

## fpf-compatible-join-iff<sup>11,40</sup>

$\forall A:\text{Type}, eq:\text{EqDecider}(A), B:(A \rightarrow \text{Type}), f,g,h:\text{fpf}(A; a.B(a)).$   
 $\text{fpf-compatible}(A; a.B(a); eq; f; g)$   
 $\Rightarrow (\text{fpf-compatible}(A; a.B(a); eq; h; \text{fpf-join}(eq; f; g))$   
 $\iff (\text{fpf-compatible}(A; a.B(a); eq; h; f) \wedge \text{fpf-compatible}(A; a.B(a); eq; h; g))$