

Material Safety Data Sheet

(WAM C-152)



Date Prepared: November 5, 2003
Revision Date: March 7, 2006
INFOTRAC: 800-535-5053
Product Number: WCWT6JF-SF
Control Number:

PO Box 1700
Snohomish, WA USA 98291

Emergency Phone Number:
(800) 535-5053

SECTION I - IDENTIFICATION

Product Name: WAM C-152
Synonyms: Penetrant and dispersant
Chemical Family: Nonionic Surfactant
Formula: Proprietary
Product Description: Cooling Water Treatment

SECTION II - HAZARDOUS INGREDIENTS

| Hazardous Ingredient | Percent | CAS Number | PEL |
|---|---------|-------------|---|
| Poly (oxy-1, 2-ethanediyl), alpha-(4- nonylphenyl)-omega-hydroxy-, branched | >1% | 127087-87-0 | None established by OSHA, ACGIH or UCC. |
| Polyacrylic Acid | >1% | 9003-01-4 | 2mg/m ³ |

SECTION III - PHYSICAL/CHEMICAL DATA

Form: Liquid
Color: Colorless
Odor: None
Boiling Point: ~212 °F
Freeze Point: ~ 32 °F
Vapor Pressure: No data available
Vapor Density (Air=1): >10
Specific Gravity: 1.018
Density lb./gal (kg/L): 8.50 (1.02)
pH(neat): 7.4 to 8.4
pH(1% solution): 9.0 to 10.0
Solubility in Water: Complete

Material Safety Data Sheet

(WAM C-152)

Volatility including Water: ~90%
Molecular Weight: Blend, not applicable

SECTION IV – FIRE AND EXPLOSION DATA

Flashpoint: None
Autoignition: Not available
Lower Flammability Limit (In Air, %):.....No data available.
Upper Flammability Limit (In Air, %):No data available.
Extinguishing Media: Extinguish fires with water spray or apply alcohol-type or all-purpose-type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.
Hazardous Combustion Products: Burning can produce the following products: Carbon monoxide and/or carbon dioxide. Carbon monoxide is highly toxic if inhaled. Carbon dioxide in sufficient concentrations can act as an asphyxiant.
Special Fire Fighting Procedures: Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity. Use self-contained breathing apparatus and protective clothing.
Unusual Fire and Explosion Hazards:Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

SECTION V – REACTIVITY DATA

Stability: Stable under normal conditions.
Hazardous Polymerization: Hazardous polymerization does not occur.
Incompatibility: Normally unreactive; however, avoid strong bases at high temperatures, strong acids, strong oxidizing agents and materials reactive with hydroxyl compounds.

SECTION VI – HEALTH DATA

Listed Carcinogen: This product is not a known carcinogen.
Medical Conditions Aggravated by Overexposure:A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure is unlikely to aggravate existing medical conditions.
Inhalation: Mist may cause irritation of the respiratory tract, experienced as nasal discomfort and discharge, with chest pain and coughing.

Material Safety Data Sheet

(WAM C-152)

Ingestion: May cause abdominal discomfort, nausea, vomiting and diarrhea. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

Eyes: Causes sever irritation, experienced as discomfort or pain, excess blinking and tear production, marked excess redness and swelling of the conjunctiva, and chemical burns of the eye.

Skin (Dermal): Brief contact is not irritating. Prolonged or repeated contact may cause discomfort and local redness. Absorption: Prolonged or widespread contact may result in the absorption of potentially harmful amounts of material.

SECTION VII – FIRST AID

Breathing (Inhalation): Remove to fresh air. Obtain medical attention if symptoms persist.

Swallowing (Ingestion): If patient is fully conscious, give two glasses of water. Do not induce vomiting. Obtain medical attention.

Eyes: Immediately flush eyes with water and continue washing for at least 15 minutes. Do not remove contact lenses, if worn. Obtain medical attention without delay, preferably from an ophthalmologist.

Skin (Dermal): Remove contaminated clothing. Wash skin with soap and water. Obtain medical attention if irritation persists. Wash clothing before reuse.

Note to Physician: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (e.g., gastric lavage after endotracheal intubation).

SECTION VIII – EMPLOYEE PROTECTION

Respiratory Protection: None expected to be needed.

Eye Protection: Monogoggles

Protective Gloves: Polyvinyl chloride coated.

Ventilation Requirements: General (mechanical) room ventilation is expected to be satisfactory.

Additional Measures: Other Protective Equipment: Eye bath, safety shower, and chemical apron.

