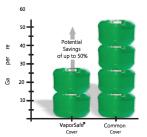


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# VAPORSAFE® FUMIGATION BARRIER

### VAPORSAFE® FUMIGANT SAVINGS



## **MAXIMIZE FIELD PERFORMANCE**

In the fumigation process, everything comes down to the film for optimal performance results in the field. And now that the industry has moved away from methyl bromide to control weeds, pests and diseases, the need for a totally impermeable film (TIF $^{\text{TM}}$ ) has become a requirement. VaporSafe $^{\text{@}}$  fumigation film is proven to be the most effective TIF $^{\text{TM}}$  fumigation film for broadcast and row mulch applications.

VaporSafe® is a unique seven layer co-extruded barrier film made from very flexible high strength polyethylene and an inner core of gas impermeable EVOH barrier resin. VaporSafe® soil fumigation barriers bring leading TIF™ film technology into a common sense approach to success. VaporSafe® is available in clear, white/black, black and other colors as required.

### **VAPORSAFE PROVEN RESEARCH**

Extensive research has been conducted on VaporSafe® fumigation barrier to assure growers repeatable and reliable performance. Results indicate that fumigant rates based on gallons per acre may be reduced by as much as 10% to 50% under VaporSafe® (TIF™), while maintaining efficacy. This reduced rate also provides improved control of fungal disease and weeds when compared to VIF (very impermeable film) at a much higher application rate while still maintaining or improving yields. VaporSafe's 7-layer UV stabilized design incorporates ultimate barrier performance and longevity expectations in addition to exceptional tear, puncture and impact resistance.



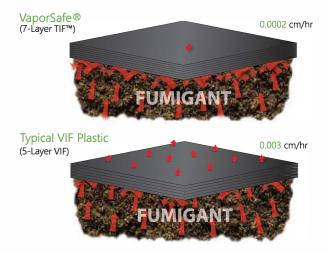
### **VAPORSAFE® FILM BENEFITS**

- Promotes maximum fumigant efficacies
- Reduces bystander exposure with lower VOC emissions
- Exceeds all current EPA and CDPR\* film standards
- · Uniformly contains soil fumigant throughout
- · Potential for reduced fumigant rates without efficacy loss
- Designed for optimal UV resistance (maximizes longevity)
- Provides high concentration over time (CT Values)
- Built to withstand installation and collection duress
- Substantially reduces or eliminates odors

### LOWERING THE MTC

The MTC (Mass Transfer Coefficient) is used to identify the fumigant retention capability of the film. Basically, the lower the MTC, the better the film efficacy. In comparison, VaporSafe® fumigation film retains 15x more fumigant than the best VIF film on the market.

### MASS TRANSFER COEFFICIENT (MTC)



Buffer Zone Diagram is based on 10 acres with new EPA regulations applied. Using past farming practices would only allow 2.32 acres available for planting; using VaporSafe® 6.28 acres (60% Buffer Zone Credit) would be available when applying at full rate. Optimize your buffer zone by combining a lower application rate with VaporSafe's proven ability to maintain efficacy and yield even at reduced fumigant rates of up to 50% can help to achieve the optimal buffer zone of 25'. (see chart at top of page for Yield results using VaporSafe®)

\*CDPR (California Department of Pesticide Regulation). TIF™ is a registered trademark of Kurary Co., Ltd.

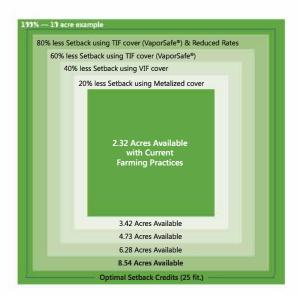
# EFFECT ON PIC-CLOR 60 RETENTION ON WEED INCIDENCE AND YIELD

| 3              | Season-Long<br>Weed Densities<br>(1,000 per Acre) |        | Yellow Nutsedge<br>Tuber Viability<br>(Viability %) |       | Common Purslane<br>Seed Viability<br>(Viability %) |      | Fruit Yield March<br>30 to Oct 8, 2009*<br>(Grams per Plant) |     |
|----------------|---|--------|---|-------|--|------|--|-----|
| Rate<br>(lb/A) | TIF   | STD    | TIF   | STD   | TIF  | STD  | TIF  | STD |
| 0              | 198 ab  | 222 a  | 74 a  | 69 a  | 48 a   | 53 a | 550  | 525 |
| 50             | 91 cde  | 148 bc | 45 b  | 41 bc | 23 b   | 53 a | 625  | 600 |
| 100            | 54 ef   | 121 cd | 13 d  | 28 c  | 1 c  | 2 c  | 925 <sup>z</sup>   | 775 |
| 200            | 18 f  | 69 def | 1 d   | 3 d   | 2 c  | 1 c  | 990 <sup>z</sup>   | 825 |
| 300            | 12 f  | 66 def | 0 d   | 7 d   | 0 c  | 0 c  | 1025   | 950 |
| 400            | 11 f  | 38 ef  | 6 d   | 0 d   | 1 c  | 0 c  | 1000   | 925 |
| MBPic          | 37 ef   | 14 f   | 1 d   | 3 d   | 0 c  | 0 c  | 975  | 990 |

Source: "Pic-Clor 60 Retention under Totally Impermeable Film in Strawberry" - Slides 15-19 Steve Fennimore, University of California-Davis, Salinas, CA

# **EPA BUFFER ZONE SETBACK CREDITS**

Buffer zones can be significantly decreased by utilizing TIF™ film to regain valuable planting acres. VaporSafe® (TIF™) lowers the EPA and CDPR\* buffer zone restrictions by an impressive 60% over standard films with even further decreases possible using rate reductions. Some VIF films will only allow a 40% reduction in buffer zones. Utilizing VaporSafe® can maximize production acres, significantly impacting your overall bottom line.



<sup>\*</sup> estimated values from graph titled "Fruit Yield March 30 to Oct 8, 2009".

z different at 0.05