



AD FALCON API Manual

Constant Permeability Model

Javad Ghorbani

March 14, 2026

Contents

1	Constant Permeability Model	3
1.1	Syntax	3



1 Constant Permeability Model

1.1 Syntax

```
@Perm: Constant k_sat <k_sat>
```

In the Constant Permeability model the intrinsic permeability, k_{sat} , is a fixed value that does not vary with the void ratio. The model assumes that the relative permeability for water is constant and equal to 1, while the relative permeability for gas is 0. Thus, the model yields:

$$k_{rw} = 1.0 \quad (1)$$

$$k_{rg} = 0.0 \quad (2)$$

This model is suitable for cases where permeability is assumed independent of changes in the void ratio.