SECTION IX – SPILL AND DISPOSAL DATA

Spill: Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid diking material to suitable containers for recovery or disposal. To avoid gelling and foaming problems, do not use water to flush away spills. Wear eye and skin protection. Floor may be slippery; use care to avoid falling.

Material Safety Data Sheet

(WAM C-152)

Waste Disposal: Aerobic biological wastewater treatment systems are effective in treating aqueous solutions of surfactants. Removal efficiency will depend upon treatment plant conditions. As with any wastewater, consultation with local treatment plant staff is recommended (and may be required by law) before disposal. In typical activated sludge treatment systems, inlet concentrations below 5 mg/L have been treated without foaming problems. For disposal of neat, unused surfactant: Incinerate in a furnace where permitted under Federal, State and local regulations. - Dispose in accordance with all applicable Federal, State and local environmental regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION X – TRANSPORTATION DATA

DOT Shipping Name: Industrial Process Compound, Water Treating, Liquid
DOT Hazard Placard(s): None; Not regulated for transport
DOT Hazard Class: None; Not regulated for transport
UN/NA Number: None
Packaging Group: N/A
Reportable Quantity: Not Listed

SECTION XI – OTHER REGULATORY INFORMATION

HMIS Health: 2
HMIS Flammability: 0
HMIS Reactivity: 0
HMIS Personal Protection: C

SECTION XII – HANDLING AND STORAGE

Storage Requirements: Store in accordance with good industrial practices.
Handling Procedure: Do not get in eyes, on skin, on clothing. Do not swallow. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.
Conditions to avoid: Prolonged excessive heat may cause product decomposition.

SECTION XIII – TOXICOLOGICAL AND ECOLOGICAL INFORMATION

Toxicity: Significant data with possible relevance to humans: In two-year feeding studies, the 4-mole ethoxylate of nonylphenol (NPE4) at doses of 200 mg/kg/day or 40 mg/kg/day in rats and dogs, respectively, produced no significant effects. The 9-mole ethoxylate (surfactant) at doses of 140 or 30 mg/kg/day in the diet of rats or dogs, respectively, produced no adverse effects. Parameters evaluated included body and organ weights and histopathology of 28 tissues. A dose of 1000 mg/kg/day of surfactant resulted in reduced body weights and enlarged livers in rats and reduced weight, emesis, and minimal blood changes

Material Safety Data Sheet

(WAM C-152)

in dogs. A dose of 88 mg/kg/day surfactant produced increased liver to body weight ratios in dogs which was attributed to decreased food consumption. Rats fed dietary concentrations of a related alkylphenol ethoxylate, the 40-mole ethoxylate of octylphenol (OPE40), up to 14000 ppm (700 mg/kg/day) for two years showed no adverse effects on growth or survival, feed consumption, hematologic values, urine measurements, organ weights or histopathologic lesions.

Toxicity: Alkylphenol Ethoxylate Toxicity: In studies with rabbits, sustained occluded skin contact of some undiluted surfactants caused inflammatory changes in the lung. Developmental effects including extra ribs and other skeletal variations were observed in the fetuses of rats treated with maternally toxic levels of a 9-mole ethoxylate of octylphenol, or a 4-mole or 9-mole ethoxylate of nonylphenol. The significance of these findings to humans is unclear as several human studies did not show any association of congenital effects in children and maternal exposure to spermicides containing octyl or nonylphenol ethoxylates.

Toxicity: Alkylphenol Toxicity: Several studies with nonylphenol have resulted in slightly increased kidney weights in male rats continuously exposed to dietary concentrations of 200 ppm or greater (approximately >10 mg/kg/body weight/day). No histological lesions of the kidney were observed in one study but histopathological lesions of the kidney were observed in one study but histopathological lesions, primarily tubule mineralization, were observed at 2000 ppm in one study and in a dose-related manner at concentrations ≥ 200 ppm in a third study. These results indicate that continuous exposure to high concentrations of nonylphenol may be toxic to the kidney. While nonylphenol has been shown to bind to the estrogen receptor and to have weak estrogen mimetic activity in several in vitro and in vivo screening assays, treatment of rats at dietary concentrations of nonylphenol up to 2000 ppm in their diet for 90 days did not result in alterations in estrous cycles, sperm measurements, or endocrine organ weights or histopathology. In addition, a three generation (F0 through F3 weaning) study conducted by the NIEHS indicated that nonylphenol did not affect reproductive parameters at dietary concentrations up to 2000 ppm in any generation. Effects in juvenile females consistent with those seen in screening assays (e.g., premature vaginal opening) were observed following high level exposure post-weaning (F1, F2 and F3) at 650 and 2000 ppm in the F2 adults compared to controls from the same generation. These results and other inconsistent or potentially body weight related findings are considered of questionable significance. The No Observed Adverse Effect Level (NOAEL) for reproduction was 2000 ppm and for all effects was 200 ppm (except as noted for kidneys above). Considering the high doses (e.g., 100-350 mg/kg/day for females in the 2000 ppm group; the higher doses occurring post-weaning), the lack of permanent/prolonged effects is considered significant. Based on the results of these studies, exposure to low doses of nonylphenol, such as from workplace or environmental exposure, would not be expected to result in effects on mammalian reproduction. In a 2-generation reproduction study with octylphenol at

