



Safety Data Sheet AdBlue (COSHH)

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DIN 70 070 product

1 IDENTIFICATION OF THE SUBSTANCE & OF THE COMPANY / UNDERTAKING

Trade name AdBlue, an aqueous urea solution (32.5 wt%) Commonly used synonyms NOx reducing agent DIN 70 070 Chemical name Carbonyl diamide Application area Reducing agent to reduce NOx gases in the SCR gas after treatment catalyst for diesel engines

CAS Number 57-13-6

EINECS Number 200-315-5

EINECS Name Preparation, therefore not relevant

Molecular formula NH_2CONH_2

Molmass 60,06 kg-kmol

COMPANY IDENTIFICATION:

Aires (Uk) Ltd
Wessex House,
Cadland Road,
Hardley, Hythe,
Southampton
SO45 3NY

TELEPHONE No.08454 502 170

EMERGENCY TELEPHONE NO: 07766 255 764 OR 07710 934 964

2 COMPOSITION / INFORMATION ON INGREDIENTS

Nature of ingredients and concentration

Aqueous solution of 32.5 weight % urea.

Classification

Not classed as hazardous material according to EC Directive 67/548/EC.

3 HAZARDS IDENTIFICATION

The product is not dangerous

AdBlue

4 FIRST AID MEASURES

Skin Contact

Wash the affected area with soap and water.

Eye Contact

Flush/irrigate eyes with copious amounts of water for at least 15 minutes. Obtain medical attention if eye irritation persists.

Ingestion

Do not induce vomiting.

Give a lot of water to drink.

Obtain medical attention if more than a small quantity has been swallowed.

Inhalation

Remove from source; fresh air

5 FIRE FIGHTING MEASURE

The product is not flammable

Ammonia might exposure due to constantly heating

If AdBlue is involved in the fire

Wear an approved breathing mask when fighting a fire. Use a self-contained Breathing apparatus if fumes are being entered.

Use plenty of water.

Prevent water containing product into drains or watercourse.

6 ACCIDENTAL RELEASE MEASURES

Take care to avoid the contamination of watercourses and drains and inform the appropriate authority in case of accidental contamination of atercourses. Any spillage of product should be cleaned up promptly, swept up and placed in a clean, labeled, open container for safe disposal.

Depending on the degree and nature of contamination, dispose of by use as an authorised waste facility.

7 HANDLING AND STORAGE

7.1 Handling

No special rules are necessary to handle AdBlue

7.2 Storage

Locate away from the source of heat or fire.

Ensure high standard of housekeeping in the storage area.

Any building used for the storage should be dry and well ventilated.

To prevent crystallisation and hydrolysis of the product, a storage temperature of 20 - 25° Celsius is strongly recommended. At a constantly environmental temperature of minus 10° Celsius, the product storage tank, pipes and equipment which comes in contact with the product, must be isolated and heated.

Recommended material for storage: High Density Polyethylene (HDPE), Light Density Polyethylene (LDPE), Cr-Ni-stainless steel and Cr-Ni-Mo stainless steel according DIN EN 10088-1 until DIN EN 10088-3 (i.g. 1.4541 and 1.4571) Unqualified materials are iron and metals containing copper and/or zinc alloys

AdBlue

8 EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Personal Protection

Wear suitable gloves when handling the product over long periods.

Use chemical safety goggles or full face shield

Don't eat, drink or smoke during handling of the product. After handling the product, clean your hands.

9 PHYSICAL AND CHEMICAL PROPERTIES

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Appearance Colourless clear liquid when free from crystals.

Odour Almost odourless.

pH water solution (conc. 10 %) 8 - 10

Crystallization point -11 °C

Explosive properties not explosive good Oxidizing properties None Solubility in water Completely

Density 1090 kg/m³ at 20 °C

Vapour pressure approx 48 mm Hg (at 40 °C)

10 STABILITY AND REACTIVITY

10.1 Stability

The product is stable under normal conditions of storage, handling and use.

10.2 Conditions to avoid

Temperatures below crystallisation point.

At higher temperatures, hydrolysis of urea with formation of ammonia and carbon dioxide might occur above 40 degrees Celsius

10.3 Materials to avoid

Strong oxidizers, acids, nitrates and nitrite.

11 TOXICOLOGICAL INFORMATION

11.1 General

See Section 3

11.2 Toxicity Data

LD50 (oral, rat) > 15.000 mg/kg

Skin irritation (Rabbit) : no irritation

Eye irritation (Rabbit) : no irritation

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12 ECOLOGICAL INFORMATION

12.1 Mobility

Soluble in water.

12.2 Persistence / Degradability

Substantially biodegradable in soil and water.

12.3 Bio-accumulation

Low potential for bio-accumulation.

12.4 Ecotoxicity

Has low intrinsic aquatic toxicity but will exert a substantial oxygen demand when significant quantities as in a spillage reach a watercourse and may cause damage to aquatic life. Acute fish toxicity LC 50 : for urea : > 10000 mg/l 48 hours (gold fish).

13 DISPOSAL CONSIDERATIONS

13.1 General

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Depending on the degree and nature of contamination, dispose of by use as an authorised waste facility.

14 TRANSPORT INFORMATION

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14.1 UN classification

Not classed, is considered non-hazardous material according to UN Orange Book and international transport codes e.g. RID (rail), ADR (road), ADNR (inland waterways) and IMDG (sea).

15 REGULATORY INFORMATION

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Not classed as hazardous material according to EC Directive 67/548/EC and therefore no obligation for registration

16 OTHER INFORMATION

16. OTHER INFORMATION

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