SAFETY DATA SHEET

1. Identification

Product identifier **On & Off Hull and Bottom Cleaner**

Other means of identification

Product Code No. 76204 (Item# 1006431)

Recommended use Cleaner for fiberglass hulls

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Canada Co.

Address 83 Galaxy Blvd
Unit 35 - 37
Toronto, ON M9W 5X6
Canada

Telephone

General Information 416-847-7750

24-Hour Emergency (CHEMTREC) 800-424-9300 (Canada)

Website www.crc-canada.ca

E-mail Support.CA@crcindustries.com

2. Hazard 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

Label elements

Signal word Danger

Hazard statement May be corrosive to metals. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention Keep only in original packaging. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. 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. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. 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. Absorb spillage to prevent material-damage.

Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in a corrosion resistant container with a resistant inner liner.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	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 - 80
hydrochloric acid		7647-01-0	15 - 40
phosphoric acid		7664-38-2	5 - 10
alcohols, C12-15, ethoxylated		68131-39-5	1 - 5
oxalic acid		144-62-7	1 - 5

The exact percentage (concentration) of composition has been withheld as a trade secret.
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Move to fresh air. If breathing is difficult, remove 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. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
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	During fire, gases hazardous to health may be formed. 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.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. 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. Should not be released into the environment. Prevent entry into waterways, sewer, basements or confined areas. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the 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. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. 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.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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/m3
	TWA	1 mg/m3
phosphoric acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
hydrochloric acid (CAS 7647-01-0)	Ceiling	3 mg/m3
		2 ppm
oxalic acid (CAS 144-62-7)	STEL	2 mg/m3
	TWA	1 mg/m3
phosphoric acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
hydrochloric acid (CAS 7647-01-0)	Ceiling	2 ppm
oxalic acid (CAS 144-62-7)	STEL	2 mg/m3
	TWA	1 mg/m3
phosphoric acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
hydrochloric acid (CAS 7647-01-0)	Ceiling	2 ppm
oxalic acid (CAS 144-62-7)	STEL	2 mg/m3

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
	TWA	1 mg/m3
phosphoric acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
hydrochloric acid (CAS 7647-01-0)	Ceiling	2 ppm
oxalic acid (CAS 144-62-7)	STEL	2 mg/m3
	TWA	1 mg/m3
phosphoric acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
hydrochloric acid (CAS 7647-01-0)	Ceiling	7.5 mg/m3
		5 ppm
oxalic acid (CAS 144-62-7)	STEL	2 mg/m3
	TWA	1 mg/m3
phosphoric acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
hydrochloric acid (CAS 7647-01-0)	Ceiling	2 ppm
oxalic acid (CAS 144-62-7)	15 minute	2 mg/m3
	8 hour	1 mg/m3
phosphoric acid (CAS 7664-38-2)	15 minute	3 mg/m3
	8 hour	1 mg/m3

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 should 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: Latex. Neoprene.

Other Wear appropriate chemical resistant clothing. Wear suitable protective clothing.

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 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.
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	0.00002 hPa estimated
Vapor density	Not available.
Relative density	1.16
Solubility(ies)	
Solubility (water)	Soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Percent volatile	64.3 % 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	Temperatures above 50 °C or below 10 °C. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as Hydrogen chloride and Phosgene. Do not mix with other chemicals. Contact with incompatible materials.
Incompatible materials	Bases. Strong oxidizing agents. Reducing agents. Metals. Amines. Bleach.
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.

Product	Species	Test Results
On & Off Hull and 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

Components	Species	Test Results
hydrochloric acid (CAS 7647-01-0)		
Acute		
Dermal		
LD50	Mouse	1449 mg/kg
phosphoric acid (CAS 7664-38-2)		
Acute		
Dermal		
LD50	Rabbit	2740 mg/kg

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Canada - Alberta OELs: Irritant

hydrochloric acid (CAS 7647-01-0)	Irritant
oxalic acid (CAS 144-62-7)	Irritant
phosphoric acid (CAS 7664-38-2)	Irritant

Respiratory sensitization Not a respiratory sensitizer.

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

ACGIH Carcinogens

hydrochloric acid (CAS 7647-01-0)	A4 Not classifiable as a human carcinogen.

Canada - Manitoba OELs: carcinogenicity

hydrochloric acid (CAS 7647-01-0)	Not classifiable as a human carcinogen.

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 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.

Components		Species	Test Results
alcohols, C12-15, ethoxylated (CAS 68131-39-5)			
Aquatic			
Acute			
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

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

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 instructions 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 of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number UN3264

UN proper shipping name CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid, phosphoric acid)

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group II

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

Special provisions 16

IATA

UN number UN3264

UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (hydrochloric acid, phosphoric acid)

Transport hazard class(es)

Class 8

Subsidiary risk -

Environmental hazards No.

Packing group II

ERG Code 8L

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

Other information

Passenger and cargo aircraft Allowed with restrictions.

Cargo aircraft only Allowed with restrictions.

IMDG

UN number	UN3264
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid, phosphoric acid)
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.

IATA; IMDG; TDG

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)

hydrochloric acid (CAS 7647-01-0)

Precursor Control Regulations

hydrochloric acid (CAS 7647-01-0) Class B

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

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)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	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).

16. Other information

Issue date 08-31-2016

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Revision information This document has undergone significant changes and should be reviewed in its entirety.