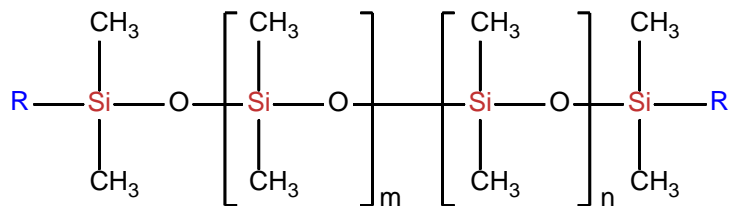


# **Evolution of Textile Softener**

SiSiB SILICONES - A part of SINOPCC group.

# 1<sup>st</sup> Generation PDMS silicones

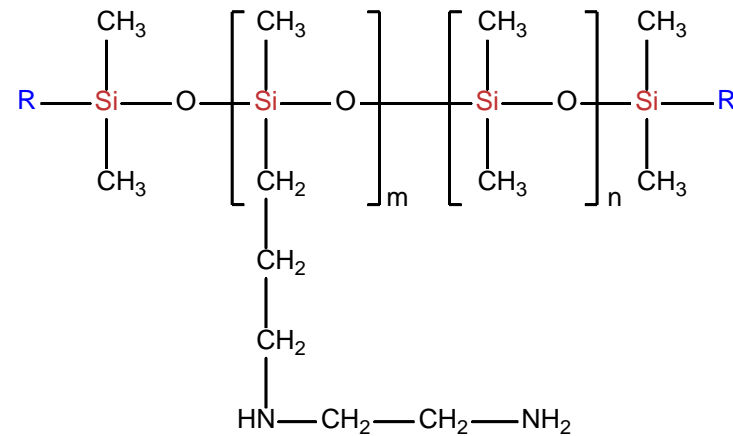
1<sup>st</sup>  
Generation



