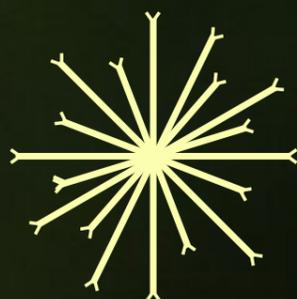


# THE CHEMISTRY OF SPARKLERS

## METALLIC FUEL

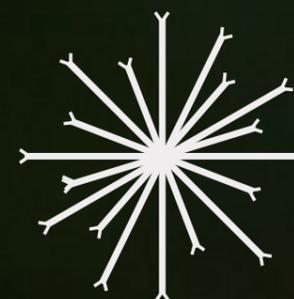
EJECTION OF BURNING METAL PRODUCES SPARKS



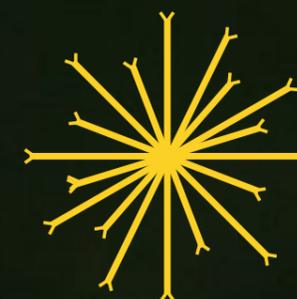
*Aluminium & Magnesium*



*Iron*



*Titanium*



*Ferrotitanium*

THE POWDERED METALS REACT WITH  $O_2$ , AND PRODUCE METAL OXIDES

## OXIDISERS

PRODUCE OXYGEN TO BURN THE MIXTURE



*Nitrate*



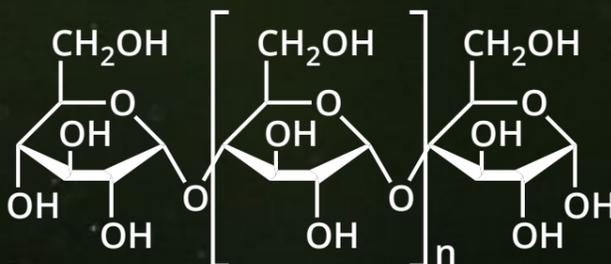
*Chlorate*



*Perchlorate*

## BINDERS

HOLD MIXTURE TOGETHER



*Dextrin*  
(common binder)

## COLOURANTS

METAL SALTS

Sr

Ba

Cu

Ca

Na

OPTIONAL; CHLORIDE AND NITRATE SALTS ARE COMMONLY USED

