

US EPA ARCHIVE DOCUMENT

From 6/18/91

CHEMISTRY STANDARD

Table 1. Physical and chemical properties of the technical grade of the active ingredient (TGAI), purified active ingredient (PAI), and the du Pont oxamyl 42% FI (EPA Reg. No. 352-400) manufacturing-use product (MP). Data concerning the unregistered TGAI are from MRID 40499702; data concerning the MP are from MRID 40499704.

Guidelines Reference
No., 40 CFR §158.190;

Name of Property	Description (Substrate) [Method]																		
63-2. Color	white (TGAI) clear (MP)																		
63-3. Physical state	crystalline solid (TGAI) liquid (MP)																		
63-4. Odor	slightly sulfurous (TGAI) slightly sulfurous and ketone-like (MP)																		
63-5. Melting point	97-100 C (TGAI) [OECD No. 102]																		
63-6. Boiling point	N/A; the oxamyl TGAI is a solid at room temperature																		
63-7. Density, bulk density, or specific gravity	bulk: 0.34 g/mL (TGAI) [PT180.101(E)] absolute: 0.97 g/mL (TGAI) [OECD No.109] 1.081 g/cc (MP) [OECD No. 109]																		
63-8. Solubility	<table border="1"><thead><tr><th colspan="2">Solubility at 25 C</th></tr><tr><th>Solvent</th><th>(g/100 g solvent)</th></tr></thead><tbody><tr><td>water</td><td>28.2</td></tr><tr><td>methanol</td><td>129</td></tr><tr><td>ethanol</td><td>32</td></tr><tr><td>isopropanol</td><td>12</td></tr><tr><td>acetone</td><td>67</td></tr><tr><td>toluene</td><td>0.8</td></tr><tr><td>methylene chloride</td><td>92</td></tr></tbody></table> (TGAI) [OECD No. 105]	Solubility at 25 C		Solvent	(g/100 g solvent)	water	28.2	methanol	129	ethanol	32	isopropanol	12	acetone	67	toluene	0.8	methylene chloride	92
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63-9. Vapor pressure	2.3×10^{-4} mm Hg @ 25 C (TGAI) [OECD No. 104]																		
63-10. Dissociation constant	non-ionic; no acidic or basic properties (TGAI)																		
63-11. Octanol/water partition coefficient	$K_{ow} = 0.36$ at 25 C (PAI) [OECD No. 107]																		

(Continued.)

TABLE A. GENERIC DATA REQUIREMENTS FOR THE OXAMWL (DU PONT) TECHNICAL GRADE OF THE ACTIVE INGREDIENT.¹

Data Requirement	Test Substance ²	Does EPA have data to satisfy this requirement?	Bibliographic Citation	Must additional data be submitted under FIFRA Sec. 3(c)(2)(B)?
<u>40 CFR §158.155-190 Product Chemistry</u>				
<u>Product Composition</u>				
61-2. Starting Materials and Manufacturing Process	TGAI	Yes	40499701	No
61-3. Formation of Impurities	TGAI	Partially	40499701	Yes ⁴
<u>Analysis and Certification of Product Ingredients</u>				
62-1. Preliminary Analysis	TGAI	Yes	40790001 41118201	No
<u>Physical and Chemical Characteristics⁵</u>				
63-2. Color	TGAI	Yes	40499702	No
63-3. Physical State	TGAI	Yes	40499702	No
63-4. Odor	TGAI	Yes	40499702	No
63-5. Melting Point	TGAI	Yes	40499702	No ⁶
63-6. Boiling Point	TGAI	N/A	N/A	No
63-7. Density, Bulk Density, or Specific Gravity	TGAI	Yes	40499702	No
63-8. Solubility	TGAI or PAI	Yes	40499702	No
63-9. Vapor Pressure	TGAI or PAI	Yes	40499702	No
63-10. Dissociation Constant	TGAI or PAI	Yes	40499702	No
63-11. Octanol/Water Partitioning Coefficient	PAI	Yes	40499702	No
63-12. pH	TGAI	Yes	40499702	No
63-13. Stability	TGAI	Yes	40499702	No
<u>Other Requirements:</u>				
64-1. Submittal of Samples	N/A	N/A	N/A	No

1. Data requirements pertain to the du Pont 42% FI (EPA Reg. No. 352-400). Additional data requirements are listed in the following Table B, "Product Specific Data Requirements for Oxamyl Manufacturing-Use Products".