R: CH<sub>3</sub>, OH or OCH<sub>3</sub>

# 2<sup>nd</sup> Generation Pendant amino silicones

2<sup>nd</sup>  
Generation



R: CH<sub>3</sub>, OH or OCH<sub>3</sub>

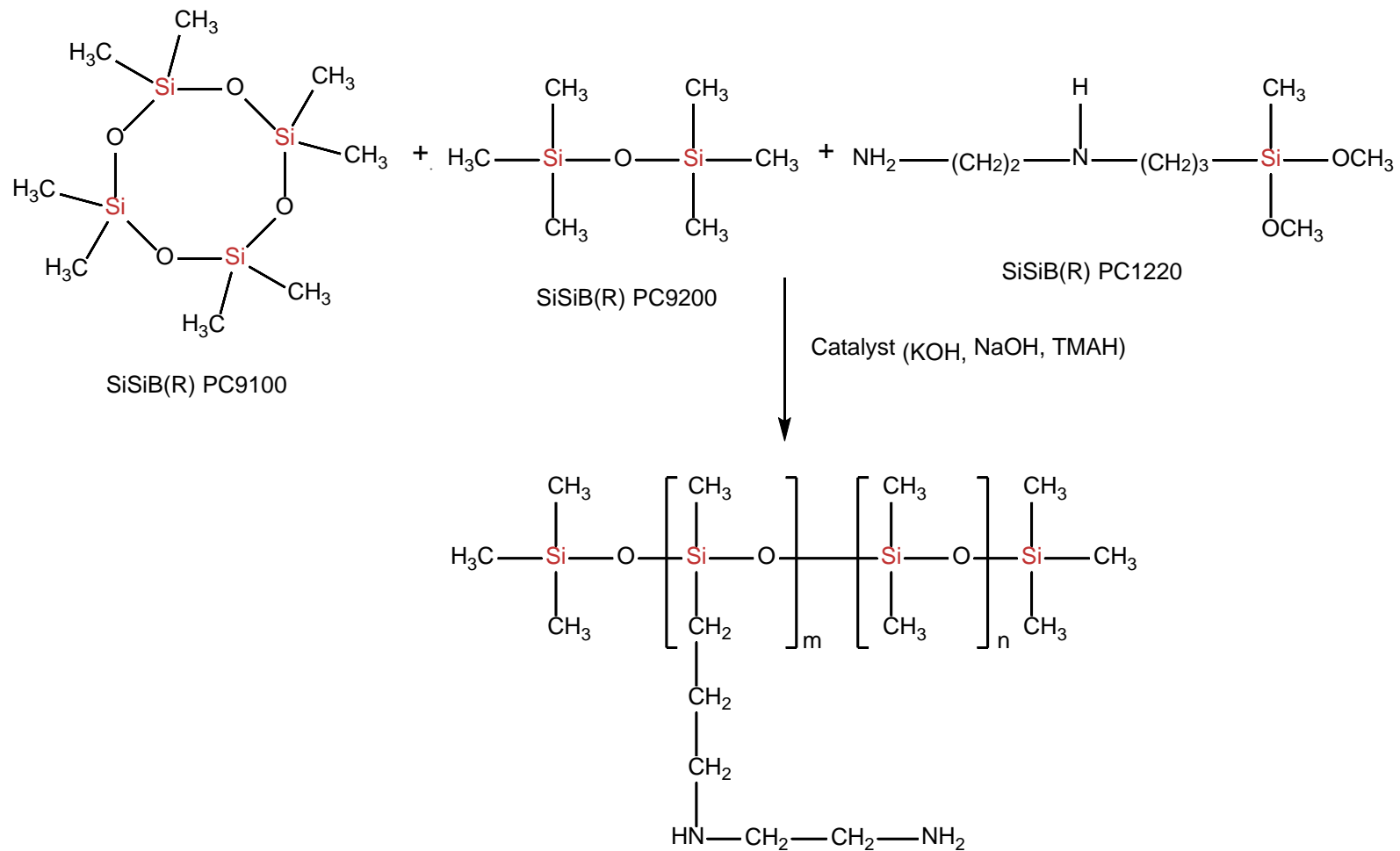
Polymer strongly fixed on fiber surface VERY HIGH WASH FASTNESS

