



Agro Chemicals

Polyether Modified Trisiloxane vs. Traditional Non-ionic Surfactants



Why Spreading and Leveling Agents?

The modern industrial farm's productivity is necessary in order to feed the increasing world's population.

The efficient use of additives like pesticides and herbicides are required to optimize yield of cultivated plants.

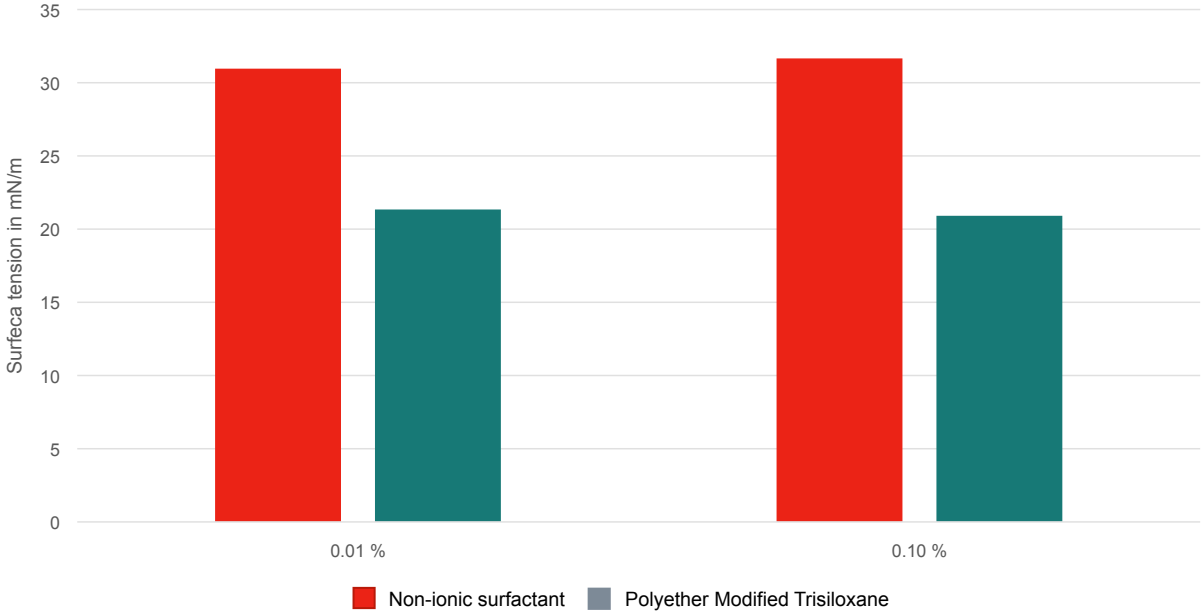
The efficacy of pesticides is enormously increased by adding spreading and leveling agents into applied formulations.

Polyether modified trisiloxanes are much more efficient spreading and leveling agents than traditional non-ionic surfactants.

Effective spreading and leveling has been proven to deliver actives more efficiently to the plant.



SURFACE TENSION (Kruess K100, Wilhelmy plate method)



