

200 Yellow Place · Rockledge, FL 32955

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MATERIAL SAFETY DATA SHEET

PREPARATION DATE: 10/13/95
REVISION DATE: 10/26/05 REV. 4

SECTION 1 - PRODUCT & COMPANY INFORMATION

PRODUCT NAME: QwikShot® Acid Flush™
PRODUCT NO.: QT2500
DESCRIPTION: oil additive
USE: acid removal
APPEARANCE: clear liquid, characteristic odor

MANUFACTURER: Mainstream Engineering Corp.
200 Yellow Place
Rockledge, Florida 32955

INFORMATION TELEPHONE: 321-631-3550
EMERGENCY TELEPHONE: 800-424-9300

SECTION 2 - PRODUCT COMPOSITION INFORMATION

* TRADE SECRET - PROPRIETARY FORMULA. Specific chemical identities are withheld as a trade secret under the provisions of OSHA hazard communication standard 29 CFR 1910.1200.

SECTION 3 - HAZARDS IDENTIFICATION

EXPOSURE LIMITS: PEL 400 PPM 200 PPM (SKIN)
TLV 400 PPM 200 PPM (SKIN)

POTENTIAL HEALTH EFFECTS:

EYE: Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

SKIN: May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns. Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

SWALLOWING: Swallowing this material may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

INHALATION: Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits.

TARGET ORGANS: This product contains ethanol. Alcoholic beverage consumption has been associated with brain damage, heart damage, and pancreatitis in humans. The relevance of these findings to ethanol exposure in industrial environments is uncertain. Exposure to this material has been found to cause kidney damage in male rats. The mechanism by which this toxicity occurs is specific to the male rat and the kidney effects are not expected to occur in humans. This material shortens the time of onset or worsens the liver damage, kidney damage, and neurotoxic effects induced by other chemicals. Lethal concentrations of ethanol has been shown to cause damage to organs including liver, kidneys, pancreas, heart, lungs, and brain. Although this rarely occurs, survivors of severe intoxication may suffer from permanent neurological damage. Overexposure to this material has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects, mild, reversible kidney effects, liver abnormalities, pancreatic damage, liver damage, central nervous system damage, brain damage, testis damage. Overexposure to this material has been suggested as a cause of the following effects in humans: visual impairment, liver damage.

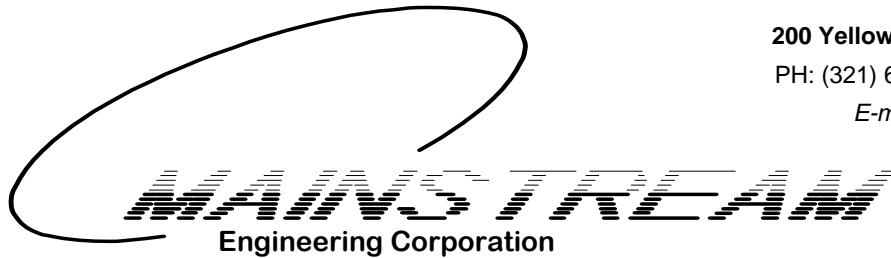
DEVELOPMENTAL INFORMATION: This material has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain. Methanol has caused birth defects in laboratory animals, but only when inhaled at extremely high vapor concentrations. The relevance of this finding to humans is uncertain. This product contains ethanol, and alcoholic beverage consumption has been associated with birth defects in humans. The relevance of this finding to ethanol exposure in industrial environments is uncertain.

CANCER INFORMATION: Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration. This product contains ethanol. The International Agency for Research on Cancer (IARC) has determined that exposure to ethanol through chronic human consumption of alcoholic beverages can cause cancer. The relevance of this finding to ethanol exposure in industrial environments is uncertain.

OTHER HEALTH EFFECTS: No data.

PRIMARY ROUTE(S) OF ENTRY: Inhalation, skin absorption, skin contact, eye contact.

SECTION 4 - EFFECTS OF OVEREXPOSURE



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Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: mouth and throat irritation (soreness, dry or scratchy feeling, cough), stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), cough, central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), leg cramps, involuntary eye movement, pain in the abdomen and lower back, respiratory depression (slowing of the breathing rate), blurred vision, shortness of breath, loss of coordination, confusion, irregular heartbeat, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), anesthesia, visual impairment (including blindness), respiratory failure, coma, and death.