Anchoring sites EXPOSED: YELLOWING

Old technology

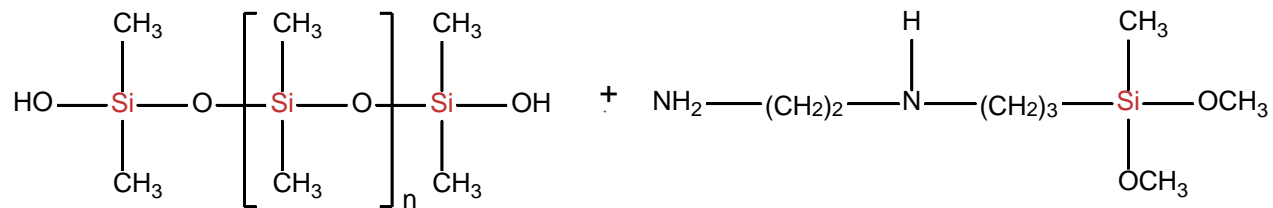
2nd  
Generation

ROS A



2<sup>nd</sup>  
Generation

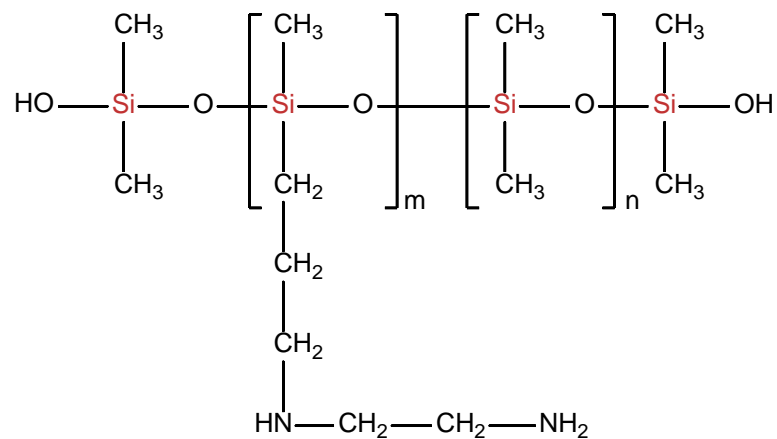
ROS **B**



SiSiB(R) OF0156

