A HIGHLY TOXIC ALKYL HALIDE

Mustard gas was used extensively in World War I and was stockpiled by many nations as a chemical weapon deterrent until several international treaties in the 1980s banned its use and called for its destruction. When this gas contacts the skin or lung, the water present rapidly displaces HCl, producing high local concentrations of acid that cause extensive blistering, tissue destruction, and, in severe exposure, death.

\[
\text{Cl-S-Cl} + \text{H}_2\text{O} \rightarrow \text{HO-S-OH} + 2 \text{HCl}
\]

"Mustard gas"