SAFETY DATA SHEET



NALCO® EC1103A

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

| Product name | : | NALCO® EC1103A |
|-------------------------------|---|---|
| Other means of identification | : | Not applicable. |
| Recommended use | : | CORROSION INHIBITOR |
| Restrictions on use | : | Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits. |
| Company | : | Nalco Champion Company 7705 Highway 90-A Sugar Land, Texas 77478 USA TEL: (281) 263-7000 |
| Emergency telephone number | : | (800) 424-9300 (24 Hours) CHEMTREC |
| Issuing date | : | 03/06/2015 |

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

| Flammable liquids Eye irritation Carcinogenicity Reproductive toxicity Specific target organ toxicity - single exposure Aspiration hazard | Category 3 Category 2B Category 2 Category 2 Category 2 Category 3 (Respiratory system, Central Nervous System) Category 1 | |
|---|--|--|
| GHS I abol element | | |

GHS Label element

Hazard pictograms



May be fatal if swallowed and enters airways.

Suspected of damaging fertility or the unborn child.

: Flammable liquid and vapour.

May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer.

Causes eye irritation.

Signal Word

: Danger

Hazard Statements

Precautionary Statements

: **Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving SAFETY DATA SHEET

NALCO® EC1103A

| equipment. Use explosion-proof electrical/ ventilating/ lighting/ |
|---|
| equipment. Use only non-sparking tools. Take precautionary |
| measures against static discharge. Avoid breathing dust/ fume/ |
| gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Use |
| only outdoors or in a well-ventilated area. Wear protective gloves/ |
| eye protection/ face protection. Use personal protective equipment |
| as required. |

Response:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Do NOT induce vomiting. If eye irritation persists: Get medical advice/ attention. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. **Storage:**

Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. **Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

: None known.

| Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS | | | |
|--|------------|--------------------|--|
| Chemical Name | CAS-No. | Concentration: (%) | |
| Hydrotreated Heavy Naphtha | 64742-48-9 | 30 - 60 | |
| Ethylbenzene | 100-41-4 | 5 - 10 | |
| Isopropanol | 67-63-0 | 5 - 10 | |
| Heavy Aromatic Naphtha | 64742-94-5 | 1 - 5 | |
| Xylene | 1330-20-7 | 1 - 5 | |
| Naphthalene | 91-20-3 | 1 - 5 | |
| Toluene | 108-88-3 | 0.1 - 1 | |

Section: 4. FIRST AID MEASURES

| In case of eye contact | : | Rinse with plenty of water. Get medical attention if symptoms occur. |
|----------------------------|---|---|
| In case of skin contact | : | Wash off with soap and plenty of water. Get medical attention if symptoms occur. |
| If swallowed | : | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Aspiration hazard if swallowed - can enter lungs and cause damage. Get medical attention immediately. |
| If inhaled | : | Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur. |
| Protection of first-aiders | : | In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required. |
| Notes to physician | : | Treat symptomatically. |

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|---|-----|---|
| Unsuitable extinguishing media | : | High volume water jet |
| Specific hazards during firefighting | : | Fire Hazard Keep away from heat and sources of ignition. Flash back possible over considerable distance. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. |
| Hazardous combustion products | : | Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides |
| Special protective equipment for firefighters | : | Use personal protective equipment. |
| Specific extinguishing methods | : | Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes. |
| Section: 6. ACCIDENTAL RE | ELE | ASE MEASURES |
| Personal precautions, | : | Ensure adequate ventilation. Remove all sources of ignition. Refer |

| Personal precautions, protective equipment and emergency procedures | : | Ensure adequate ventilation. Remove all sources of ignition. Refer to protective measures listed in sections 7 and 8. |
|---|---|--|
| Environmental precautions | : | Do not allow contact with soil, surface or ground water. |
| Methods and materials for containment and cleaning up | : | Eliminate all ignition sources if safe to do so. Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Do not flush into surface water or sanitary sewer system. |

| | Section: 7. | HANDLING AND STORAGE |
|--|-------------|----------------------|
|--|-------------|----------------------|

Advice on safe handling : Open drum carefully as content may be under pressure. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from fire, sparks and heated surfaces. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands thoroughly after handling. Use only with adequate ventilation.

