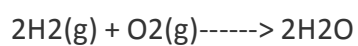


Question #46638, Chemistry, Other

The space shuttle burns liquid hydrogen and oxygen in the main engine. If 102000 kg of liquid hydrogen is carried on particular launch. What mass of liquid oxygen is necessary for all the hydrogen burnt??



Answer:

$$102 \cdot 10^6 \text{ g} \quad \quad \quad X \text{ g}$$



$$2 \cdot 2 \cdot 1 \text{ g/mol} \quad 2 \cdot 16 \text{ g/mol}$$

$$X = 102 \cdot 10^6 \cdot 2 \cdot 16 / (2 \cdot 2 \cdot 1) = 816 \cdot 10^6 \text{ (g)} = \mathbf{816000 \text{ kg}}$$