SAFETY DATA SHEET

ASHLAND

ADJUNCT ALK

1. Identification of the substance/preparation and of the company/undertaking

Product name ADJUNCT ALK

Use of the substance/preparation Industrial applications: Boiler water treatment. Internal Treatment Alkalyzer.

Manufacturer / Supplier

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2. Composition/information on ingredients

Substance/preparation Preparation

Ingredient name	CAS number	% by weight	EC number	Classification*
Sodium hydroxide ** See section 16 for the full text of the R-phrases declared above*	1310-73-2	25 - 40	215-185-5	C; R35

*** Occupational exposure limits, if available, are listed in section 8.**

3. Hazards identification

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification Corrosive
R35- Causes severe burns.

Note: See section 11 for more detailed information on health effects and symptoms.

4. First aid measures

First aid measures

Inhalation

Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion

Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

Get medical attention immediately. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact

Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Note: See section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

Extinguishing media

Suitable

Use an extinguishing agent suitable for the surrounding fire.

Special exposure hazards

Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminium, zinc, etc.

In a fire or if heated, a pressure increase will occur and the container may burst.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Thermal decomposition products

Decomposition products may include the following materials:
metal oxide/oxides

Protection of fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

7. Handling and storage

Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

Do not store below the following temperature: 2°C (35.6°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Packaging materials

Recommended

Use original container.

8. Exposure controls/personal protection

Exposure limit values

Not available.

Ingredient name	Occupational exposure limits
Sodium hydroxide	**EH40-WEL (United Kingdom (UK), 1/2005).** STEL: 2 mg/m³ 15 minute(s). Form: All forms

Notes:
TWA=Time Weighted Average
STEL=Short Term Exposure Limit
Where there is no reference to the national regulations, other limits (Europe or US) may be given.

Exposure controls

Engineering measures

If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hand protection	Recommended: nitrile rubber, butyl rubber, PVC gloves.
Eye protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Skin protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

9. Physical and chemical properties

Physical state	Liquid.
Colour	Colourless.
Boiling point	>100°C (>212°F)
Melting point	2°C (35.6°F)
Density	1.34 g/cm^3
pH	>13.5 [Conc. (% w/w): 1%]
Flash point	Not available.
Explosion limits	Not applicable.
Solubility	Easily soluble in the following materials: cold water.

10. Stability and reactivity

Stability	The product is stable. Under normal conditions of storage and use, hazardous polymerisation will not occur. Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminium, zinc, etc.
Materials to avoid	Highly reactive or incompatible with the following materials: acids. Reactive or incompatible with the following materials: metals. Water (exothermic reaction) . Incompatible with magnesium, zinc and aluminium.
Thermal decomposition products	Decomposition products may include the following materials: metal oxide/oxides

11. Toxicological information

Potential acute health effects

Inhalation	May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
Ingestion	May cause burns to mouth, throat and stomach.
Skin contact	Severely corrosive to the skin. Causes severe burns.
Eye contact	Severely corrosive to the eyes. Causes severe burns.

Acute toxicity No data available.

Ingredient name	Test	Species	Result	Exposure
Sodium hydroxide	LDLo Oral	Rabbit	500 mg/kg	-
	LDLo Oral	Human	1.57 mg/kg	-

Potential chronic health effects

Chronic effects	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.

Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Ingestion	Adverse symptoms may include the following: stomach pains
Skin contact	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Eye contact	Adverse symptoms may include the following: pain watering redness
Target organs	Contains material which causes damage to the following organs: lungs, upper respiratory tract, skin, eye, lens or cornea.

12. Ecological information

Environmental effects No known significant effects or critical hazards.

Ecotoxicity data Aquatic ecotoxicity

Acute toxicity Not available.

Ingredient name	Species	Period	Result

Other ecological information

Persistence/degradability	Not available.
Bioaccumulative potential	Not available.
AOX	The product does not contain organically bound halogens which could lead to an AOX value in waste water.

13. Disposal considerations

Methods of disposal	The generation of waste should be avoided or minimised wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
European waste catalogue (EWC)	06 02 04*
Hazardous waste	Yes.
Additional information	06 02 04* sodium and potassium hydroxide

14. Transport information

Land - road/railway (ADR/RID Classification)

UN number	UN1824
Proper shipping name	SODIUM HYDROXIDE SOLUTION
ADR/RID Class	8
Packing group	II

ADR/RID Label

Other information

Hazard identification number
80

Limited quantity
LQ22

CEFIC Tremcard
80S1824

Sea (IMO/IMDG Classification)

UN number	UN1824
Proper shipping name	SODIUM HYDROXIDE SOLUTION
IMDG Class	8
Packing group	II

IMDG Label

Other information

Emergency schedules (EmS)
F-A, S-B

15. Regulatory information

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

Product use Industrial applications.

EU Regulations

Hazard symbol or symbols

Corrosive

Risk Phrases R35- Causes severe burns.

Safety Phrases S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Contains Sodium hydroxide 215-185-5

Child protection Not applicable.

Tactile warning of danger Not applicable.

16. Other information

Full text of R-phrases referred to in sections 2 and 3 - United Kingdom (UK)	*R35- Causes severe burns.*
Full text of classifications referred to in sections 2 and 3 - United Kingdom (UK)	*C - Corrosive*

ADJUNCT® is a registered trademark of Ashland.

History

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Prepared by	**Ashland - European Shared Business Services**
Information contact	**Contact local supplier or distributor.**

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