

# TECHNOLOGIES TRANSFERRED FROM ISRO

TT / 08 / VSSC

## AMMONIUM DINITRIMIDE (AND)

(Technology Transferred to Premier Explosives Pvt. Ltd.)

Ammonium Dinitramide (ADN) is a powerful chlorine free oxidiser having positive oxygen balance, and is superior to Ammonium Perchlorate (AP) and Ammonium Nitrate (AN) with respect to enthalpy of formation. The molecular structure of AND-ADN combines the desirable properties of the ammonium salts and the higher energetic performances of the nitramines. Performance characteristics, ease of manufacture, ecological effects, cost and safety are some of the major factors to be considered while developing a new generation propellants. Energetic binders and chlorine-free high-energy oxidisers such as Ammonium Dinitrimide (ADN) are very attractive in this respect. New generation high-energy binders are predicted to give 10-15 seconds more specific impulse with high-energy oxidisers like ADN than the conventional HTPB/AP/Al system.

*For further details, please contact:*

Director  
Technology Transfer & Industry Cooperation (TT&IC)  
ISRO Headquarters  
"Antariksh Bhavan"  
New BEL Road  
Bangalore - 560 094



2009

TT&IC, ISRO HQ, Antariksh Bhavan, New BEL Road, Bangalore – 560 094  
[www.isro.gov.in](http://www.isro.gov.in)