



SAFETY DATA SHEET

1. Identification

Product identifier	On & Off Hull & Bottom Cleaner
Other means of identification	
Product code	MK2032
Recommended use	Cleaner for fiberglass hulls
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufactured or sold by:	
Company name	CRC Industries, Inc.
Address	885 Louis Dr. Warminster, PA 18974 US
Telephone	
General Information	215-674-4300
Technical Assistance	800-521-3168
Customer Service	800-272-4620
24-Hour Emergency (CHEMTREC)	800-424-9300 (US) 703-527-3887 (International)
Website	www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	May be corrosive to metals. Harmful if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Do not breathe mist or vapor. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.
Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

Supplemental information

When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Water		7732-18-5	60 - 70
Hydrochloric Acid		7647-01-0	20 - 30
Phosphoric Acid		7664-38-2	5 - 10
Alcohols, C12-15, Ethoxylated		68131-39-5	1 - 3
Oxalic Acid		144-62-7	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. If respiratory irritation, dizziness, or unconsciousness occurs, seek immediate medical assistance. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with soap and plenty of water for 15 minutes. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Drink 1 or 2 glasses of water. Rinse mouth. Do not induce vomiting without advice from poison control center. Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Probable mucosal damage may contraindicate the use of gastric lavage.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	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.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. 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 cleaning up

This product is miscible in water. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Should not be released into the environment. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. For larger spills, neutralize with sodium carbonate or absorb on fire retardant material. Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Never use with chlorine products. Can react to give chlorine gas. Never use or mix with other cleaners or chemicals. Do not use on any surface that can be damaged by acid materials. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. Use care in handling/storage. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container. Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
Hydrochloric Acid (CAS 7647-01-0)	Ceiling	7 mg/m ³
		5 ppm
Oxalic Acid (CAS 144-62-7)	PEL	1 mg/m ³
Phosphoric Acid (CAS 7664-38-2)	PEL	1 mg/m ³

US. ACGIH Threshold Limit Values

Components	Type	Value
Hydrochloric Acid (CAS 7647-01-0)	Ceiling	2 ppm
Oxalic Acid (CAS 144-62-7)	STEL	2 mg/m ³
	TWA	1 mg/m ³
Phosphoric Acid (CAS 7664-38-2)	STEL	3 mg/m ³
	TWA	1 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Hydrochloric Acid (CAS 7647-01-0)	Ceiling	7 mg/m ³
		5 ppm
Oxalic Acid (CAS 144-62-7)	STEL	2 mg/m ³
	TWA	1 mg/m ³
Phosphoric Acid (CAS 7664-38-2)	STEL	3 mg/m ³
	TWA	1 mg/m ³

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	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.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield.
Skin protection	
Hand protection	Wear protective gloves such as: Neoprene. Latex.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an acid gas cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Keep away from food and drink. 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.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Color	White.
Odor	Acid.
Odor threshold	Not available.
pH	< 1
Melting point/freezing point	< 0 °F (< -17.8 °C)
Initial boiling point and boiling range	185 °F (85 °C)
Flash point	None (Tag Closed Cup)
Evaporation rate	Slow.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	15.9 hPa estimated
Vapor density	Not available.
Relative density	1.16
Solubility (water)	Completely soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	67.4 % estimated

10. Stability and reactivity

Reactivity	Reacts violently with strong alkaline substances. This product may react with reducing agents. May be corrosive to metals.
Chemical stability	Material is stable under normal conditions.

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Do not mix with other chemicals. Contact with incompatible materials. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.
Incompatible materials	Chlorine. Alkalies. Strong oxidizing agents. Reducing agents. Metals. Amines.
Hazardous decomposition products	Hydrogen chloride. Phosgene.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Harmful if swallowed. May cause respiratory irritation.

Product	Species	Test Results
On & Off Hull & Bottom Cleaner		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg calculated
Inhalation		
LC50	Rat	> 20 mg/l, 4 hours calculated
Oral		
LD50	Rat	> 930 mg/kg calculated

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

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
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	
Hydrochloric Acid (CAS 7647-01-0)	3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not expected to be an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Product	Species	Test Results	
On & Off Hull & Bottom Cleaner			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Daphnia	14.7335 mg/l, 48 hours estimated
Fish	LC50	Fish	99.4512 mg/l, 96 hours estimated
Components			
Species			
Test Results			

Alcohols, C12-15, Ethoxylated (CAS 68131-39-5)

Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	0.4 - 0.75 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	2.7 mg/l, 96 hours

Hydrochloric Acid (CAS 7647-01-0)

Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	282 mg/l, 96 hours

Oxalic Acid (CAS 144-62-7)

Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	125 - 150 mg/l, 48 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.
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.

13. Disposal considerations

Disposal of waste from residues / unused products	This material and its container must be disposed of as hazardous waste. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
Hazardous waste code	D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
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.

14. Transport information

DOT	
UN number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric Acid RQ = 24510 LBS, Phosphoric Acid RQ = 73529 LBS), Limited Quantity
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

IATA

Air
Not permitted for shipment by air.

IMDG

UN number UN3264

UN proper shipping name CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric Acid, Phosphoric Acid), Limited Quantity

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group II

Environmental hazards

Marine pollutant No.

EmS F-A, S-B

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US 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 Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Oxalic Acid (CAS 144-62-7) 1.0 % One-Time Export Notification only.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Hydrochloric Acid (CAS 7647-01-0) Listed.

Phosphoric Acid (CAS 7664-38-2) Listed.

CERCLA Hazardous Substances: Reportable quantity

Hydrochloric Acid (CAS 7647-01-0) 5000 LBS

Phosphoric Acid (CAS 7664-38-2) 5000 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Hydrochloric Acid (CAS 7647-01-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

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

Hydrochloric Acid (CAS 7647-01-0) 6545

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

Hydrochloric Acid (CAS 7647-01-0) 20 %WV

DEA Exempt Chemical Mixtures Code Number

Hydrochloric Acid (CAS 7647-01-0) 6545

Food and Drug Administration (FDA)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Immediate Hazard - Yes

Hazard categories Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Hydrochloric Acid (CAS 7647-01-0)
Phosphoric Acid (CAS 7664-38-2)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. New Jersey Worker and Community Right-to-Know Act

Oxalic Acid (CAS 144-62-7)
Phosphoric Acid (CAS 7664-38-2)
Hydrochloric Acid (CAS 7647-01-0)

US. Massachusetts RTK - Substance List

Hydrochloric Acid (CAS 7647-01-0)
Oxalic Acid (CAS 144-62-7)
Phosphoric Acid (CAS 7664-38-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Hydrochloric Acid (CAS 7647-01-0)
Phosphoric Acid (CAS 7664-38-2)
Oxalic Acid (CAS 144-62-7)

US. Rhode Island RTK

Hydrochloric Acid (CAS 7647-01-0)
Phosphoric Acid (CAS 7664-38-2)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s)) Not determined

Consumer products (40 CFR 59, Subpt. C) Not regulated

State

Consumer products Not regulated

VOC content (CA) < 0.5 %

VOC content (OTC) < 0.5 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
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).

16. Other information, including date of preparation or last revision

Issue date 04-07-2015

Prepared by Allison Cho

Version # 01
Further information Not available.
HMIS® ratings Health: 3
Flammability: 0
Physical hazard: 1
Personal protection: D
NFPA ratings Health: 3
Flammability: 0
Instability: 1

NFPA ratings



Disclaimer

CRC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.