Material Safety Data Sheet

(WAM C-152)

dietary concentrations of 0.2 to 2000 ppm, treatment-related effects in adult F0, F1 and F2 animals were limited to reduced body weights and feed consumption at 2000 ppm. No effects on any reproductive parameters were observed in either generation. No effects on sperm measurements, estrous cyclicity, or reproductive organs were observed in adult animals. Pup body weights during lactation were reduced at 2000 ppm. The NOAEL for systemic and postnatal toxicity was 200 ppm (approximately 15 mg/kg/day) and for reproductive toxicity was >2000 ppm (approximately 150 mg/kg/day). Although octylphenol has weak estrogen mimetic activity in some screening assays, no estrogenic or reproductive effects occurred from dietary exposure to rats for two generations over a 10,000 fold dose range.

Aquatic Toxicity Study:

Toxic to aquatic organisms.

Aquatic Toxicity Study:

Ecotoxicity to Micro-organisms Toxicity to Micro-organism. Bacterial Inhibition; IC50. Result value: >5000 mg/l. Ecotoxicity to Aquatic Invertebrates Toxicity to Aquatic Invertebrates. Daphnia; 48 h; LC50. Result value: 21.4 mg/l. Ecotoxicity to Aquatic Plants Ecotoxicity to Fish Toxicity to Fish. Fathead Minnow; 96 h; LC50. Result value: 6.6 mg/l.

Aquatic Toxicity Study:

Further Information: Appropriate treatment of effluents will reduce levels of nonylphenol ethoxylate (NPE) residues to concentrations that should pose no harm to the environment, including protection for weak estrogen-mimetic activity observed for some degradation intermediates.

SECTION XIV – ADDITIONAL INFORMATION

Additional:

This product may contain trace amounts of ethylene oxide (CAS No. 75-21-8), a condition which creates the potential for accumulation for ethylene oxide in the head space of shipping and storage containers and in enclosed areas where the product is being handled or used. Ethylene oxide is listed by OSHA as probably carcinogenic to humans, IARC as carcinogenic to humans, and NTP as known to be a human carcinogen. OSHA considers that, at excessive levels, ethylene oxide may present reproductive, mutagenic, genotoxic, neurological and sensitization hazards. If this product is handled with adequate ventilation, the presence of these trace amounts is not expected to result in any short or long term hazard. This product may not be exempt from OSHA's ethylene oxide standard, 29 CFR 1910.1047. Users should comply with all applicable provisions. Personnel should be monitored to determine levels of exposure to ethylene oxide. If necessary, protective measures should be taken. The OSHA permissible exposure limit for ethylene oxide is 1 ppm TWA8, the action level is 0.5 ppm TWA8, the ACGIH TLV is 1 ppm TWA8 and OSHA has established an excursion limit of 5 ppm (15 minute average). Surfactants can cause foaming problems in biological wastewater treatment plants and other high shear operations.

ABBREVIATIONS

Material Safety Data Sheet

(WAM C-152)

ACGIH=American Conference of Governmental Industrial Hygienists

OSHA=Occupational Safety and Health Administration

TLV=Threshold Limit Value

PEL=Permissible Exposure Limit

TWA=Time Weighted Average

STEL=Short-Term Exposure Limit

This information is furnished without warranty, expressed or implied, except it is accurate to the best knowledge of Waterside Asset Management. Neither Waterside Asset Management nor any of its distributors assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of the suitability of any material is the responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Waterside Asset Management assumes no legal responsibility for loss, damage, or expense arising out of, or in any way connected with, the handling, storage, use or disposal of this product.