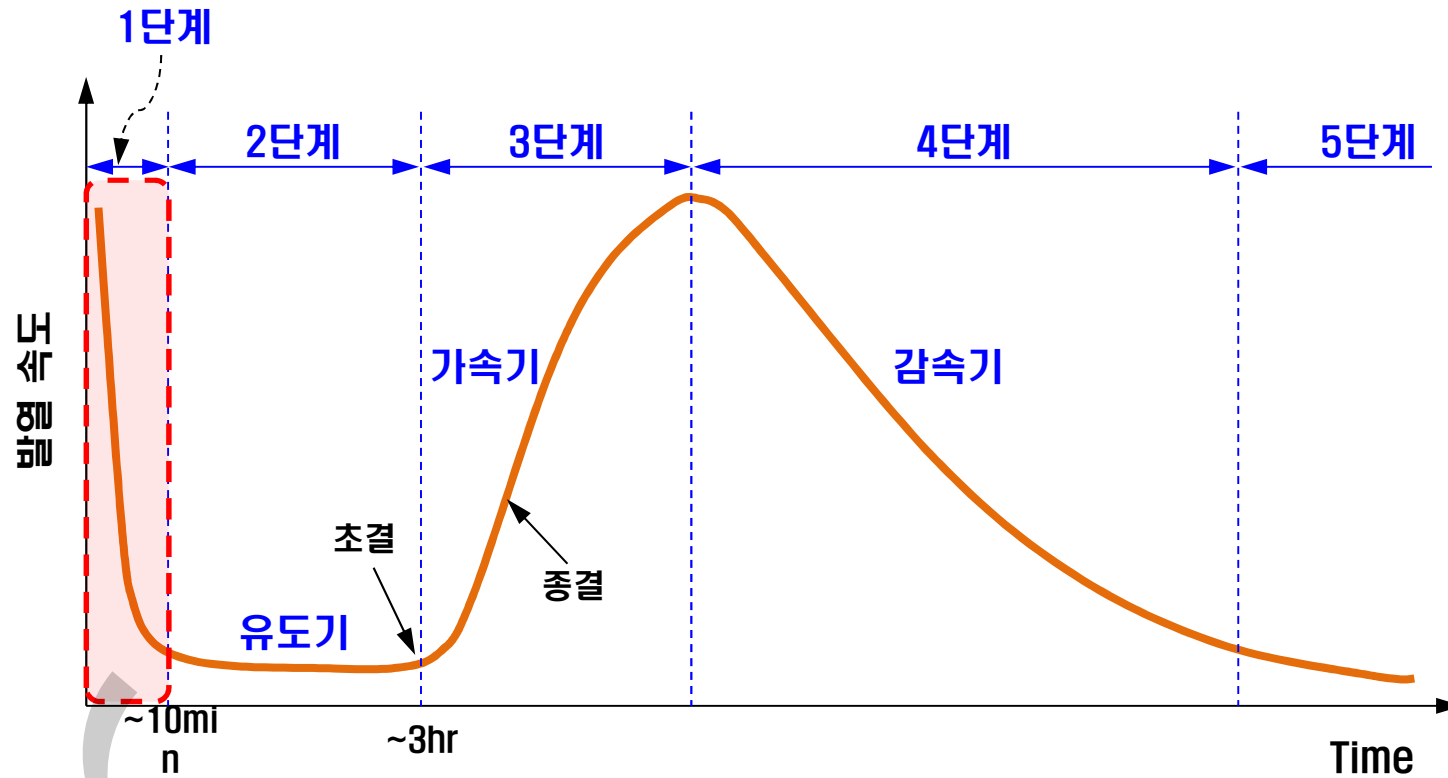


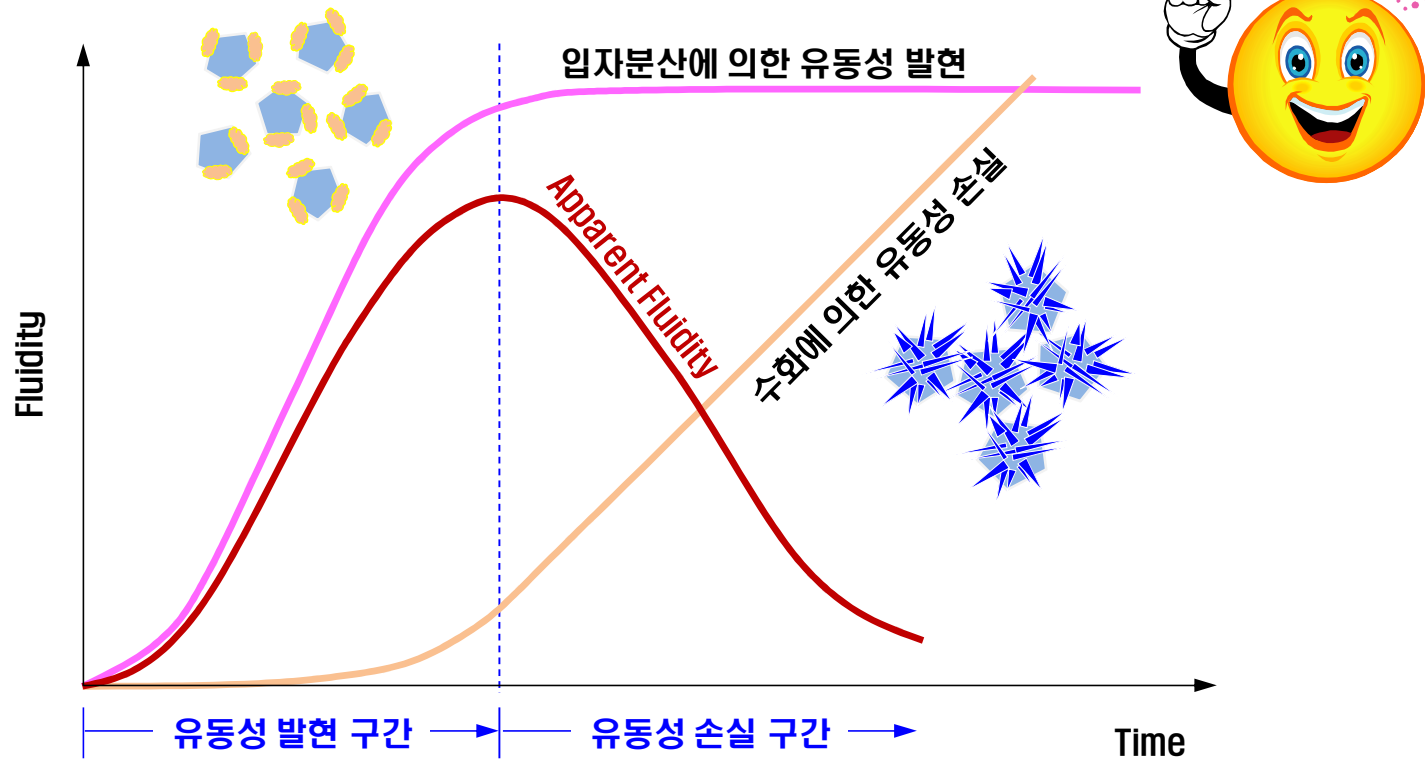
화학 혼화제 종류	분산 원리	사용량 (C x %)	감수율 (%)
➤ Lignin계	-	0.2 ~ 0.3	~10
➤ Melamine계	정전기적 반발력	1 ~ 3	~20
➤ Naphthalene계		0.5 ~ 3	~20
➤ PCA계	입체장애 효과	0.5 ~ 1.5	25 ~ 30



- ✓ C₃A의 급격한 수화 진행 단계 (화학 혼화제 작용 단계)
- ✓ 이수석고에 의해 Ettringite 생성으로 C₃A 초기 수화 억제
- ✓ Ettringite : $3C_3A \cdot 3CaSO_4 \cdot 32H_2O$