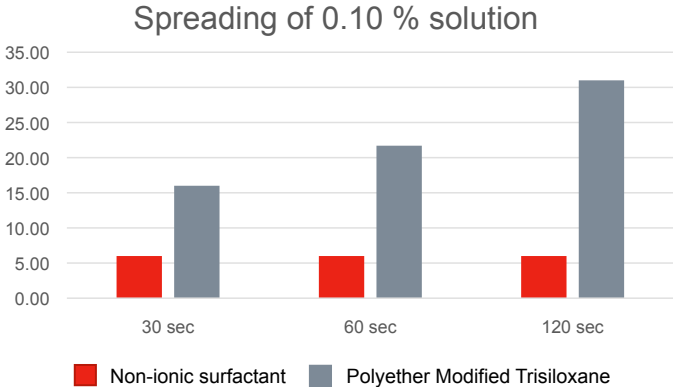
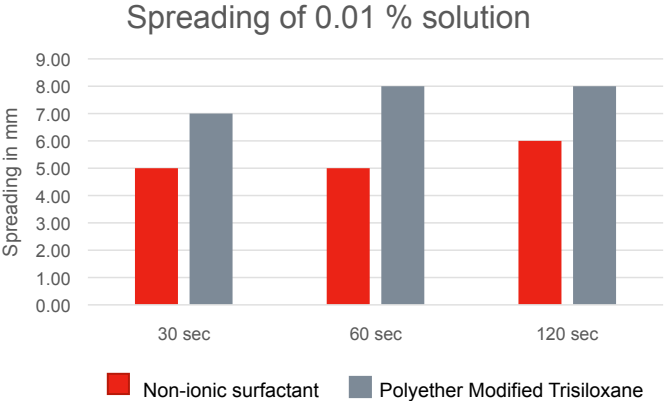
► Lower surface tension provides better spreading and active delivery performance.





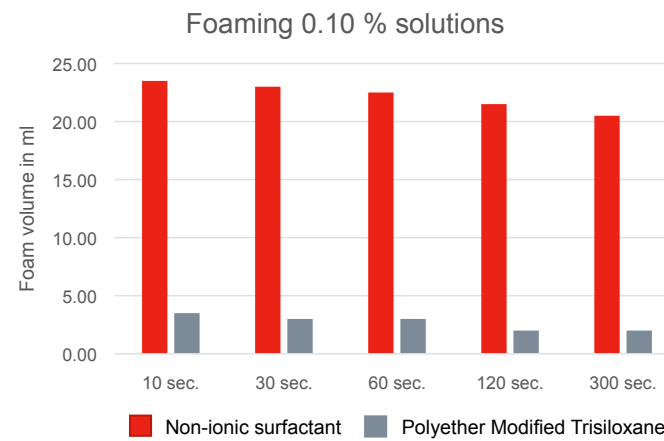
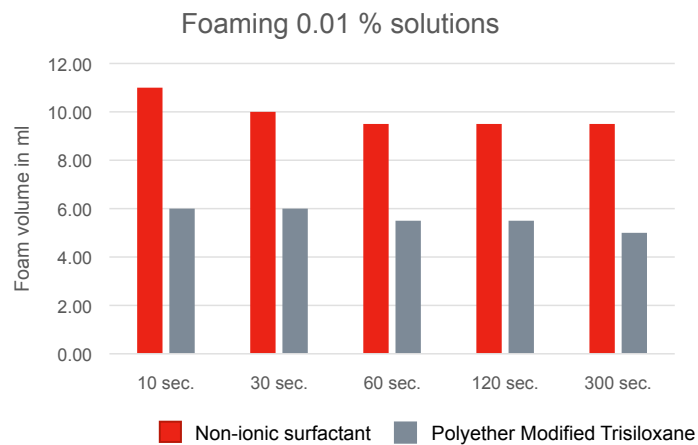
SPREADING TEST (according to ASTM E-2044-99)

ormatieren
s) über die
stenebene



► The trisiloxane surfactant outperforms traditional non-ionics by covering more surface area faster.

FOAMING



- ▶ Less foam makes the final solution more user friendly and easier to apply. Traditional non-ionic surfactants are much more pro-foaming than trisiloxane chemistries.

Method: Put 20 ml solution into a calibrated 100 ml cylinder. Shake the cylinder 30 times for 30 seconds. Measure the foam volume after 10, 30, 60, 120 and 300 seconds.

CONCLUSION

Pure molecules of polyether modified trisiloxanes, like CHT's

- HANSA ADD 1055,
- HANSA ADD 1060-RP,
- HANSA AC 1460

outperform traditional non-ionics in surface tension reduction, spreading, and reducing foaming much better than traditional silicone-free surfactants (e.g. NPEO, 6 EO).