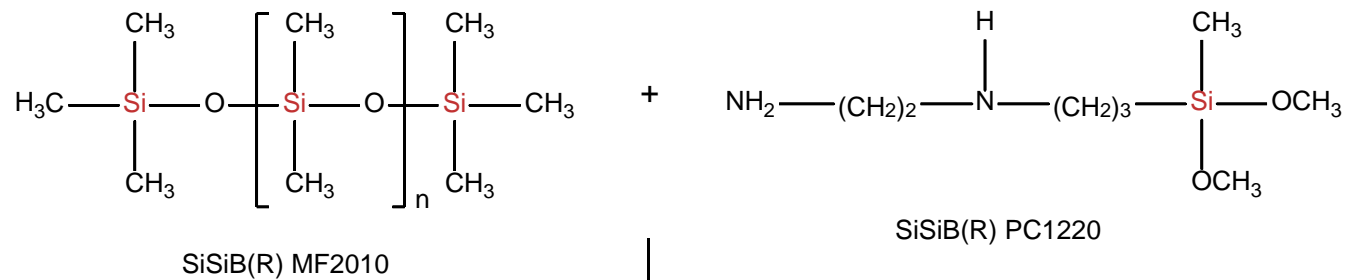
SiSiB(R) PC1220

Catalyst (KOH, NaOH, TMAH)

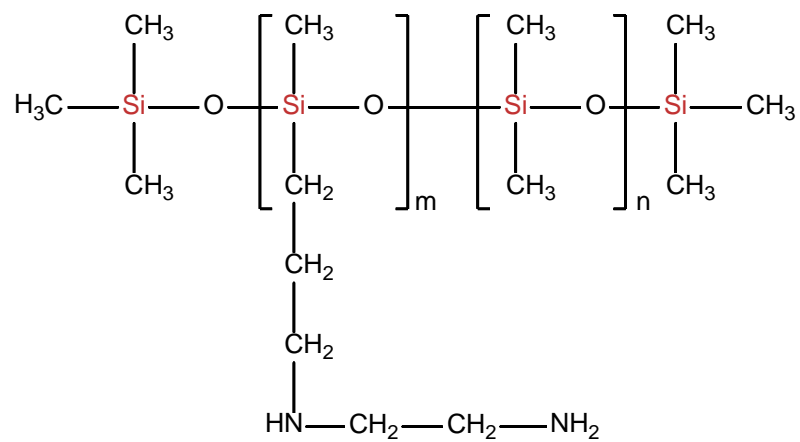


2nd  
Generation

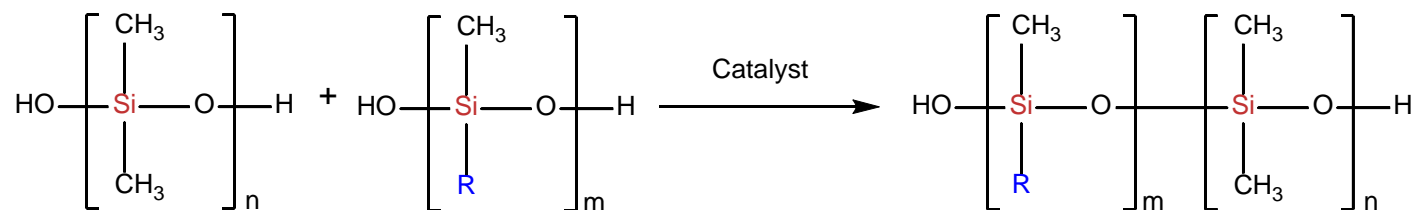
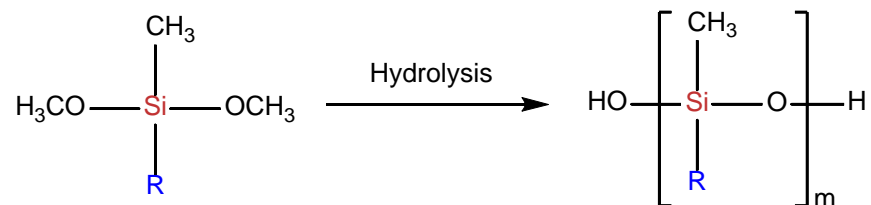
ROS C