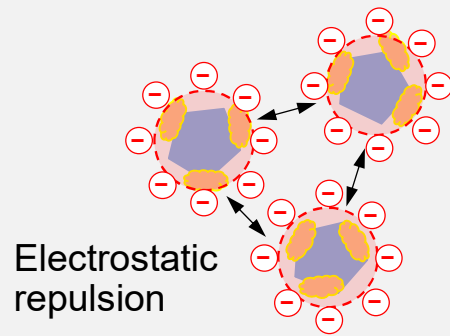
**“Concrete의 유동성은 Cement 입자분산과
Cement 수화의 Trade-off 현상!”**




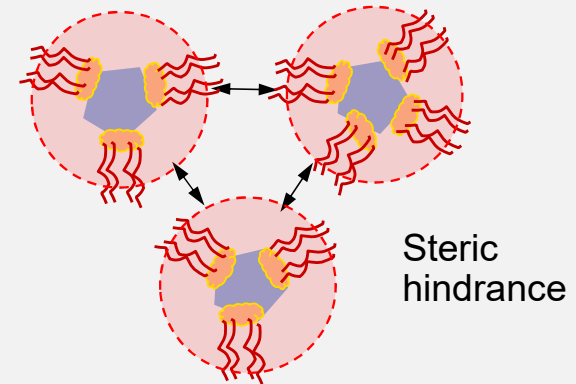
PNS

PCE

Initial Dispersion

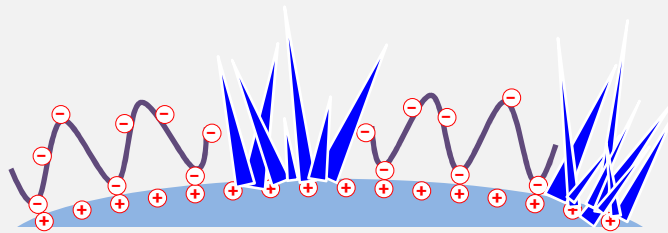


※  : Adsorption layer

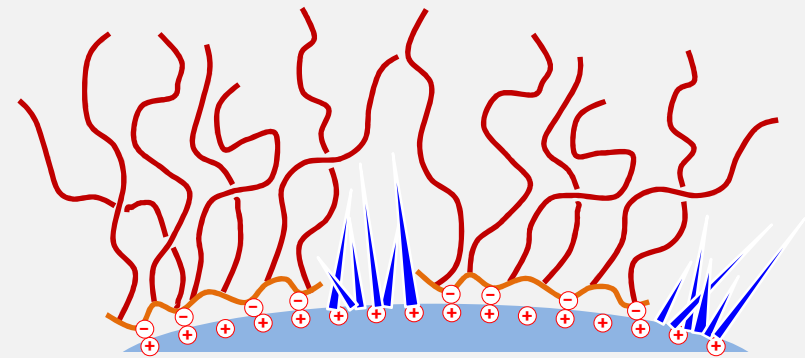


“Better dispersion”

Slump Retention



※  : Hydrate



“Better slump retention”