia. When used in conjunction with ALNOVOL® PN 760 or resorcinol, CYREZ resins offer the ultimate in rubber adhesion giving optimum bonding strength. No skin irritation.

- No amine or ammonia by-product
- Better scorch protection than provided by HMT
- No corrosive effects on steel and brass/bronze coated steel
- Ease of handling
- Low dust level
- High loading

CYREZ 400 is used in applications as a methylene donor in the "HRH" dry rubber adhesion systems for bonding rubber to organic cord and wire reinforcement materials. To improve adhesion as well as physical properties CYREZ 400 should be used together with silica in the compound.

Suggested levels of resins are:

CYREZ	1.5 - 4 phr
ALNOVOL PN 760	1.5 - 3 phr
or	
Resorcinol	1.5 - 3 phr
or	
Resorcinol formaldehyde resin	2 - 4 phr

CYREZ 400 can be used in conjunction with methylene acceptors (ALNOVOL® PN 160 or ALNOVOL® PN 320) in rubber compounds to increase modulus, tensile, stiffness and hardness. A suggested range could be 5 to 15 phr.

The ratio within this dosage should be ALNOVOL : CYREZ 7:3 (calculated on active).

## STORAGE

At temperatures up to 35°C and by protection from sources of moisture storage stability in original containers amounts to at least 365 days. The expiration date may be extended and COA updated after QC testing of retained samples, only for material in allnex possession.

## SAFETY AND HANDLING

Please consult the Safety Data Sheet (SDS) for safety, health, and environmental data available from allnex.