



BVA OILS

BVA SPRAY OILS



IMPROVE YOUR PRODUCTIVITY WITH BVA SPRAY OILS

For Information Call
BVA OILS 248-348-4920

*Or Your Local BVA
Spray Oil Agent*

BVA SPRAY OILS are a series of specially refined, paraffinic type, petroleum base oils intended for use as Agrichemical spray oils. Properly formulated and applied for herbicidal or pesticidal use in Agricultural or Horticultural spray applications, they offer the user the following benefits

1. EFFICIENT LOW-COST APPLICATION.

When applied in low concentration, (0.5%-1.5%) oil-in water emulsions, alone, or in combination with other active, chemical type pesticides and herbicides.

2. IMPROVED PRODUCTIVITY.

Effective control of insect pests and plant diseases, reduces crop losses and increases yields.

3. ENVIRONMENTAL SAFETY.

They are completely biodegradable. Safety to personnel and animal life is assured by their paraffinic nature. They are approved by the Environmental Protection Agency.

4. APPLICATION SAFETY.

Their low aromatic content ensures that they will not cause physiological damage to plants or crops.

Petroleum oils have been used successfully for many years in agricultural and horticultural applications. They offer the advantages of low cost, easy application and effectiveness. When properly manufactured and applied, they are physiologically safe to the crop on which they are used, and are effective plant disease and insect controls. Spray oils affect many insects by interfering with their metabolic functions. Thus the oil effectively controls insect development and no immunity to their effectiveness is developed. They are especially useful on most types of citrus and other fruit crops and are helpful in controlling:

Greasy Spots
Scales of various forms
Loosens Sooty Mold
Spider Mites
Whiteflies

NOTE: Other types of insect pests and plant diseases may also be controlled by oil, alone, or in combination with other active, chemical type pesticides



Research on oils and their use as spray oils has shown the preferred, and most effective oils, to be manufactured from well-refined, paraffinic type oils having carefully controlled distillation properties. The resulting oils are low in aromatics content, and thus have little or no phytotoxic effects. They also have sufficient residence time on the crop so as to protect it through its growth period, and meet the physical requirements of easy application.

BVA SPRAY OILS are carefully manufactured from selected, paraffinic base stocks, and are controlled to meet all applicable state and federal regulatory requirements for spray oils. Complete data on all available BVA SPRAY OIL grades may be found at the end of this brochure.

BVA SPRAY OILS

BVA Grade	10	13	22
Viscosity, SUS@100°F	60	70	110
* EPA Registration No.	55206-1	55206-2	55206-4
Florida Spec No.	412-66	435-66	NA**

* Environmental Protection Agency

** Not Applicable

Extensive research by agricultural researchers has defined three oil properties to be critical to an oil's performance as a spray oil. Those properties, defined below, are Unsulfonated Residue, the 10% - 90% Boiling Range, and the 50% Distillation Point. This is for oils used in applications where the oil is normally applied as a low concentration (0.5%-1.5%), oil-in-water emulsion.

UNSULFONATED RESIDUE (UR) is a measure of the level of refining given the oil, and the residual level of aromaticity of the oil. A low level of aromatics, and thus a high value of UR, is desirable because aromatics may cause physiological damage when applied to sensitive crops. BVA SPRAY OILS are highly refined oils, from selected paraffinic stocks, and thus have desirably high UR values meeting all major industry specifications.

BVA SPRAY OILS
UNSULFONATED RESIDUE VALUES
% By Volume, ASTM D-483

Florida Specs. Limit	92	Minimum
BVA SPRAY OIL 10	98	
BVA SPRAY OIL 13	98	
BVA SPRAY OIL 15	98	
BVA SPRAY OIL 22	98	

The other two critical properties relate to the distillation, or boiling point characteristics of the oil. By controlling these properties, oils can be defined and selected which may be applied safely and effectively over a range of ambient temperature conditions, with sufficient residence time on the crop, and without dangerous phytotoxic activity or risk.

Current Florida specifications limit both a narrow Boiling Range between 10% to 90% Distilled and a 50% Distillation Point range. This combined limit effectively defines an optimum oil molecular weight, and viscosity range which has been found to have the desired pesticidal activity with minimal phytotoxic effect. Generally, pesticidal efficiency is directly related to boiling range, up to about 480°F. Lower boiling range oils may be preferred in spring, fall and winter months when ambient temperatures are lower, even though they have inherently lower pesticidal efficiency.

BVA SPRAY OILS
DISTILLATION PROPERTIES

BVA Grade	10	13	22
Distillation, ASTM D-1160 °F@ 10 mm Hg.			
10 % -90 % Range, Typical	55	78	-
10 % -90 % Florida Spec., max.	80	80	No Spec
50 % Boiling Point, typical	415	431	476
Florida Spec.	412 ± 8	435 ± 8	No Spec

Properties such as API Gravity, Pour Point, and others, are also defined in these published specifications. These are all important in describing a satisfactory spray oil. As shown below, BVA SPRAY OILS exceed these additional requirements. Additional information is available by contacting your BVA OIL representative.

BVA SPRAY OILS TYPICAL PROPERTIES

BVA Grade Number	10	13	22
EPA Registration No.	55206-1	55206-2	55206-4
Florida Spec. No.	412-66	435-66	None
Gravity, 'API 60/60F	33.7	33.3	35.3
Density, g/ml	0.8515	0.8517	0.8537
Unsulphonated Res., %	99.0	99.0	99.0
Pour Point, °F	-6	-6	-6
Distillation, °F, 10 mmHg			
10 - 90 % Range	33	70	118
50 % Point	415	431	476
Viscosity, SUS @100 °F	64.6	71.3	102.5
Viscosity, cSt @ 40 °C	11	13.4	21.1
Flash Point, °F	356	365	392
Color	30	30	30
Pounds Per Gallon	7.11	7.11	7.12



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