A CompositeSolid, formed by the Solids A and B, should fulfil the following two properties:

rule #1: their interior should not overlap ($A^o \cap B^o = \emptyset$)

rule #2: their union should form one solid ($A \cup B =$ one Solid)

val3dity can validate these with a user-defined tolerance, eg 2cm. Each Solid is either dilated or eroded by tolerance/2, as shown below.

10cm

rule #1
erosion by tolerance

10cm

rule #2
dilation by tolerance