SAFETY DATA SHEET

Product: MARC 113 WRITE-OFF GEL VANDALISM MARK REMOVER

Form R04132

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER AND NAME: MARC 113 WRITE-OFF GEL VANDALISM MARK REMOVER

SDS DATE: 05/19/15

SUPPLIER: Mid-American Research Chemical Corp. **ADDRESS: P. O. Box 927 Columbus, NE 68602-0927**
PHONE: 402-564-7104 FAX: 403-563-1290
EMERGENCY PHONE: InfoTrac 1-800-535-5053
E-MAIL: marc@marc1.com WEBSITE: www.marc1.com

RECOMMENDED USE: Remove graffiti markings.

PREPARED BY: MARC

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATION: Causes skin corrosion/irritation. Causes serious eye damage/irritation.

SIGNAL WORD AND PRECAUTIONARY STATEMENTS: DANGER: Extremely flammable aerosol. May be fatal if swallowed and enters airways. Causes skin irritation and serious eye irritation . May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure effects.

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. Do not spray on an open flame or other ignition source. Pressurized container: do not pierce or burn, even after use. Do not breathe gas. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye/face protection. See Section 4 FIRST-AID MEASURES.

POTENTIAL HEALTH EFFECTS: See Section 11 for more information.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NO.	%
Toluene	108-88-3	40-60
Butane	106-97-8	10-20
Diacetone Alcohol	123-42-2	2.5-10
Isopropyl Alcohol	67-63-0	2.5-10
Propane	74-98-6	2.5-10
Other components below reportable levels		10-20

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if you are concerned , irritation develops and persists, or if you feel unwell.

SKIN: Wash off with soap and plenty of water. Seek medical advice/attention if irritation develops and persists. Take off contaminated clothing and wash before reuse.

INGESTION: Rinse mouth. **DO NOT INDUCE VOMITING!** Call a physician or poison control center immediately.

INHALATION: **Rem**ove to person to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

MOST IMPORTANT SYMPTOMS/ EFFECTS, ACUTE & DELAYED: May cause drowsiness and dizziness, headache, nausea, vomiting and **i**rritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness , swelling and blurred vision. Prolonged exposure may cause chronic effects.

INDICATION OF IMMEDIATE MEDICAL ATTENTION & SPECIAL TREATMENT NEEDED: Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

GENERAL INFORMATION: IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Powder. Foam. Carbon dioxide (CO2).

UNSUITABLE EXTINGUISHING MEDIA: Do not use water jet as an extinguisher, as this will spread the fire.

SPECIAL FIRE FIGHTING PROCEDURES: **See SPECIFIC METHODS below.**

FIRE-FIGHTING EQUIPMENT/ INSTRUCTIONS: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

SPECIFIC METHODS: Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Extremely flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

HAZARDOUS DECOMPOSITION PRODUCTS: No hazardous decomposition products are known.

SECTION 6: ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES/ PROTECTIVE EQUIPMENT: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment and clothing during clean-up. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see Section 8 of the SDS.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP: Refer to attached safety data sheets and/or instructions for use. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Collect spillage. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal see Section 13 of SDS.

ENVIRONMENTAL PRECAUTIONS: Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood**.** Pressurized container. Do not pierce or burn even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not re-use empty containers. Do not get this material in contact with eyes, skin and clothing. Avoid breathing gas. Avoid prolonged exposure. Use only in well-ventilated areas. Should be handled in closed systems, if possible. Pregnant or breastfeeding women must not handle this product. Wear appropriate personal protective equipment as required. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

OTHER PRECAUTIONS: **KEEP OUT OF REACH OF CHILDREN! CONTENTS UNDER PRESSURE!**

STORAGE: Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122°F. Do not puncture, incinerator or crush. Do not handle or store near an open flame, heat, or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of SDS).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

COMPONENTS	TYPE	VALUE
Diacetone Alcohol (CAS123-42-2)	PEL	240 mg/m3
Isopropyl Alcohol (CAS 67-63-0)	PEL	50 ppm 980 mg/m3
Propane (CAS 74-98-6)	PEL	400 ppm 1800 mg/m3 1000 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

COMPONENTS	TYPE	VALUE
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

COMPONENTS	TYPE	VALUE
Butane (CAS 106-97-8))	STEL	1000 ppm
Diacetone Alcohol (CAS123-42-2)	TWA	50 ppm
Isopropyl Alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

COMPONENTS	TYPE	VALUE
Butane (CAS 106-97-8))	TWA	1900 mg/m3 800 ppm
Diacetone Alcohol (CAS123-42-2)	TWA	240 mg/m3 50 ppm
Isopropyl Alcohol (CAS 67-63-0)	STEL	1225 mg/m3 500 ppm
	TWA	980 mg/m3 400 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm
Toluene (CAS 108-88-3)	STEL	560 mg/m3 150 ppm
	TWA	375 mg/m3 100 ppm

Biological limit values:
ACGIH Biological Exposure Indices

COMPONENTS	VALUE	DETERMINANT	SPECIMEN	SAMPLING TIME
Isopropyl Alcohol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with Hydrolysis	Creatine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

*-For sampling details, please see the source document.

