**AMMONIA, ANHYDROUS**

**Product**
Colourless non-flammable gas, with pungent odor

**Nature of Hazard**
- Corrosive, causing damage to skin, eyes and air passages.
- Forms explosive mixture with air.
- Toxic by inhalation or skin absorption.
- The gas is absorbed or readily dispersed by water fog/spray.
- Gives off toxic or irritant gases or fumes when burning.
- Heating of container(s) will cause pressure rise with risk of bursting and immediate release of expanding toxic vapour cloud which may ignite, leading to explosion (VCE) and creation of a pressure wave.
- Contact with liquid will cause frostbite and severe damage to eyes.
- Ingestion can damage the tissues of the mouth, throat, esophagus and other tissues of the digestive system.
- May attack metals and produce hydrogen gas which may form explosive mixture with air.
- The gas may be invisible and may enter sewers, basements or confined spaces.
- Extremely corrosive and can burn and damage eyes, skin, mucous membranes and any other exposed tissue.

**PPE for Vehicle Crew**
- Gas tight suit.
- Protect personnel from radiated heat with water fog curtain or other heat protective measures.
- Insulating undergarments and thick textile or leather gloves.
- Consider wearing standard firefighting clothing underneath the suit.

**Emergency Action by Driver**
Notify Police and Fire Brigade immediately, then:

**Do**
- No smoking, eliminate ignition sources.
- Warn people nearby to stay indoors with doors and windows closed. Stop any ventilation. Consider evacuation of people in immediate danger.
- Keep upwind. Put on protective equipment before entering danger area.
- Minimise number of personnel in risk area.
- Warn people to leave and not to re-enter basements, sewers or other confined spaces.

**Emergency Information**
(Driver and Emergency Services)

**First Aid**
- If substance has got into eyes, wash out with water for at least 15 minutes and seek immediate medical attention.
- Remove contaminated clothing immediately and drench affected skin with plenty of water.
- Persons who have been in contact with the substance or have inhaled fumes should get immediate medical attention. Pass on all available product information.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing adhering to skin.
- Mouth to mouth resuscitation should be avoided. Use alternative methods, preferably with oxygen or compressed air driven apparatus.
- Thaw frosted parts carefully with cold water.

**Emergency Services Information**

**PPE**
- Emergency Services as per vehicle crew. Emergency Action Code requires breathing apparatus.

**Fire**
- Keep container(s) cool with water.
- Cut off gas supply if safe to do so.
- Do NOT extinguish leaking gas flame unless ABSOLUTELY necessary.
- Work from protected position to reduce risk to personnel. Use unmanned monitors or lances.
- Extinguish with water fog (spray) or dry powder.
- Do not use water jet to extinguish.
- Use water spray to knock down fire fumes if possible.
- Avoid unnecessary run-off of extinguishing media which may cause pollution.

**Spillage**
- Stop leaks if possible.
- Check explosive limits.
- Use low sparking hand tools and intrinsically safe equipment.
- Knock down or disperse gas cloud with water spray.
- If substance has entered a water course or sewer, inform the responsible authority.
- Ventilate sewers and basements where there is no risk to personnel or public.
- In the absence of specialist advice, drench spillage with water spray to assist evaporation and absorb gas but avoid unnecessary run off which will cause pollution.

**Precaution after intervention**
- Drench contaminated suit and breathing apparatus with water before removing facemask and suit.
- Use chemical protection suit and self-contained breathing apparatus while undressing contaminated co-workers or handling contaminated equipment.

**Emergency Telephone Number &Company Address**

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