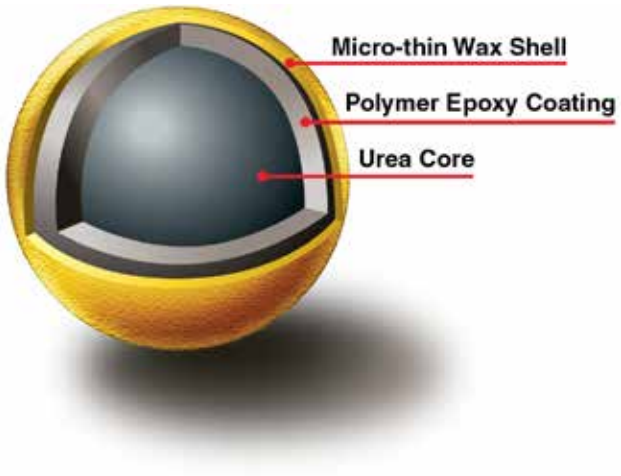
XRT® Extended Release Fertilizer Technology

SURFCOTE® Sustained Uniform Release Fertilizer

POLYMER COATED FERTILIZERS.

- 3, 4, and 6 Month Consistent Nutrient Release
- Water Is Needed Initially To Activate Prill
- Rainfall Does Not Affect Nutrient Discharge
- Temperature Only Affects Release Delivery
- Epoxy Coating
  - Extremely Durable Coating
  - Allows For Thinner Coating
  - Stays Intact For Entire Duration
  - Thickness Determines Longevity
- Yellow Color Allows Great Visibility in Turf



FACTORS AFFECTING RELEASE:

- Moisture is the Activator
  - Releases Slow if Water Becomes Limiting
  - Release Resumes When Water is Available
  - Too Much Rain or Irrigation is ***NOT*** an Issue
  - Provides a "Rain-proofing" effect by limiting water movement in/out
- Release Mechanism—Osmotic Diffusion
  - Water Diffuses Through Barriers
  - Liquified Urea Moves Back Through Polymer Coatings (semi-permeable barriers)
- Temperature Influences Diffusion Rate
  - Warmer Temperatures = > N Release Rate
  - Cooler Temperatures = < N Release Rate
- Coating Chemistry
  - Different From Polyurethanes
  - Less Temperature Sensitive

KNOX FERTILIZER COMPANY

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VS.

PCSCU (SULFUR COATED UREA)

PCSCU:

- Will Release Much Faster than XRT/SurfCote
- One Release Range (4-8 Weeks)
- N Release by Catastrophic Failure of Coating
- When Water Penetrates the Coating—The Nitrogen Release is Rapid
- Unpredictable Nitrogen Release Due to Contact w/water (irrigation and rainfall) As Well As Coating Breakage
  - Poses the risk of increased harmful leaching events
  - Excess available nutrients can be pollutants irrespective of the source
- Will Not Deliver a Consistent/Constant Nitrogen Feeding During Product Lifespan
- Considered a “Slow Release” not a “Controlled Release”
- PCSCU Does Not Stand Up Well to the Use of Larger Spreaders Because the Wear Can Fracture the Coating Causing Immediate Release of N When the Coating Is Broken
- Applying PCSCU Almost Always Lowers Soil pH
  - This acidification may cause nutrient disorders such as calcium or magnesium deficiency
- 1960’s Technology

Sulfur coating is **brittle** and easily damaged in blending and spreading

Urea release by leakage.....