CRC.

SAFETY DATA SHEET

1. Identification

Product identifier QD® Electronic Cleaner

Other means of identification

Product code 05101, 05103, 05703

Recommended use Electronic cleaner

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** 800-521-3168

Assistance

 Customer Service
 800-272-4620

 24-Hour Emergency
 800-424-9300 (US)

(CHEMTREC) 703-527-3887 (International)
Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards Flammable aerosols Category 1

Gases under pressure Liquefied gas Skin corrosion/irritation Category 2

Specific target organ toxicity, single exposure Category 3 narcotic effects

Aspiration hazard Category 1

Hazardous to the aquatic environment,

long-term hazard

OSHA defined hazards Not classified.

Label elements

Environmental hazards

Health hazards



Signal word Danger

Hazard statement Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if

swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. Harmful

Category 3

to aquatic life with long lasting effects.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open

flame or other ignition source. Do not apply while equipment is energized. Pressurized container: Do not pierce or burn, even after use. Extinguish all flames, pilot lights and heaters. Vapors will accumulate readily and may ignite. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. 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. Avoid breathing mist or vapor. Wash thoroughly after

handling. Wear protective gloves. Avoid release to the environment.

Response If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash

with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for

breathing. Call a poison center/doctor if you feel unwell.

 Storage Store in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to

temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.

Disposal Dispose of contents/container in accordance with local/regional/national regulations.

Hazard(s) not otherwise classified (HNOC)

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

Supplemental information

96.1% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

lixtures			
Chemical name	Common name and synonyms	CAS number	%
Naphtha (petroleum), hydrotreated light		64742-49-0	70 - 80
1,1-Difluoroethane	HFC-152a	75-37-6	20 - 30
n-Hexane		110-54-3	3 - 5
2,2-Dimethylbutane		75-83-2	< 0.2
2-Methylpentane		107-83-5	< 0.2

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. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contactRinse with water. Get medical attention if irritation develops and persists.

Ingestion Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If

vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Aspiration may cause pulmonary edema and pneumonitis. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed

General information

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Contents under pressure. Pressurized container may rupture when exposed to heat or flame. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire-fighting equipment/instructions General fire hazards

In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.

Extremely flammable aerosol. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

2/9

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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. Remove all possible sources of ignition in the surrounding area. Many vapors are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. 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

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Stop the flow of material, if this is without risk. Prevent product from entering drains. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

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

7. Handling and storage

Precautions for safe handling

Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. 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. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Occupational exposure limits

Level 3 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate 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. Avoid spark promoters. These alone may be insufficient to remove static electricity. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

510 ppm

8. Exposure controls/personal protection

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Components Value Type PEL 1800 mg/m3 n-Hexane (CAS 110-54-3) 500 ppm **US. ACGIH Threshold Limit Values** Components Value **Type** 2,2-Dimethylbutane (CAS **STEL** 1000 ppm 75-83-2) **TWA** 500 ppm 2-Methylpentane (CAS **STEL** 1000 ppm 107-83-5) **TWA** 500 ppm n-Hexane (CAS 110-54-3) **TWA** 50 ppm **US. NIOSH: Pocket Guide to Chemical Hazards** Components Value **Type** 2,2-Dimethylbutane (CAS 1800 mg/m3 Ceiling 75-83-2)

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US. NIOSH: Pocket Guide to Cher Components	nical Hazards Type	Value	
<u> </u>	TWA	350 mg/m3	
		100 ppm	
2-Methylpentane (CAS 107-83-5)	Ceiling	1800 mg/m3	
,		510 ppm	
	TWA	350 mg/m3	
		100 ppm	
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3	

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
1,1-Difluoroethane (CAS 75-37-6)	TWA	2700 mg/m3
10 01 0)		1000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedio n, without hydrolysis	Urine	*

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

Exposure guidelines

US - California OELs: Skin designation

n-Hexane (CAS 110-54-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

n-Hexane (CAS 110-54-3)

Can be absorbed through the skin.

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.

50 ppm

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile. Polyvinyl chloride (PVC). Viton®.

Other Wear appropriate chemical resistant 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 organic vapor 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

When using do not 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.

9. Physical and chemical properties

Appearance

Physical state
Form
Color
Color
Colorless.

Odor
Alcoholic.

Odor threshold
PH
Not available.

Melting point/freezing point
Not available.

Initial boiling point and boiling

range

123 °F (50.6 °C) estimated

Flash point < 0 °F (< -17.8 °C) Tag Closed Cup

Evaporation rate Very fast.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower

(%)

1.1 % estimated

Flammability limit - upper

(%)

19 % estimated

Vapor pressure 175 mmHg (68 °F (20 °C))

Vapor density> 1 (air = 1)Relative density0.72 estimatedSolubility (water)Negligible.Partition coefficientNot available.

