

Warning: The Cubic model is aliased.

Fit Summary

Response 2: Insolubility

Source	Sequential p-value	Lack of Fit p-value	Adjusted R ²	Predicted R ²	
Linear	0.0002		0.7931	0.6142	Suggested
2FI	0.1596		0.8177	0.4106	
Quadratic	0.0173		0.9265	0.5669	Suggested
Cubic	0.0001		0.9974	0.8733	Aliased

Sequential Model Sum of Squares [Type I]

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Mean vs Total	61117.13	1	61117.13			
Linear vs Mean	577.11	2	288.56	24.00	0.0002	Suggested
2FI vs Linear	24.90	1	24.90	2.35	0.1596	
Quadratic vs 2FI	65.41	2	32.70	7.65	0.0173	Suggested
Cubic vs Quadratic	29.16	2	14.58	95.87	0.0001	Aliased
Residual	0.7603	5	0.1521			
Total	61814.46	13	4754.96			

Select the highest order polynomial where the additional terms are significant and the model is not aliased.

Lack of Fit Tests

Source	Sum of Squares	df	Mean Square	F-value	p-value
Linear	120.23	6	20.04		
2FI	95.33	5	19.07		
Quadratic	29.92	3	9.97		
Cubic	0.7603	1	0.7603		
Pure Error	0.0000	4	0.0000		

The selected model should have insignificant lack-of-fit.

Model Summary Statistics

Source	Std. Dev.	R ²	Adjusted R ²	Predicted R ²	PRESS	
Linear	3.47	0.8276	0.7931	0.6142	269.06	Suggested
2FI	3.25	0.8633	0.8177	0.4106	410.98	
Quadratic	2.07	0.9571	0.9265	0.5669	302.04	Suggested
Cubic	0.3900	0.9989	0.9974	0.8733	88.35	Aliased

Focus on the model maximizing the **Adjusted R²** and the **Predicted R²**.