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|-----------------------------|---|---|
| Conditions for safe storage | : | Keep away from heat and sources of ignition. Keep in a cool, well- ventilated place. Keep away from oxidizing agents. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers. Connections must be grounded to avoid electrical charges. |
| Suitable material | : | The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use. |
| Unsuitable material | : | not determined |

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

| Components | CAS-No. | Form of exposure | Permissible concentration | Basis |
|-------------------------------|------------|------------------|---------------------------|-----------|
| Hydrotreated Heavy Naphtha | 64742-48-9 | TWA | 500 ppm 2,000 mg/m3 | OSHA Z1 |
| Ethylbenzene | 100-41-4 | TWA | 20 ppm | ACGIH |
| | | TWA | 100 ppm 435 mg/m3 | NIOSH REL |
| | | STEL | 125 ppm 545 mg/m3 | NIOSH REL |
| | | TWA | 100 ppm 435 mg/m3 | OSHA Z1 |
| Isopropanol | 67-63-0 | TWA | 200 ppm | ACGIH |
| | | STEL | 400 ppm | ACGIH |
| | | TWA | 400 ppm 980 mg/m3 | NIOSH REL |
| | | STEL | 500 ppm 1,225 mg/m3 | NIOSH REL |
| | | TWA | 400 ppm 980 mg/m3 | OSHA Z1 |
| Heavy Aromatic Naphtha | 64742-94-5 | TWA | 500 ppm 2,000 mg/m3 | OSHA Z1 |
| | | TWA | 200 mg/m3 | ACGIH |
| Xylene | 1330-20-7 | TWA | 100 ppm 435 mg/m3 | OSHA Z1 |
| | | TWA | 100 ppm | ACGIH |
| | | STEL | 150 ppm | ACGIH |
| Naphthalene | 91-20-3 | TWA | 10 ppm | ACGIH |
| | | TWA | 10 ppm 50 mg/m3 | NIOSH REL |
| | | STEL | 15 ppm 75 mg/m3 | NIOSH REL |
| | | TWA | 10 ppm 50 mg/m3 | OSHA Z1 |

Engineering measures

: Effective exhaust ventilation system Maintain air concentrations below occupational exposure standards.

Personal protective equipment

| NAL | CO® | EC1 | 103A |
|-----|-----|-----|------|
|-----|-----|-----|------|

| Eye protection | : Safety glasses | |
|--|--|--|
| Hand protection | : Wear protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. | |
| Skin protection | : Wear suitable protective clothing. | |
| Respiratory protection | : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. | |
| Hygiene measures | : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. | |
| Section: 9. PHYSICAL AND CHEMICAL PROPERTIES | | |

| Appearance | : | Liquid |
|--|---|---|
| Colour | : | brown |
| Odour | : | hydrocarbon-like |
| Flash point | : | 27.7 °C Method: ASTM D 93, Pensky-Martens closed cup |
| | | 25 °C Method: ASTM D 93, Pensky-Martens closed cup |
| рН | : | no data available |
| Odour Threshold | : | no data available |
| Melting point/freezing point | : | MELTING POINT: -54 °C |
| Initial boiling point and boiling range | : | no data available |
| Evaporation rate | : | no data available |
| Flammability (solid, gas) | : | no data available |
| Upper explosion limit | : | no data available |
| Lower explosion limit | : | no data available |
| Vapour pressure | : | 20.2 mm Hg (37.8 °C) |
| Relative vapour density | : | no data available |
| Relative density | : | 0.95 |
| Density | : | 7.9 lb/gal |
| Water solubility | : | insoluble |
| Solubility in other solvents | : | no data available |
| Partition coefficient: n- octanol/water | : | no data available |
| Auto-ignition temperature | : | no data available |
| Thermal decomposition temperature | : | no data available |
| Viscosity, dynamic | : | no data available |

| Viscosity, kinematic | : 18.2 mm2/s (40 °C) Method: ASTM D 445 |
|----------------------|--|
| VOC | : no data available |

Section: 10. STABILITY AND REACTIVITY

| Chemical stability | : | Stable under normal conditions. |
|------------------------------------|---|--|
| Possibility of hazardous reactions | : | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | : | Extremes of temperature Heat, flames and sparks. |
| Incompatible materials | : | Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. |
| Hazardous decomposition products | : | Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides |

