1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: NALCON® 7616
APPLICATION: BIOCIDE
COMPANY IDENTIFICATION: Nalco Company
1601 W. Diehl Road
Naperville, Illinois 60563-1198
EMERGENCY TELEPHONE NUMBER(S): (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING
HEALTH: 3 / 3 FLAMMABILITY: 1 / 1 INSTABILITY: 0 / 0 OTHER:
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme * = Chronic Health Hazard

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

<table>
<thead>
<tr>
<th>Hazardous Substance(s)</th>
<th>CAS NO</th>
<th>% (w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydro-3,5-Dimethyl-2H-1,3,5-Thiadiazine-2-Thione</td>
<td>533-74-4</td>
<td>60.0 - 100.0</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**

DANGER
Corrosive. Causes skin burns. May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Toxic to aquatic organisms.
Do not get in eyes, on skin or on clothing. Do not take internally. Avoid generating dusts. Avoid breathing dust. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.
When handling this product, the use of overalls, a chemical resistant apron and rubber boots is recommended. Wear suitable gloves. Wear chemical splash goggles.
May form explosive dust-air mixtures. Handling operations may generate combustible dust in the finely divided and suspended state. To reduce the potential for dust explosions and/or fire, do not permit dust to accumulate. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of sulfur (SOx) under fire conditions. Under fire conditions, may evolve: carbon disulfide, hydrogen sulfide, methyl isothiocyanate, formaldehyde, carbon dioxide.
SAFETY DATA SHEET

PRODUCT
NALCON® 7616

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

PRIMARY ROUTES OF EXPOSURE:
Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE:

EYE CONTACT:
Corrosive. Will cause eye burns and permanent tissue damage.

SKIN CONTACT:
Corrosive; causes permanent skin damage.

INGESTION:
Not a likely route of exposure. May be harmful or fatal if swallowed.

INHALATION:
May cause irritation of mucous membranes.

AGGRAVATION OF EXISTING CONDITIONS:
A review of available data does not identify any worsening of existing conditions.

HUMAN HEALTH HAZARDS - CHRONIC:
No adverse effects expected other than those mentioned above.

4. FIRST AID MEASURES

IF IN EYES: Hold eyelids open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call poison control center or doctor for treatment advice.

IF SWALLOWED: Call a Poison Control Center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN:
Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition. Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

FLASH POINT: None
EXTINGUISHING MEDIA:
Foam, Carbon dioxide, Dry powder, Other extinguishing agent suitable for Class B fires, For large fires, use water spray or fog, thoroughly drenching the burning material.
Water mist may be used to cool closed containers.

FIRE AND EXPLOSION HAZARD:
May form explosive dust-air mixtures. Handling operations may generate combustible dust in the finely divided and suspended state. To reduce the potential for dust explosions and/or fire, do not permit dust to accumulate. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of sulfur (SOx) under fire conditions. Under fire conditions, may evolve: carbon disulfide, hydrogen sulfide, methyl isothiocyanate, formaldehyde, carbon dioxide.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING:
In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:
Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Keep people away from and upwind of spill/leak. Ventilate spill area if possible. Remove sources of ignition. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available.

METHODS FOR CLEANING UP:
Sweep up and shovel. Reclaim into recovery or salvage drums. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS:
This product is toxic to fish and other water organisms. Do not discharge directly into lakes, ponds, streams, waterways or public water supplies.

7. HANDLING AND STORAGE

HANDLING:
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Avoid generating dusts. Keep the containers closed when not in use. Ensure all containers are labeled. Maintain good housekeeping practices. Do not use, store, spill or pour near heat, sparks or open flame. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition.

STORAGE CONDITIONS:
Store separately from oxidizers. Keep in dry place. Store in suitable labeled containers. Store the containers tightly closed. Store away from heat and sources of ignition. Connections must be grounded to avoid electrical charges.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS:
This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES:
General ventilation is recommended. Local exhaust ventilation may be necessary when dusts or mists are generated.