Catalyst (KOH, NaOH, TMAH)

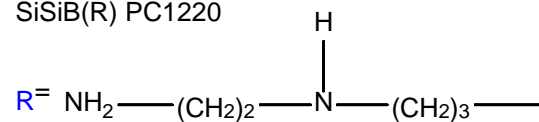


## Other Amino Silane in Use

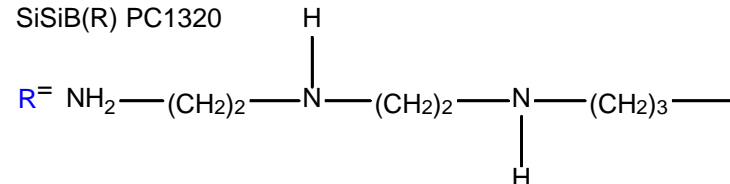


SiSiB(R) OF0156

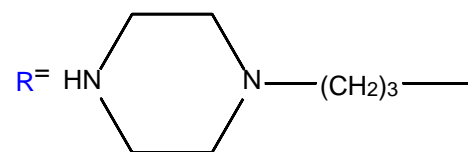
SiSiB(R) PC1220



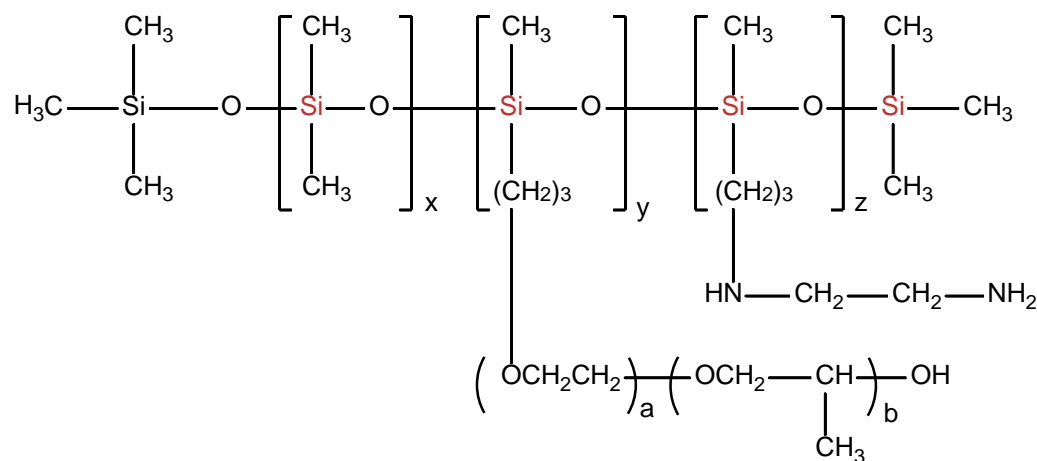
SiSiB(R) PC1320



SiSiB(R) PC1412



# 3<sup>rd</sup> Generation Pendant amino polyether silicones



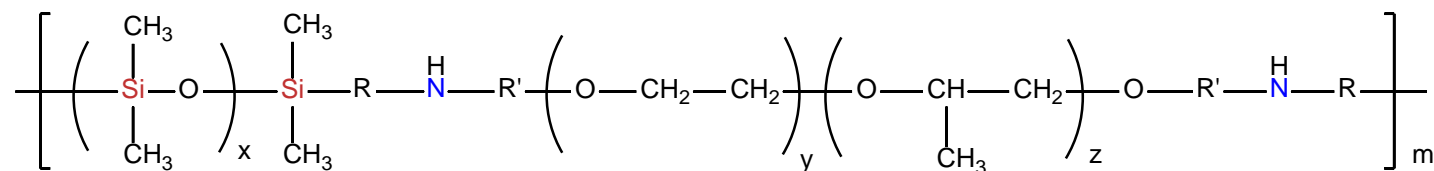
Hydrophilic moieties far away from fiber surface:

IT IS NOT THE BEST WAY TO GET HYDROPHILICITY

Very bad softening properties



# 4<sup>th</sup> Generation Block - Linear (AB)<sub>n</sub> textile softener



Hydrophilic segments directly attached to fiber surface: VERY HIGH HYDROPHILICITY