Section: 11. TOXICOLOGICAL INFORMATION

| Information on likely routes of | : | Inhalation, Eye contact, Skin contact |
|---------------------------------|---|---------------------------------------|
| exposure | | |

Potential Health Effects

| Eyes | : | Causes eye irritation. |
|---|-----|---|
| Skin | : | Health injuries are not known or expected under normal use. |
| Ingestion | : | May be fatal if swallowed and enters airways. Produces methemoglobin. |
| Inhalation | : | May cause respiratory tract irritation. May cause nose, throat, and lung irritation. Inhalation may cause central nervous system effects. |
| Chronic Exposure | : | Suspected of damaging fertility or the unborn child. Suspected of causing cancer. |
| Experience with human exposure | | |
| Experience with human expo | วรเ | ire |
| Experience with human expo Eye contact | | Redness, Irritation |
| | : | |
| Eye contact | : | Redness, Irritation |
| Eye contact Skin contact | : | Redness, Irritation No symptoms known or expected. |
| Eye contact Skin contact Ingestion | : | Redness, Irritation No symptoms known or expected. Vomiting |

| Acute oral toxicity | : LD50 rat: 7,601.7 mg/kg Test substance: Product | |
|-----------------------------------|--|--------------------------------------|
| Acute inhalation toxicity | : Acute toxicity estimate : > 40 mg/l Exposure time: 4 h | |
| Acute dermal toxicity | : LD50 rabbit: > 4,556 mg/kg Test substance: Product | |
| Skin corrosion/irritation | : no data available | |
| Serious eye damage/eye irritation | : Result: Mild eye irritation | |
| Respiratory or skin sensitization | : no data available | |
| Carcinogenicity | | |
| IARC | Group 2B: Possibly carcinogenic to hu Ethylbenzene Naphthalene | i mans 100-41-4 91-20-3 |
| OSHA | No component of this product present at l equal to 0.1% is identified as a carcinoge carcinogen by OSHA. | |
| NTP | Reasonably anticipated to be a human | carcinogen |
| | Naphthalene | 91-20-3 |
| Reproductive effects | : no data available | |
| Germ cell mutagenicity | : no data available | |
| Teratogenicity | : no data available | |
| STOT - single exposure | : no data available | |
| STOT - repeated exposure | : no data available | |
| Aspiration toxicity | : no data available | |

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

| Environmental Effects : | Toxic to aquatic life. Harmful to aquatic life with long lasting effects. |
|-------------------------|--|
| Components | |
| Toxicity to fish : | Isopropanol LC50 Fish: 9,640 mg/l Exposure time: 96 h |
| | Heavy Aromatic Naphtha LC50 : 3.5 mg/l |

| NALCO® EC1103A | | |
|--|----|---|
| | | Exposure time: 96 h |
| Components | | |
| Toxicity to daphnia and other aquatic invertebrates | : | Ethylbenzene EC50 Daphnia: 1.81 mg/l Exposure time: 48 h |
| Components | | |
| Toxicity to algae | : | Toluene EC50 Chlamydomonas angulosa: Exposure time: 3 h |
| Components | | |
| Toxicity to bacteria | : | Toluene EC50 Nitrosomonas Sp.: 84 mg/l Exposure time: 24 h |
| Components | | |
| Toxicity to fish (Chronic toxicity) | : | Toluene NOEC: 1.39 mg/l Exposure time: 40 d Species: Coho Salmon |
| Components | | |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | Toluene NOEC: 0.74 mg/l Exposure time: 7 d Species: Ceriodaphnia dubia |
| Persistence and degradabilit | ty | |

The organic portion of this preparation is expected to be inherently biodegradable.

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models. If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

134 mg/l

| Air | : 10 - 30% |
|-------|------------|
| Water | : 30 - 50% |
| Soil | : 30 - 50% |

The portion in water is expected to float on the surface.

