

class - V.H. semester V

subject - chemistry

Paper - MIC-V

unit - II

Topic - Borazine

Dr. Rashmi Sinha

Dept. of chemistry

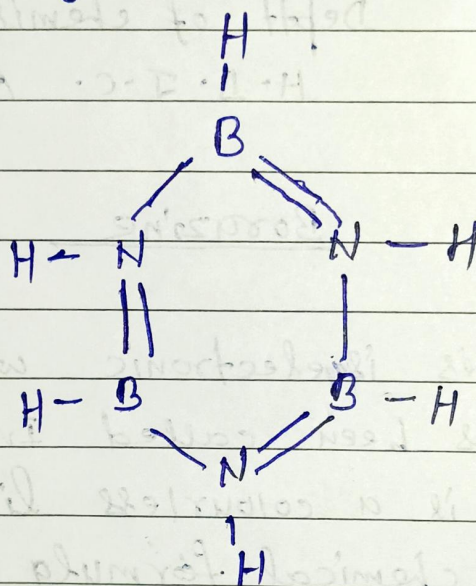
H.D.T.C. Ara

Borazine

Borazine is isoelectronic with Benzene and hence has been called Inorganic Benzene. Borazine is a colourless liquid compound with the chemical formula $B_3N_3H_6$. It is isostructural with benzene. The six B-N bonds have length of $1.44 \text{ \AA}$. The C-C bonds in benzene is shorter in length at $1.397 \text{ \AA}$. The B-N Bond length is between that of the boron-nitrogen with 151 pm and the boron-nitrogen double bond is 131 pm . This suggests that partial delocalisation of nitrogen lone pair electrons.

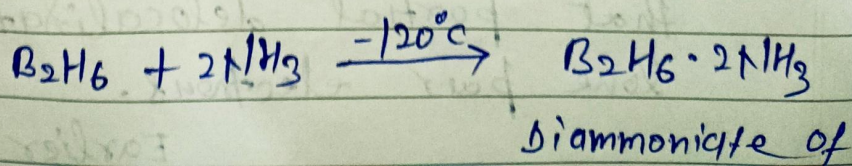
Earlier it was called

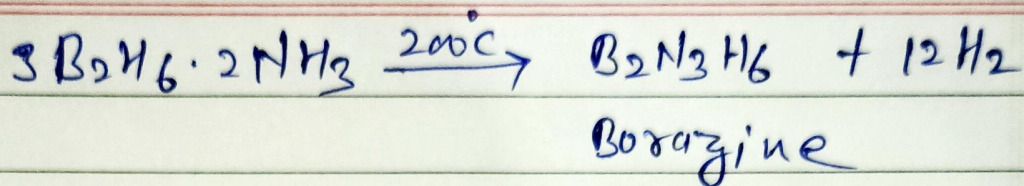
Borazole indicating the presence of $-OH$ gr. in the molecule. Since this compound does not contain $-OH$ gr. hence it is wrong to call this compound borazole. Its systematic name is s -triazatriborine and may be represented as below:-



Methods of Preparation:-

1. Stock Erich Pohland originally prepared Borazine by the action of diborane and ammonia at 120°C , to give diammoniate of diborane which on decomposition at 200°C to give borazine.





It may be also prepared by heating lithium borohydride and ammonium chloride in vacuum at about 250°C .