Silicon segments exposed and far away from fiber surface: VERY SOFT FEEL

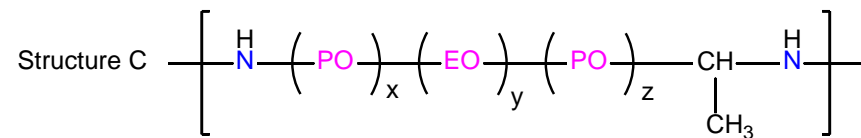
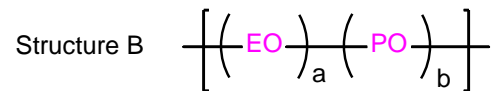
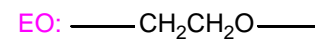
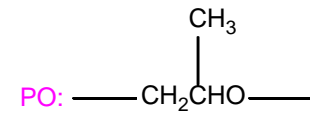
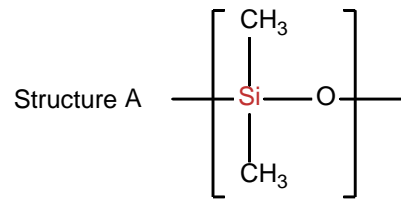
Anchoring sites HINDERED forming part of the linear polymeric chain: LOW YELLOWING

Surfactant-like structure: GOOD STABILITY

Best performance up to date

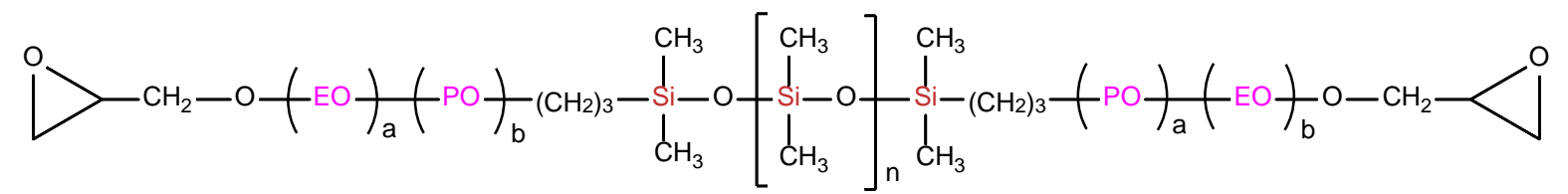
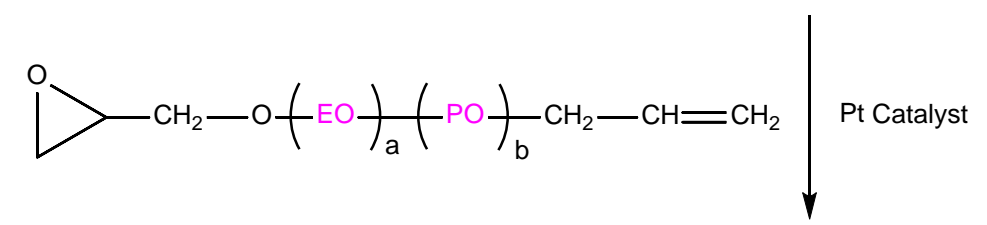
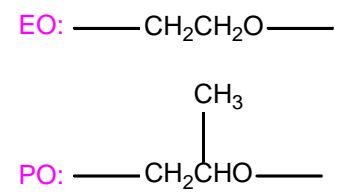
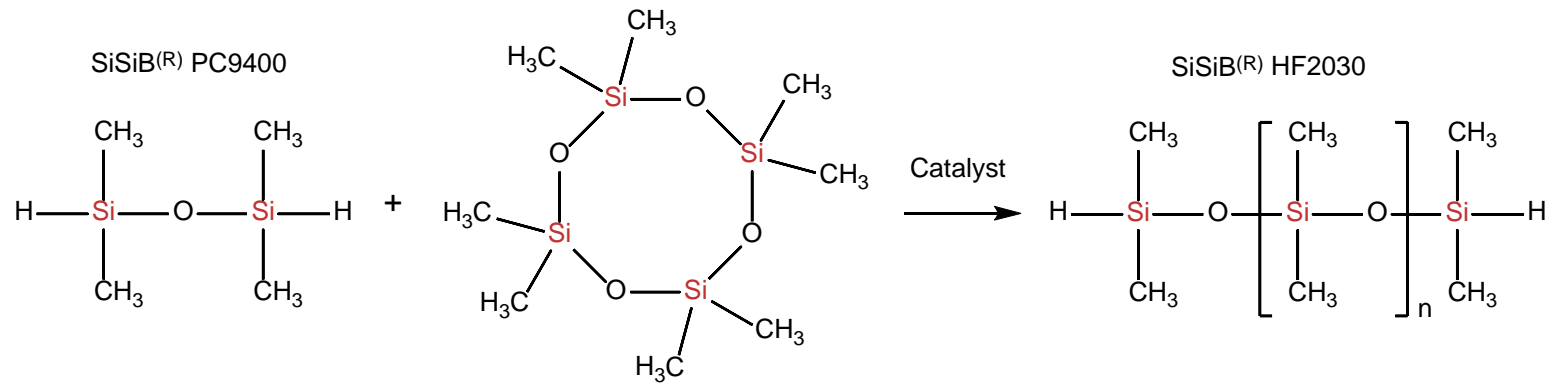
# 4<sup>th</sup> Generation textile softener units