Bioaccumulative potential

Component substances have a potential to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

The information presented only applies to the material as supplied. The classification or waste code may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

| Hazardous Waste: | : D001, D018 |
|-------------------------|--|
| Disposal methods | : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility. |
| Disposal considerations | : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. |

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

The presence of an RQ component (Reportable Quantity for U.S. EPA and DOT) in this product causes it to be regulated with an additional description of RQ for road, or as a class 9 for road and air, ONLY when the net weight in the package exceeds the calculated RQ for the product.

| Proper shipping name | : FLAMMABLE LIQUID, N.O.S. |
|----------------------------|-----------------------------|
| Technical name(s) | : ISOPROPANOL, ETHYLBENZENE |
| UN/ID No. | : UN 1993 |
| Transport hazard class(es) | : 3 |
| Packing group | : 111 |
| Reportable Quantity (per | : 1,720 lbs |
| package) | |
| RQ Component | : NAPHTHALENE |
| | |

Air transport (IATA)

The presence of an RQ component (Reportable Quantity for U.S. EPA and DOT) in this product causes it to be regulated with an additional description of RQ for road, or as a class 9 for road and air, ONLY when the net weight in the package exceeds the calculated RQ for the product.

| Proper shipping name | | FLAMMABLE LIQUID, N.O.S. |
|--------------------------------------|---|---------------------------|
| Technical name(s) | | ISOPROPANOL, ETHYLBENZENE |
| UN/ID No. | : | UN 1993 |
| Transport hazard class(es) | : | 3 |
| Packing group | : | III |
| Reportable Quantity (per package) | : | 1,720 lbs |
| RQ Component | : | NAPHTHALENE |

Sea transport (IMDG/IMO)

| Proper shipping name | : | FLAMMABLE LIQUID, N.O.S. |
|----------------------|---|---------------------------|
| Technical name(s) | : | ISOPROPANOL, ETHYLBENZENE |

| UN/ID No. | : UN 1993 |
|----------------------------|--------------------------|
| Transport hazard class(es) | : 3 |
| Packing group | : III |
| *Marine pollutant | : HEAVY AROMATIC NAPHTHA |

*Note: This product is regulated as a Marine Pollutant when shipped by Rail, Highway (in bulk quantities), or Air (if no other hazard class applies), and when shipped by water in all quantities.

Section: 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|------------|-----------|--------------------|--------------------------------|
| Xylene | 1330-20-7 | 100 | 3781 |

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

| SARA 311/312 Hazards | : Fire Hazard Chronic Health Hazard Acute Health Hazard | | | |
|----------------------|---|---|----------|--|
| SARA 302 | | No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. | | |
| SARA 313 | | The following components are subject to reporting levels established by SARA Title III, Section 313: | | |
| | Ethylbenzene | 100-41-4 | 5 - 10 % | |
| | Xylene | 1330-20- | 1 - 5 % | |
| | - | 7 | | |
| | Naphthalene | 91-20-3 | 1 - 5 % | |

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

| Ethylbenzene | 100-41-4 |
|--------------|----------|
| Naphthalene | 91-20-3 |

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

| Toluene | 108-88-3 |
|---------|----------|
|---------|----------|

INTERNATIONAL CHEMICAL CONTROL LAWS :

TOXIC SUBSTANCES CONTROL ACT (TSCA) The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

AUSTRALIA

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

CHINA

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

EUROPE

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

JAPAN

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

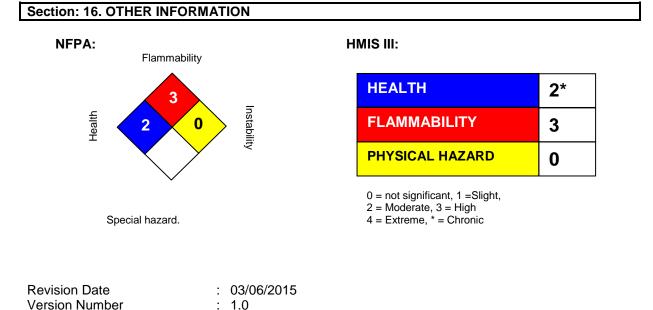
KOREA

This product contains substance(s) which are not in compliance with the Toxic Chemical Control Law (TCCL) and may require additional review.

PHILIPPINES

Prepared By

This product contains substance(s) which are not in compliance with the Republic Act 6969 (RA 6969) and may require additional review.



REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

: Regulatory Affairs

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

For additional copies of an MSDS visit www.nalco.com and request access.