Exposure guidelines

US – California OELs: skin designation
Toluene (CAS 108-88-3) Can be absorbed through the skin.

US **– Minnesota Haz Subs: Skin designation applies**
Toluene (CAS 108-88-3) Skin designation applies.

APPROPRIATE ENGINEERING CONTROLS/
VENTILATION: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

RESPIRATORY PROTECTION: If permissible levels are exceeded use NIOSH mechanical filter/organic vapor cartridge or an air-supplied respirator.

EYE/FACE PROTECTION: Wear eye/face protection. Wear safety glasses with side shields (or goggles).

SKIN PROTECTION/PROTECTIVE GLOVES: Wear appropriate chemical resistant gloves.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear appropriate thermal protective clothing. Use of an impervious apron is recommended.

Eye wash facilities and emergency shower must be available when handling this product.

THERMAL HAZARDS: Wear appropriate thermal protective clothing, when necessary.

WORK HYGIENIC PRACTICES: When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:
PHYSICAL STATE: Gas.
FORM: Aerosol.
COLOR: White.
ODOR: Solvent.
ODOR THRESHOLD: Not available.
pH: Not available.
MELTING/FREEZING POINT: Not available.
INITIAL BOILING POINT/RANGE: 257.08°F (125.05°C) estimated.
FLASH POINT/METHOD USED: -156.0°F (-104.4°C) estimated
EVAPORATION RATE: Not available.
FLAMMABILITY (solid, gas):. Not available
FLAMMABILITY LIMITS (%): **LOWER:** Not available. **UPPER:** 12% estimated
FLAMMABILITY EXPLOSIVE (%): **LOWER:** Not available **UPPER:** Not available
VAPOR PRESSURE (mmHg): 35 – 55 psig @ 70°F estimated
VAPOR DENSITY (AIR = 1): Not available.
RELATIVE DENSITY: Not available.
SPECIFIC GRAVITY (H2O = 1): 0.796 estimated
SOLUBILITY IN WATER: Not available
PARTITION COEFFICIENT, n-OCTANOL/WATER: Not available
AUTO-IGNITION TEMPERATURE: 797°F (425°C) estimated
DECOMPOSITION TEMPERATURE: Not available
VISCOSITY: Not available

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: The product is stable and non-reactive under normal conditions of use, storage and transport.

CHEMICALSTABILITY: Material is stable under normal conditions.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization does not occur.

CONDITIONS TO AVOID: Avoid temperatures exceeding the flash point. Contact with incompatible materials.

INCOMPATIBILITY (MATERIAL TO AVOID): Acids. Strong oxidizing agents. Nitrates. Isocyanates. Fluorine. Chlorine.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: No hazardous decomposition products are known.

HAZARDOUS POLYMERIZATION: N/A **CONDITIONS TO AVOID (POLYMERIZATION):** NA

SECTION 11: TOXICOLOGICAL INFORMATION

INFORMATION ON LIKELY ROUTES OF EXPOSURE:

EYES: Causes serious eye irritation.

SKIN: Causes skin irritation.

INGESTION: Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia**.**

INHALATION: May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness, headache, nausea and vomiting. Narcotic effects. Prolonged inhalation may be harmful.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS: May cause drowsiness an dizziness. Headache, nausea, vomiting. Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

INFORMATION ON TOXICOLOGICAL EFFECTS:

ACUTE TOXICITY: May be fatal if swallowed and enters airways. Narcotic effects.

COMPONENTS	SPECIES	TEST RESULTS
Butane (CAS 106-97-8)		
ACUTE		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes 52 %, 120 Minutes
	Rat	1355 mg/l
Diacetone Alcohol (CAS 123-42-2)		
ACUTE		
Dermal		
LD50	Rabbit	14.5 ml/kg, 24 Hours
	Rat	> 1875 mg/kg, 24 Hours 13500 mg/kg
Oral		
LD50	Rat	3002 mg/kg
Isopropyl Alcohol (CAS 67-63-0)		
ACUTE		
Dermal		
LD50	Rabbit	16.4 ml/kg, 24 Hours
Inhalation		
LC50	Rat	>10000 ppm, 6 Hours
Oral		
LD50	Rat	5.84 g/kg