4<sup>th</sup>  
Generation

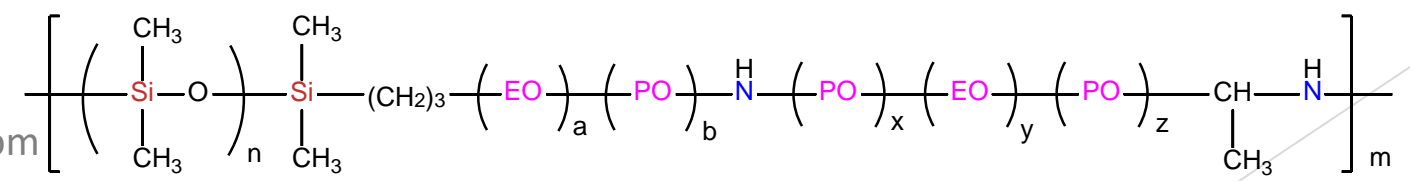
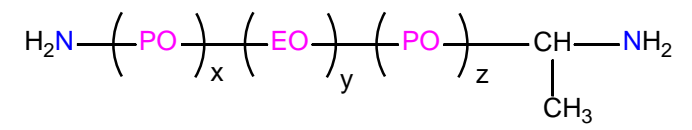


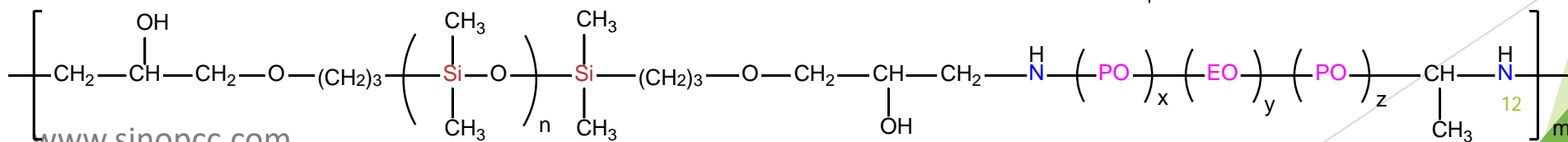
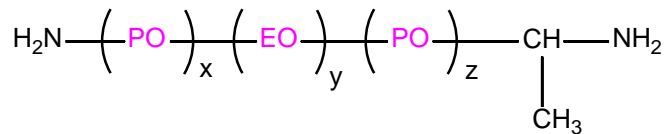
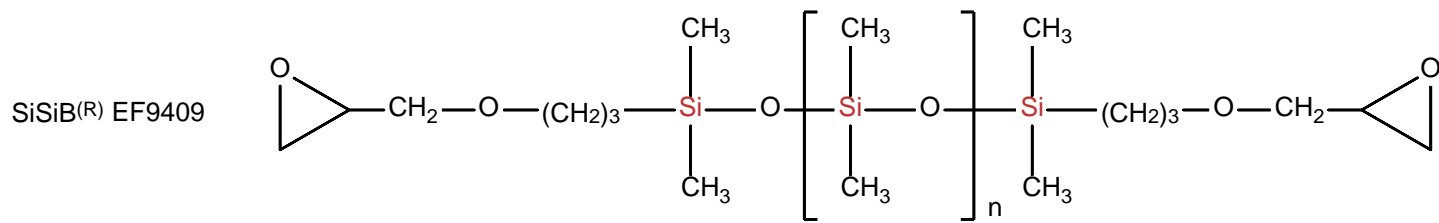
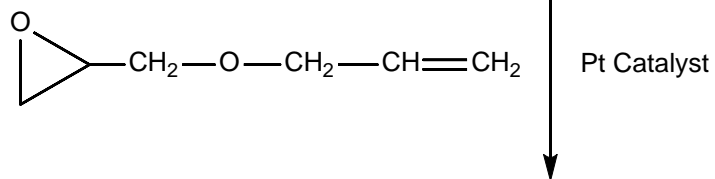
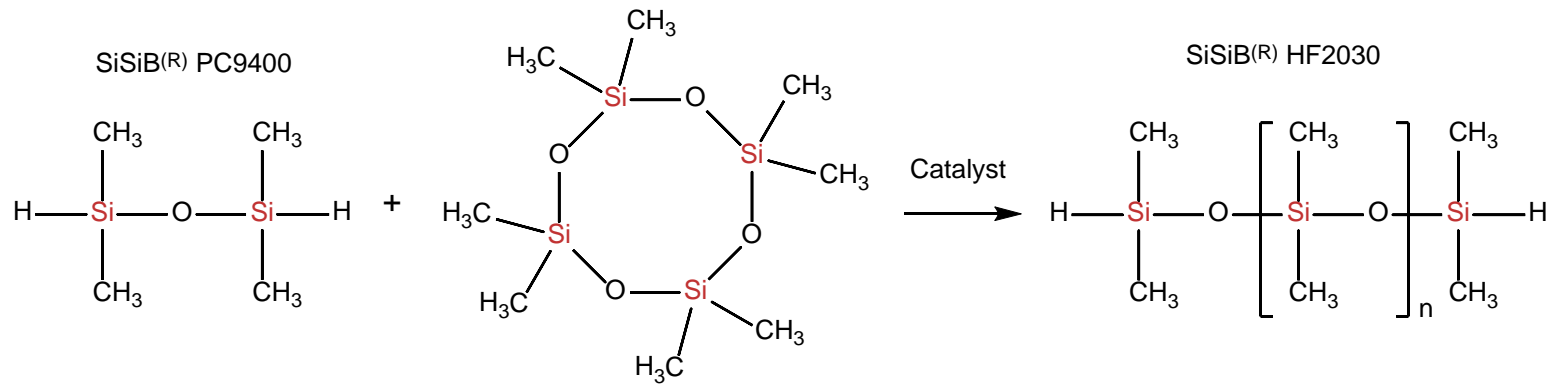
4<sup>th</sup>  
Generation