RESPIRATORY PROTECTION:
Where concentrations in air may exceed the limits given in this section or when significant mists, vapors, aerosols, or dusts are generated, an approved air purifying respirator equipped with suitable filter cartridges is recommended. Consult the respirator / cartridge manufacturer data to verify the suitability of specific devices. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION:
Wear protective gloves. The choice of work glove depends on work conditions and what chemicals are handled. Please contact the PPE manufacturer for advice on what type of glove material may be suitable. Gloves should be replaced immediately if signs of degradation are observed.

SKIN PROTECTION:
Wear protective overalls, chemical splash goggles and impervious gloves.

EYE PROTECTION:
Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS:
Use good work and personal hygiene practices to avoid exposure. Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke.

HUMAN EXPOSURE CHARACTERIZATION:
Based on our recommended product application and personal protective equipment, the potential human exposure is: Moderate

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE  Powder
APPEARANCE  White
ODOR  Sulfurous
SAFETY DATA SHEET

PRODUCT

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BULK DENSITY 47 lb/ft³
SOLUBILITY IN WATER Partial
MELTING POINT 221 °F / 105 °C
VOC CONTENT 16 % EPA Method 24

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY:
Stable under normal conditions.

HAZARDOUS POLYMERIZATION:
Hazardous polymerization will not occur.

CONDITIONS TO AVOID:
Moisture  Heat  and sources of ignition including static discharges.  Avoid generating dusts.

MATERIALS TO AVOID:
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:
Under fire conditions: Oxides of carbon, Oxides of nitrogen, Under fire conditions, may evolve: carbon disulfide, hydrogen sulfide, methyl isothiocyanate, formaldehyde, carbon dioxide.
Under acidic conditions: Oxides of sulfur, Hydrogen sulfide (H2S), Carbon disulfide, Carbonyl sulfide, Formaldehyde
Under alkaline conditions: Formaldehyde, Sodium methylthiocarbonate

11. TOXICOLOGICAL INFORMATION

The following results are for the product.

ACUTE ORAL TOXICITY:
Species: Rat
LD50: 596 mg/kg
Test Descriptor: Product

ACUTE DERMAL TOXICITY:
Species: Rabbit
LD50: > 2.000 mg/kg
Test Descriptor: Product
ACUTE INHALATION TOXICITY:
Species: Rat
LC50: 8.4 mg/l (4 hrs)
Test Descriptor: Product

SENSITIZATION:
Repeated or prolonged contact may cause sensitization in some individuals.

CARCINOGENICITY:
None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION:
Based on our hazard characterization, the potential human hazard is: High

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS:
The following results are for the product.

Acute Fish Results:

<table>
<thead>
<tr>
<th>Species</th>
<th>Exposure</th>
<th>Test Type</th>
<th>Value</th>
<th>Test Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bluegill Sunfish</td>
<td>96 hrs</td>
<td>LC50</td>
<td>0.3 mg/l</td>
<td>Product</td>
</tr>
<tr>
<td>Rainbow Trout</td>
<td>96 hrs</td>
<td>LC50</td>
<td>0.16 mg/l</td>
<td>Product</td>
</tr>
</tbody>
</table>

ACUTE INVERTEBRATE RESULTS:

<table>
<thead>
<tr>
<th>Species</th>
<th>Exposure</th>
<th>Test Type</th>
<th>Value</th>
<th>Test Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daphnia magna</td>
<td>48 hrs</td>
<td>LC50</td>
<td>0.3 mg/l</td>
<td>Product</td>
</tr>
</tbody>
</table>

AVIAN RESULTS:

<table>
<thead>
<tr>
<th>Species</th>
<th>Exposure</th>
<th>Test Type</th>
<th>Value</th>
<th>Test Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bobwhite Quail</td>
<td>21 Days</td>
<td>LC50</td>
<td>415 mg/kg</td>
<td>Product</td>
</tr>
<tr>
<td>Bobwhite Quail</td>
<td>8 Days</td>
<td>LC50</td>
<td>1,850 mg/kg</td>
<td>Product</td>
</tr>
<tr>
<td>Mallard Duck</td>
<td>8 Days</td>
<td>LC50</td>
<td>&gt; 5,000 mg/kg</td>
<td>Product</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Air</th>
<th>Water</th>
<th>Soil/Sediment</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5%</td>
<td>30 - 50%</td>
<td>50 - 70%</td>
</tr>
</tbody>
</table>

