

MATERIAL SAFETY DATA SHEET

REVISION DATE: 03/19/2015

SECTION 1 - PRODUCT & COMPANY IDENTIFICATION

PRODUCT NAME: QwikShot® Acid Flush™

USE: Removal of acidic residues

DESCRIPTION: Clear liquid, characteristic odor

MANUFACTURER: Mainstream Engineering Corporation
200 Yellow Place
Rockledge, Florida 32955

INFORMATION TELEPHONE: 321-631-3550

EMERGENCY TELEPHONE: 800-424-9300

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910

(OSHA HCS): Flammable liquids (Category 2), H225

HAZARD STATEMENT(S):

H225 Highly flammable liquid and vapor.

PICTOGRAM(S):



SIGNAL WORD: Danger

PRECAUTIONARY STATEMENT(S):

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303 + P361 + P353

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370 + P378

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P403 + P235

Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/ container to an approved waste disposal plant.

HAZARDS NOT OTHERWISE CLASSIFIED BY GHS: none

SECTION 3 - 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 4 - EMERGENCY & FIRST-AID PROCEDURES

EYE: Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

SKIN: Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek 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



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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 5 – FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide, or foam extinguishing materials.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide.

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.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus in positive pressure mode with confined facepiece.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND

EMERGENCY PROCEDURES: Use personal protective equipment outlined in section 8 for normal handling of this material. Remove all possible sources of ignition from the vicinity. Ensure adequate ventilation and minimize exposure to vapors. Evacuate personnel to safe areas. Vapors can accumulate to explosive

concentrations in the presence of an ignition source. For personal protection see section 8.

ENVIRONMENTAL PRECAUTIONS: Prevent release to the environment if possible. Do not flush product into drains or sewer lines.

MATERIALS FOR CONTAINMENT AND CLEAN-UP: Use a nonflammable absorbent material for clean-up. Place in container for disposal according to local regulations.

REFERENCE TO OTHER SECTIONS: For additional disposal directions and reporting requirements, please refer section 13.

SECTION 7 – HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Keep container closed when not in use. Use good personal hygiene practices in accordance with this material. Avoid getting the product in eyes or on skin. Remove contaminated clothing and clean before re-use. Wash hands before eating or drinking.

Make sure there is adequate ventilation in order to minimize exposure to possible vapors.

Keep away from heat and flame. Keep operating temperatures of equipment below ignition temperatures at all times. Use non-sparking tools.

Please wear appropriate personal protective equipment for handling of this product as outlined in Section 8.

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

SPECIAL STORAGE CONSIDERATIONS: Even when emptied, the containers may retain product residues (vapor and/or liquid), and this may pose a static ignition hazard.

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.



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SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION MEASURES

EXPOSURE LIMITS: ACGIH TWA 200 PPM
STEL 250 PPM

ENGINEERING CONTROLS: In enclosed environments, exhaust ventilation by explosion-proof mechanical means may be necessary to control air contaminants below specified exposure limits. Handle product in accordance with good industrial hygiene and safety practice.

PERSONAL PROTECTIVE EQUIPMENT: Please wear appropriate person protective equipment for handling of this product as indicated below.

EYE PROTECTION: Chemical splash goggles are advised.

SKIN PROTECTION: Use gloves of an appropriate material (latex, nitrile or PVC gloves) to minimize exposure.

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

SECTION 9 - PHYSICAL AND CHEMICAL DATA

APPEARANCE: Clear, colorless liquid
ODOR: Sweet odor
ODOR THRESHHOLD: No data available
pH: No data available
FLASH POINT: 51°F (TCC)
AUTOIGNITION TEMPERATURE: 781°F
FLAMMABILITY: No data available
EXPLOSION LIMITS: Lower: 3.3% (V), Upper: 20.7% (V)
MELTING POINT: -114 °C (-173 °F)
BOILING POINT (760 mm Hg): 78 °C (170.6°F)
VAPOR PRESSURE: 47 mm Hg (68 °F)
VAPOR DENSITY (AIR = 1): 1.6
SPECIFIC GRAVITY (WATER = 1): 0.794
SOLUBILITY: Miscibility with water
PARTITION COEFFICIENT: No data available
(N-OCTANOL/WATER)
DECOMPOSITION TEMPERATURE: No data available
VISCOSITY: No data available
VOC CONTENT: 100 %
EVAPORATION RATE: 3.3
(N-BUTYL ACETATE = 1)

SECTION 10 – STABILITY AND REACTIVITY

REACTIVITY: No data available.

CHEMICAL STABILITY: Stable when handled or stored under the recommended conditions.

POSSIBILITY OF HAZARDOUS REACTIONS: Vapors may form flammable/explosive mixture with air. Remove sources of heat, flames and sparks. Do not expose to extremes of temperature.

HAZARDOUS POLYMERIZATION: Product will not undergo hazardous polymerization

CHEMICAL INCOMPATIBILITY: Avoid contact with strong oxidizing agents and alkali metals.

HAZARDOUS DECOMPOSITION PRODUCTS: May form oxides of carbon.

SECTION 11 - TOXICOLOGICAL INFORMATION

PRIMARY ROUTES OF ENTRY: Inhalation, skin absorption, skin contact, eye contact, ingestion.

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY

LD50 Oral - rat - 7,060 mg/kg

Target Organs/Functions: Lungs, Thorax, or Respiration

LC50 Inhalation - rat - 10 h - 20000 ppm

ACUTE SYMPTOMS: Eye disorders, respiratory irritation, intestinal irritation.

DELAYED EFFECTS: No data available

CHRONIC EFFECTS:

MUTAGENICITY: No evidence of a mutagenic effect.

TERATOGENICITY: No evidence of a teratogenic effect (birth defect).

SENSITIZATION: No evidence of a sensitization effect.

REPRODUCTIVE: No evidence of negative reproductive effects.

CHRONIC SYMPTOMS: Chronic exposure can result in damage to the central nervous system, narcosis, and/or damage to the heart.

CARCINOGENICITY

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.



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OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

SECTION 12 - ECOLOGICAL INFORMATION

TOXICITY: No data available.

PERSISTENCE AND DEGRADABILITY: No data available

BIOACCUMULATION: No data available

SOIL TO GROUNDWATER MOBILITY: No data available

OTHER ADVERSE EFFECTS: No data available

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer to assure compliance.

SPECIAL CONSIDERATIONS FOR DISPOSAL: This material is characterized as a *highly flammable* waste (D001) under the Resource Conservation and Recovery Act (RCRA).

SECTION 14 - TRANSPORT INFORMATION

DOT (US):

UN NUMBER: UN1987

PROPER SHIPPING NAME: Qwikshot, Alcohols NOS

TRANSPORT HAZARD CLASSES: Flammable, Hazardous

CLASS: 3

PACKING GROUP: II

Per 49 CFR 173.4, this package qualifies for a small quantity exception.

SECTION 15 - REGULATORY INFORMATION

No additional information.

SECTION 16 - OTHER INFORMATION

HMIS RATING:

Health hazard: 2

Flammability: 3

Physical Hazard: 0

NFPA RATING:

Health: 2

Flammability: 3

Reactivity: 0

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.

PREPARATION INFORMATION

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