SECTION 5 - EMERGENCY & FIRST-AID PROCEDURES

SKIN: Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

EYES: If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

INGESTION: Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

INHALATION: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention. Keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

NOTICE TO PHYSICIANS: Inhalation of high concentrations of this material, as could possibly occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances, and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 µg/dl. Methanol is effectively removed by hemodialysis. This material is an aspiration hazard. Potential danger from aspiration must be weighted against possible oral toxicity when deciding to induce vomiting.

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions), liver, kidney, central nervous system, pancreas, heart, male reproductive system. Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease, or anemias. Individuals with preexisting heart disorders may be more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

SECTION 6 - PHYSICAL AND CHEMICAL DATA

BOILING POINT (760 mm Hg):	63.8°C
VAPOR PRESSURE:	98 mm Hg (20 °C)
VAPOR DENSITY (AIR = 1):	1.6
SPECIFIC GRAVITY (WATER = 1):	0.794
PERCENT VOLATILES:	100 %
EVAPORATION RATE:	3.3
(N-BUTYL ACETATE = 1)	
APPEARANCE:	clear liquid
ODOR:	characteristic odor

SECTION 7 - REACTIVITY DATA

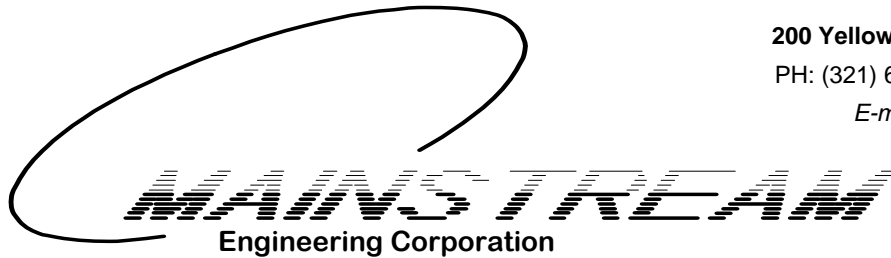
STABILITY: Stable
HAZARDOUS POLYMERIZATION: Product will not undergo hazardous polymerization
HAZARDOUS DECOMPOSITION: May form: carbon dioxide and carbon monoxide, various hydrocarbons.
INCOMPATIBILITY: Avoid contact with strong oxidizing agents, heat, flame.

SECTION 8 - FIRE AND EXPLOSION INFORMATION

FLASH POINT: 51°F (TCC)
FLAMMABILITY LIMITS: Lower: 1.4%, Upper: 20.7%
EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, foam.
AUTOIGNITION TEMPERATURE: 781°F
HAZARDOUS DECOMPOSITION PRODUCTS: Toxic fumes of carbon dioxide, carbon monoxide, and various hydrocarbons.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus in positive pressure mode with confined facepiece.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Never use welding or cutting torch on or near container (even empty) because product (even residue) can ignite explosively.

NFPA RATING: Health: 2, Flammability: 3, Reactivity: 0

SECTION 9 - HANDLING, STORAGE, AND DISPOSAL



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HANDLING: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions in the data sheet must be observed. Static ignition hazard can result from handling and use. Sudden release of hot organic vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignition without presence of obvious ignition sources. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

EYE PROTECTION: Chemical splash goggles are advised.

SKIN PROTECTION: Wear impervious gloves.

RESPIRATORY PROTECTION: If workplace exposure limits of product are exceeded, a NIOSH/MSHA approved air supplied respirator is advised. Engineering or administrative controls should be implemented to reduce exposure.

STORAGE: Store in a cool, dry location. Keep container tightly closed. Do not store near heat, flame, strong oxidants. Maintain adequate ventilation.

SPILL AND LEAK PROCEDURES: Do not permit product to enter streams, sewers, or other waterways. Eliminate all ignition sources. Dike spill and eliminate leak. Absorb with vermiculite or other absorbent. Transfer absorbent to closed containers for disposal.

DISPOSAL: Dispose of in accordance with all local, state, and federal regulations.

SECTION 10 - ADDITIONAL INFORMATION

DOT SHIPPING CLASS: 49 CFR 173.4 (Exemptions for small quantities).

EPA TSCA: All ingredients listed on the TSCA Inventory.

The information contained herein is believed to be accurate and is offered in good faith. The above information is, in part, based on material safety data sheets supplied by the vendors of the raw materials used in this product. Because product use is beyond our control, no warranty is given, expressed, or implied. Mainstream Engineering Corporation cannot assume any liability for the use of information contained herein or from damage resulting from handling or contact with the above product. To determine applicability or effect of any law or regulation with respect to the product, users should consult a legal advisor or appropriate governmental agency.