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

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION
Based on our hazard characterization, the potential environmental hazard is: High
Based on our recommended product application and the product's characteristics, the potential environmental exposure is: Low

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT:

- Proper Shipping Name: CORROSIVE SOLID N.O.S
- Technical Name(s): Substituted thiazole
- UN/ID No: UN 1759
- Hazard Class - Primary: 8
- Packing Group: III
- Flash Point: None

AIR TRANSPORT (ICAO/IATA):

- Proper Shipping Name: CORROSIVE SOLID N.O.S
- Technical Name(s): Substituted thiazole
- UN/ID No: UN 1759
- Hazard Class - Primary: 8
Packing Group : III

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : CORROSIVE SOLID N.O.S
Technical Name(s) : Substituted thiazole
UN/ID No : UN 1759
Hazard Class - Primary : 8
Packing Group : III

*Marine Pollutant : DAZOMET (Metam-sodium)

*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.

15. REGULATORY INFORMATION

This section contains additional information that may have relevance to regulatory compliance. The information in this section is for reference only. It is not exhaustive, and should not be relied upon to take the place of an individualized compliance or hazard assessment. Nalco accepts no liability for the use of this information.

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Tetrahydro-3,5-Dimethyl-2H-1,3,5-Thiadiazine-2-Thione : Corrosive, HARMFUL

CERCLA/SUPERFUND, 40 CFR 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

X Immediate (Acute) Health Hazard
- Delayed (Chronic) Health Hazard
- Fire Hazard
- Sudden Release of Pressure Hazard
- Reactive Hazard
Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):
This product contains the following substance(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals

<table>
<thead>
<tr>
<th>Hazardous Substance(s)</th>
<th>CAS NO</th>
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</tr>
</thead>
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<td>533-74-4</td>
<td>60.0 - 100.0</td>
</tr>
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TOXIC SUBSTANCES CONTROL ACT (TSCA):
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act:

Limitations: no more than required to produce intended technical effect. As a preservative in the manufacture and coating of paper and paperboard intended for use in contact with food in accordance with the following prescribed conditions: (a) It is used as follows: (1) In the manufacture of paper and paperboard as a preservative for substances added to the pulp suspension prior to the sheet-forming operation provided that the preservative is volatilized by heat in the drying and finishing of the paper and paperboard. (2) As a preservative for coatings for paper and paperboard, Provided, That the preservative is volatilized by heat in the drying and finishing of the coated paper or paperboard. (b) The quantity used shall not exceed the least amount reasonably required to accomplish the intended technical effect and shall not be intended to nor, in fact, accomplish any physical or technical effect on the food itself. No more than required to produce its intended technical effect for 175.105 and 176.300.

FEDERAL INSECTICIDE, FUNGICIDE AND RODENTICIDE ACT (FIFRA):
EPA Reg. No. 1706-195

In all cases follow instructions on the product label.

This product has been certified as KOSHER/PAREVE for year-round use INCLUDING THE PASSOVER SEASON by the CHICAGO RABBINICAL COUNCIL.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311:
Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.
CLEAN AIR ACT, Sec. 112 (Hazardous Air Pollutants, as amended by 40 CFR 63), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

CALIFORNIA PROPOSITION 65 :
Substances listed under California Proposition 65 are not intentionally added or expected to be present in this product.

MICHIGAN CRITICAL MATERIALS :
Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

STATE RIGHT TO KNOW LAWS :
Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

INTERNATIONAL CHEMICAL CONTROL LAWS :

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :
Substances regulated under the Pest Control Products Act are exempt from CEPA New Substance Notification requirements.

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

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
All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

PHILIPPINES
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).
16. OTHER INFORMATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

* The human risk is: Low
* The environmental risk is: Low

Any use inconsistent with our recommendations may affect the risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.


Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By: Product Safety Department
SAFETY DATA SHEET

PRODUCT

NALCON® 7616

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

Date issued: 11/15/2013
Version Number: 1.18