

Understanding HOT and Cold Prepolymers



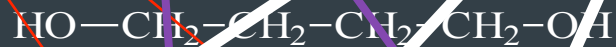
ELASTOCAST PREPOLYMERS

ISOCYANATE

TDI

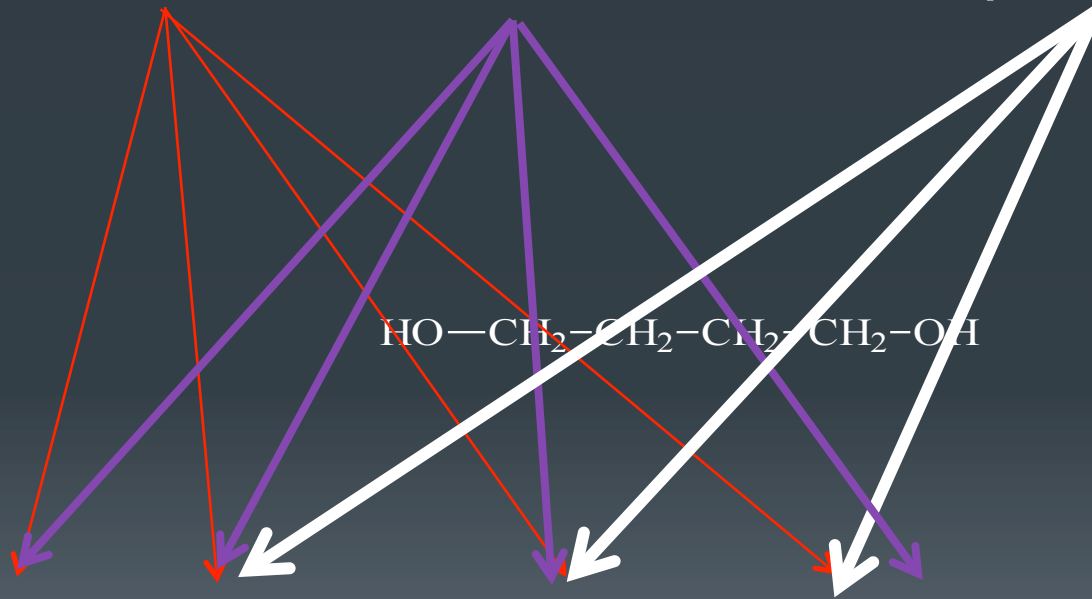
MDI

OTHERS(ALIPHATICS)



OTHERS PESOL POLYOL PolyTHF

POLYOL



ELASTOCAST HOT CAST PREPOLYMERS- - - UNDERSTANDING NAMING SYTEM

■ MDI PREPOLYMERS

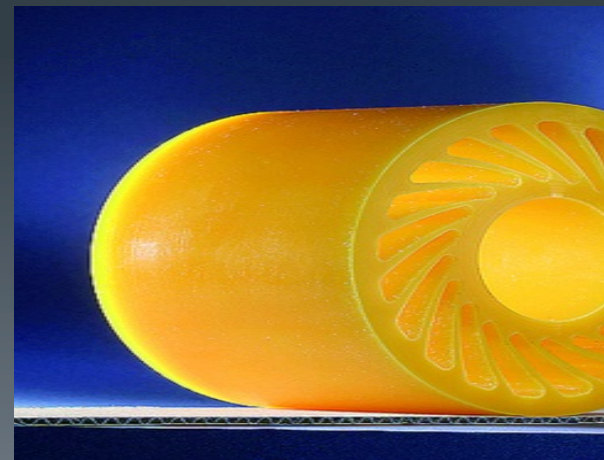
- Elastocast TT series
- Elastocast TIE series
- Elastocast TIP series
- Elastocast TIC series
- Elastocast TQZ series

■ ALIPHATIC series

- Elastocast IW series
- Elastocast II series

■ TDI PREPOLYMERS

- Elastocast TC series
- Elastocast TD series
- Elastocast TLF series



ELASTOCAST HOT CAST UNDERSTANDING NAMING SYSTEM

■ MDI PREPOLYMERS

- Elastocast TT series
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■ TDI PREPOLYMERS

- Elastocast TC series
- Elastocast TD series
- Elastocast TLF series

- TT = PESOL
- TIE = PolyTHF
- TIP = PEOL
- TIC = Caprolactone
- TQZ = above 13%

ELASTOCAST PREPOLYMERS

example MDI vs. TDI with PESOL

MDI Ester with Butanediol

- Hardness - 85A
- Tensile - 7100 psi
- Split tear - 300 pli
- Die C Tear - 525 pli
- Rebound - 34%
- Taber Abrasion - 30
- Comp Set - 24%

TDI Ester with MBOCA

- Hardness - 85A
- Tensile - 6100 psi
- Split tear - 260 pli
- Die C Tear - 460 pli
- Rebound - 30%
- Taber Abrasion - 90
- Comp Set - 28%



ELASTOCAST PREPOLYMERS

example MDI versus TDI with PolyTHF

MDI Ether with Butanediol

- Hardness - 80A
- Tensile - 4200 psi
- Split tear - 80 pli
- Rebound - 65%
- Taber Abrasion - 12
- Comp Set - 17%

TDI Ether with MBOCA

- Hardness - 80A
- Tensile - 3100 psi
- Split tear - 65 pli
- Rebound - 51%
- Taber Abrasion - 59
- Comp Set - 29%

ELASTOCAST PREPOLYMERS

MDI versus TDI SUMMARY

DIFFERENCE: EASE OF PROCESSING

MDI Advantages

- Better Tear Resistance
- Better Abrasion
- Greater Resilience
- Lower Hysteresis
- Safer Handling
- Lower System Costs

TDI Advantages

- Faster Demold Times
- Snap Cure Profiles
- Higher Hardness
- Easier to process
- Less moisture sensitive

ELASTOCAST COLD CAST SYSTEMS

- **R4 & R5 SERIES**
- **1:1 SYSTEM - R36 & R74 SERIES**
- **FILLED SYSTEMS - R71 SYSTEM**
- **POURABLE RIGIDS - R7 SERIES**



ELASTOCAST COLD CAST SYSTEMS

- **R4 & R5 SERIES**
 - Low cost / ready to cast
- **1:1 SYSTEM - R36 & R74 SERIES**
 - Fixed ratio easy to mix
- **FILLED SYSTEMS - R71 SYSTEM**
 - Castable mold making system
- **POURABLE RIGIDS - R7 SERIES**
 - Models and movie sets

**ELASTOCAST
COLD CAST NAMING SYSTEM**

ELASTOCAST R4A75-5M BLK

ELASTOCAST COLD CAST NAMING SYSTEM

ELASTOCAST **R4A75-5M** BLK

R = RESIN

4 = which ISO to use = Elastocast T4

A = durometer A, for harder materials D

5M = 5 minutes from mix to gel point

BLK = black color

• COMPETITION

- CHEMTURA MARKET LEADER
- COIM TRYING TO TAKE CHEMTURA BUSINESS
- ANDERSON DEVELOPMENT
- BAYER STRUGGLING BUT NOT DEAD
 - BAYONE
 - BAULE'
 - BAYER SPECIALTY RIM
- OTHERS:
PSC,ERA,HYPERLAST,CHEMLINE,POLYCOAT,ARNCO



The Chemical Company