



Material Safety Data Sheet

FM.PRO-35

1. Chemical Product and Company Identification

PRODUCT NAME : **Ammonia**
TRADE NAME/SYNONYMS : **Anhydrous Ammonia**

COMPANY IDENTIFICATION :

PT. BSG GASES
Jl. Cempaka, Desa Jatimulya
Tambun, Bekasi - Indonesia
EMERGENCY PHONE : **+62 21 8812507 – 08**

2. Composition, Information on Ingredients

COMPONENT : **AMMONIA**
FORMULA : **NH₃**
PERCENTAGE : **99+%**

3. Hazards Identification

EMERGENCY OVERVIEW : **Corrosive liquid and gas under pressure. Can cause eye, skin, and respiratory tract burns.**

POTENTIAL HEALTH EFFECTS:

ROUTES OF ENTRY: **Inhalation, Skin, Eye**
ACUTE EFFECTS: **Irritating and corrosive to skin, eyes, respiratory tract, and mucous membrane. Symptoms include dyspnea, coughing, chest pains, and pulmonary edema. High exposure levels can cause burning and blistering of skin, permanent corneal damage and may be fatal. Contact with liquid can cause severe burns of skin and eyes.**
CHRONIC EFFECTS: **Skin and respiratory related disease**

4. First Aid Measures

INHALATION: **Immediately remove victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.**
EYE CONTACT: **Immediately flush with copious amounts of water for at least 15 minutes.**
SKIN CONTACT: **Immediately flush with copious amounts of water for at least 15 minutes while removing contaminated clothing.**
INGESTION: **None**
IN EVENT OF EXPOSURE, CONSULT A PHYSICIAN

5. Fire Fighting Measures

FLASH POINT: **N/A**
AUTOIGNITION TEMPERATURE: **850 deg.C**
FLAMMABLE LIMITS:
LOWER: **15%**
UPPER: **25%**

EXTINGUISHING MEDIA: **Water spray or fog.**
SPECIAL FIRE FIGHTING INSTRUCTION AND EQUIPMENT: **Wear self-contained breathing apparatus and full protective clothing. Keep fire exposed cylinders cool with water spray. If possible, stop the product flow.**
HAZARDOUS COMBUSTION PRODUCTS: **Toxic fumes of nitrogen oxides.**
UNUSUAL FIRE AND EXPLOSION HAZARDS: **Cylinder rupture may occur under fire conditions. Emits toxic fumes under fire conditions.**

6. Accidental Release Measures

CLEAN UP PROCEDURES: **Douse with water to retard atmospheric dispersion, ventilate area. Shut off source if possible and remove source of heat.**
SPECIALIZED EQUIPMENT: **None**

7. Handling And Storage

PRECAUTIONS TO BE TAKEN IN HANDLING: **Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.**
PRECAUTIONS TO BE TAKEN IN STORAGE: **Store in well ventilated areas away from combustibles. Keep valve protection cap on cylinders when not in use.**

8. Exposure Controls, Personal Protection

ENGINEERING CONTROLS: **Provide adequate general and local exhaust ventilation to maintain concentration below exposure limits..**

EYE / FACE PROTECTION: **Safety glasses.**

SKIN PROTECTION: **None**

RESPIRATORY PROTECTION: **In case of leakage, Use a self-contained breathing apparatus in case of emergency or non-routine use.**

OTHER PROTECTIVE EQUIPMENT: **Safety shoes when handling cylinders.**

9. Physical And Chemical Properties

APPEARANCE: **Colorless**
ODOR: **Pungent**
PHYSICAL PRESSURE: **Gas**
VAPOR PRESSURE: **@25.7 deg.C: 10 atm**
VAPOR DENSITY (AIR=1): **0.597**
BOILING POINT (C): **-33.4**
SOLUBILITY IN WATER: **v/v 20 deg.C: 42.8**
SPECIFIC GRAVITY (H₂O=1): **Gas**
EVAPORATION RATE: **N/A**
ODOR THRESHOLD: **0.6-0.7 ppm**

10. Stability and Reactivity

STABILITY: **Stable under normal storage conditions.**
CONDITIONS TO AVOID: **Storage in poorly ventilated areas. Storage near a heat source.**
MATERIALS TO AVOID: **Copper, zinc, mercury and their alloys, and strong mineral acids**
HAZARDOUS POLYMERIZATION: **Will not occur.**
HAZARDOUS DECOMPOSITION: **None**

11. Toxicological Information

Not available

12. Ecological Information

Not available

13. Disposal Considerations

WASTE DISPOSAL METHOD: **Limited amount of gas may be released to atmosphere under appropriate conditions. Return cylinders to supplier with any valve outlet plugs or caps secured and valve protection cap in place.**

14. Transport Information

PROPER SHIPPING NAME: **Ammonia, anhydrous**
HAZARD CLASS: **2.2(nonflammable)**
IDENTIFICATION NUMBER: **UN1005**
LABELING: **NONFLAMMABLE GAS**

SPECIAL PRECAUTIONS: **Cylinders should be transported in a secure upright position in a well ventilated truck.**

15. Other Information

OTHER PRECAUTIONS: **Protect containers from physical damage. Do not deface cylinders or labels. Cylinders should be refilled by PT. BSG GASES qualified producers of compressed gas.**