ROS **A**



SiSiB<sup>(R)</sup> EF1000





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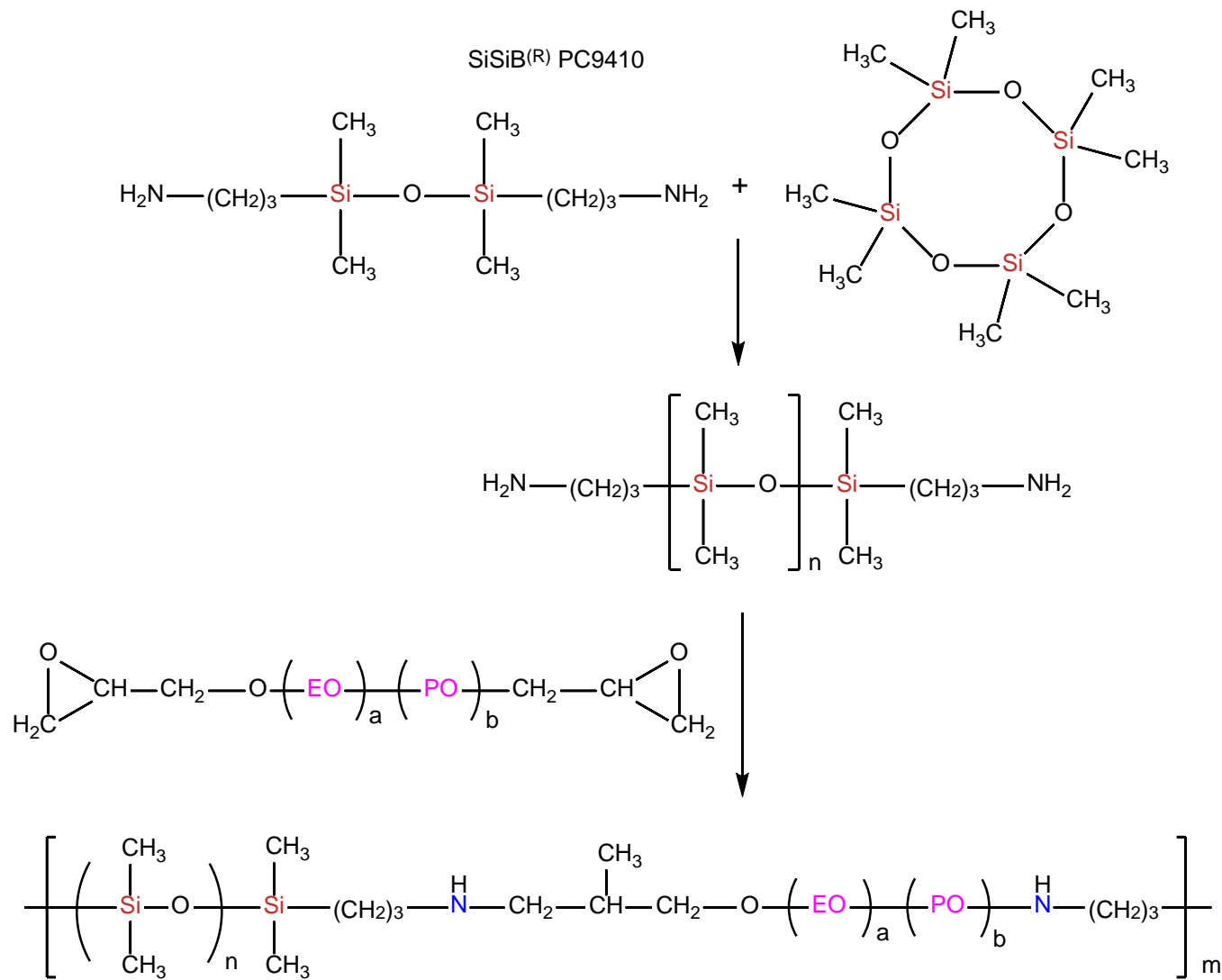
4<sup>th</sup>  
Generation

ROS B

SiSiB SILICONES

4<sup>th</sup>  
Generation

ROS C



# SiSiB SILICONES

*A part of SINOPCC group.*

*SiSiB SILICONES, established in 1989, is one of the leading manufacturers in silicone industry, focusing on the development and manufacture of silanes and silicones. Strategically positioned within the silicone supply chain, SiSiB SILICONES provide a comprehensive range of performance-enhancing products and solutions to meet the need of customers. These include silanes and siloxanes, silicone fluids, silicone rubbers, silicone resins, specialty silicones and fumed silica.*

***Your Reliable Partner for Silanes and Silicones!***

# About SiSiB SILICONES

- Over 30 years experience in silanes & silicones field.
- SINOPCC have 7 silicone production sites all over the world.
- 100 senior technicians and engineers, total 1,350 employee.
- 80% for overseas market. Exported to over 100 countries.
- ISO-9001 & ISO-14001 certificated.

# About SiSiB SILICONES - Capacity

Silanes &  
Siloxanes

- 60,000MT

Silicone  
Fluids

- 65,000MT

Specialty  
Silicones

- 28,000MT

Silicone  
Rubbers

- 32,000MT

Fumed  
Silicas

- 10,000MT

Silicone  
Resins

- 3,000MT