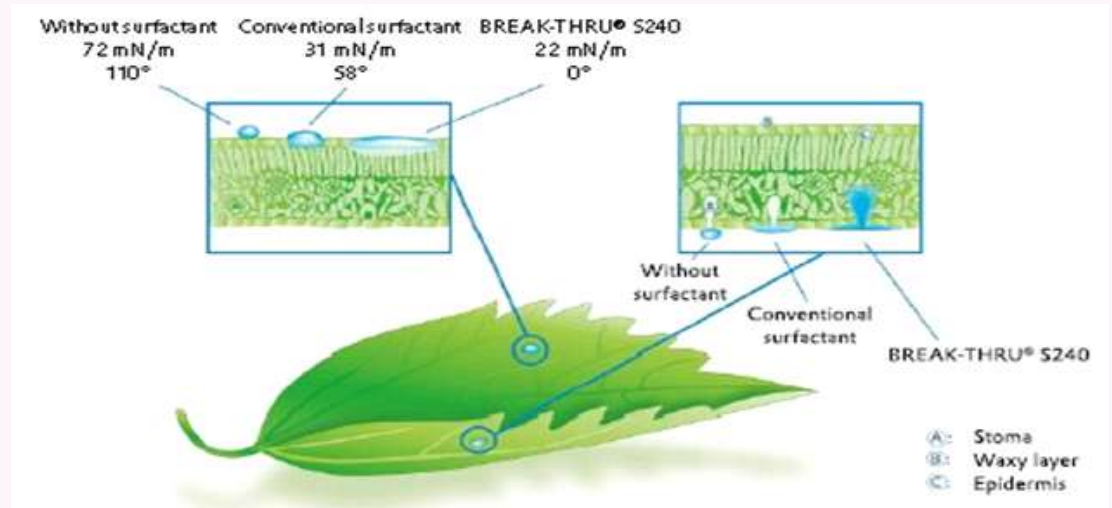


BREAK-THRU S 240 (Super Spreader & Super Penetrant)



Introduction:

BREAK-THRU S 240 is a non-ionic surfactant that belongs to chemical class “Organo-modified trisiloxanes”, which has phenomenal activity of “Super Spreading” (i.e. the rapid coverage of hydrophobic surfaces such as leaves at concentrations of 0.1% or less). Aqueous solutions with BREAK-THRU S240 have zero contact angle (Figure 1)



Super spreading is due to dramatic lowering of surface tension of water. Pesticides or foliar fertilizer Sprays containing BREAK-THRU S240 are very effective due to:



- **Wetting Action** : Complete wetting of treated foliage
- **Targeting Effect** : Allowing the spray to reach locations that are not accessible
- **Stomatal Flooding (Penetrating action)**: Better uptake through the waxy layer of leaves i.e. by Cuticular Penetration and by entering stomatal pores

What is Stomatal Flooding?

Stomata are microscopic pores in the leaf's surface that exchange water vapor, Oxygen and Carbon Dioxide with the atmosphere. Spray solutions of Systemic Pesticides + BREAK THRU S240 can enter these minute openings, gaining direct access to the plant's intercellular structure. The active ingredient is quickly absorbed once it reaches inside the sub-stomatal cavity by the spongy mesophyll, resulting in faster and more positive results and rain-fastness.

Cuticular Penetration:

The function of waxy cuticle layer is to prevent water loss from the leaf surface. Its impervious nature also inhibits entry of pesticides into the leaf. Silicone surfactants can enhance the passage of pesticides through the cuticle without damaging it.

Composition: 100% Polyether Modified Trisiloxane

BREAK-THRU S240 Benefits:

- BREAK-THRU S 240 allows a larger amount of active ingredient (Systemic Insecticides/ /Fungicides/ Weedicides) to enter the plant.
- BREAK-THRU S 240 provides rain-fastness within one hour.
- BREAK-THRU S 240 permits the reduction of spray volumes up to 30%, which Saves time, money, and environmental resources.
- BREAK-THRU S 240 safeguards the performance of pesticides and foliar fertilizers under unfavorable conditions such as:
 - a. Hot and dry conditions.
 - b. Mature and hardened weeds species.
 - c. Dust covered crops.
 - d. After a cold period when the waxy layer of plants is thicker.
 - e. When plants have a limited surface e.g. spikes.
 - f. When complete coverage is necessary e.g. within Rose petals.

Video Link: <https://www.youtube.com/watch?v=WEDZbV7HgLQ>

Application Rate:

- For Contact Pesticides: 50 ml/ Acre.
- For Systemic Pesticides: 80 ml/Acre.
- For Soil application: 100 ml/Acre

Manufactured by:



Evonik Industries, Germany