Propane (CAS 74-98-6)
ACUTE

Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes 52 %, 120 Minutes
	Rat	1355 mg/l 658 mg/l/4h

Toluene (CAS 108-88-3)
ACUTE

Dermal		
LD50	Rabbit	>5000 mg/kg, 24 Hours
Inhalation		
LC50	Mouse	6405-7436 ppm, 6 Hours 5320 ppm, 8 Hours
	Rat	5879-6281 ppm, 6 Hours 12.5 – 28.8 mg/l, 4 Hours
Oral		
LD50	Rat	5000 mg/kg

*Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/eye irritation: Causes serious eye irritation.
Respiratory or skin sensitization
Respiratory sensitization: Not available.
Skin sensitization: This product is not expected to cause skin sensitization.
Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Toluene (CAS 108-88-3) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.

Reproductive toxicity: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity-Single exposure: May cause drowsiness and dizziness.
Specific target organ toxicity-Repeated exposure: Respiratory system, skin, kidneys, central nervous system, eyes and liver. May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard: May be fatal if swallowed and enters airways.
Chronic effects: Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Toxic to aquatic life with long lasting effects.

COMPONENTS		SPECIES	TEST RESULTS
Diacetone Alcohol (CAS 123-42-2)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	420 mg/l, 96 Hours
		Fish	420 mg/l, 96 Hours
Isopropyl Alcohol (CAS 67-63-0)			
Aquatic			
Algae	IC50	Algae	10000.0001 mg/L, 72 Hours
Crustacea	EC50	Daphnia	13299 mg/L, 48 Hours
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 Hours
Toluene (CAS 108-88-3)			
Aquatic			
Algae	IC50	Algae	433.0001 mg/L, 72 Hours
Crustacea	EC50	Daphnia	7.645 mg/L, 48 Hours
		Water flea (Daphnia magna)	5.46 – 9.83 mg/l, 48 Hours
Fish	LC50	Coho salmon, silver salmon (Oncorhynchus kisutch)	8.11 mg/l, 96 Hours

*Estimates for product may be based on additional component data not shown.

Persistence and degradability: No data is available on the degradability of this product.
Bioaccumulative potential: No data available.

Partition coefficient n-octanol / water (log Kow)

Butane	2.89
Diacetone Alcohol	-0.098
Isopropyl Alcohol	0.05
Propane	2.36
Toluene	2.73

Mobility in soil: No data available.

Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

LOCAL DISPOSAL REGULATIONS: Dispose in accordance with all applicable regulations.

HAZARDOUS WASTE CODE: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

US RCRA Hazardous Waste U List: Reference

Toluene (CAS 108-88-3)	U220

WASTE FROM RESIDUES/ UNUSED PRODUCTS: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see Disposal instructions).

CONTAMINATED PACKAGING: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (for ground/non-bulk containers)

CONTAINER SIZES(S): Aerosol Can (16 oz.)
PROPER SHIPPING NAME: CLEANING COMPOUND.
HAZARD CLASS: N/A
ID NUMBER: None
PACKING GROUP: None
LABEL STATEMENT: LTD QTY

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA (TOXIC SUBSTANCE CONTROL ACT): Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4):
Toluene (CAS 108-88-3) Listed

SARA 304 EMERGENCY RELEASE NOTIFICATION: Not regulated**.**

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA)

Hazard categories
Immediate Hazard – Yes
Delayed Hazard – Yes
Fire Hazard – Yes
Pressure Hazard – No
Reactivity Hazard - No

SARA 302 Extremely Hazardous Substance: Not listed.

SARA 311/312 Hazardous chemical: No

SARA 313 (TRI reporting)

INGREDIENT	CAS NO.	% by wt.
Toluene	108-88-3	40 - 60

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Toluene (CAS 108-88-3)

Clean Air Act (CAA) Section 112 (r) Accidental Release Prevention (40 CFR 68.130)
Butane (CAS 106-97-8)
Propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA), List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Toluene (CAS 108-88-3) 6594

Drug Enforcement Administration (DEA), List 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c))

Toluene (CAS 108-88-3) 35% weight/volume

DEA Exempt Chemical Mixtures Code Number

Toluene (CAS 108-88-3) 594

Country(s) or region	Inventory name	On Inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16: OTHER INFORMATION

HMIS/NFPA Ratings:

Health =	1
Flammability =	**3**
Reactivity =	**0**
Other =	**-**
Protection =	**B**

REVISION DATE: 05/19/15

N/A = Not Applicable, N/D = Not Determined, N/E = Not Established

DISCLAIMER: While the information contained herein is believed to be correct, no warranties are made with respect thereto, and all liability from reliance thereon is disclaimed.