(n-octanol/water)

Auto-ignition temperature 489.2 °F (254 °C) estimated

Decomposition temperatureNot available.Viscosity (kinematic)Not available.Percent volatile100 % estimated

10. Stability and reactivity

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

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Heat, flames and sparks. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition

products

Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be

harmful.

Skin contact Causes skin irritation.

Eye contact Direct contact with eyes may cause temporary irritation.

Ingestion Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious

chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics

Headache. May cause drowsiness and dizziness. Nausea, vomiting. Aspiration may cause

pulmonary edema and pneumonitis. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects.

Product Species Test Results

QD® Electronic Cleaner

Acute Dermal

LD50 Rabbit

bbit 2696 mg/kg estimated

Inhalation

LC50 Rat 26392 ppm, 4 hours estimated

27 mg/l, 4 hours estimated

Material name: QD® Electronic Cleaner

Product Species Test Results

Oral

LD50 Rat 19828 mg/kg estimated

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

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye

irritation

Direct contact with eyes may cause temporary irritation.

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicityNo data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity Risk of cancer cannot be excluded with prolonged exposure.

Reproductive toxicityThis product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

May cause drowsiness and dizziness.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard May be fatal if swallowed and enters airways. If aspirated into lungs during swallowing or vomiting,

may cause chemical pneumonia, pulmonary injury or death.

Chronic effects Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

otoxicity	Harmful t	o aquatic life with long lasting ef	ffects.
Product		Species	Test Results
QD® Electronic Clean	er		
Aquatic			
Fish	LC50	Fish	1553.8115 mg/l, 96 hours estimated
Acute			
Crustacea	EC50	Daphnia	1754.8054 mg/l, 48 hours estimated
Components		Species	Test Results
n-Hexane (CAS 110-5	4-3)		
Aquatic			
Fish	LC50	Fathead minnow (Pimeph	nales promelas) 2.101 - 2.981 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

Partition coefficient n-octanol / water (log Kow)

 1,1-Difluoroethane
 0.75

 2,2-Dimethylbutane
 3.82

 2-Methylpentane
 3.74

 n-Hexane
 3.9

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

Hazardous waste code

Disposal of waste from residues / unused productsIf discarded, this product is considered a RCRA ignitable waste, D001. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose in accordance with all applicable regulations.

D001: Waste Flammable material with a flash point <140 F

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.

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14. Transport information

DOT

UN number UN1950

UN proper shipping name Aerosols, flammable, Limited Quantity, MARINE POLLUTANT (Hexanes)

Transport hazard class(es)

Class 2.1 Subsidiary risk 2.1 Label(s)

Not applicable. Packing group

Environmental hazards

Yes Marine pollutant

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

Special provisions 306 Packaging exceptions None Packaging non bulk None Packaging bulk

IATA

UN1950 **UN number**

Aerosols, flammable, Limited Quantity **UN proper shipping name**

Transport hazard class(es)

2.1 Class Subsidiary risk

Packing group Not applicable.

Environmental hazards Yes. **ERG Code** 10L

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

Other information

Passenger and cargo

aircraft

Allowed.

Allowed. Cargo aircraft only

IMDG

UN number UN1950

AEROSOLS, LIMITED QUANTITY, MARINE POLLUTANT **UN proper shipping name**

Transport hazard class(es)

2 Class Subsidiary risk

Not applicable. Packing group

Environmental hazards

Marine pollutant Yes

Not available.

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.

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

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

n-Hexane (CAS 110-54-3)

CERCLA Hazardous Substance List (40 CFR 302.4)

n-Hexane (CAS 110-54-3) Listed.

CERCLA Hazardous Substances: Reportable quantity

5000 LBS n-Hexane (CAS 110-54-3)

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.

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

n-Hexane (CAS 110-54-3)

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

1,1-Difluoroethane (CAS 75-37-6)

Safe Drinking Water Act

Not regulated.

(SDWA)

Food and Drug

Not regulated.

Administration (FDA)

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Immediate Hazard - Yes **Section 311/312 Hazard categories** Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No

No SARA 302 Extremely

hazardous substance

US state regulations

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

Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)

n-Hexane (CAS 110-54-3)

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

1,1-Difluoroethane (CAS 75-37-6)

n-Hexane (CAS 110-54-3) Ethanol (CAS 64-17-5)

US. Massachusetts RTK - Substance List

1,1-Difluoroethane (CAS 75-37-6)

n-Hexane (CAS 110-54-3)

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

Isopropyl alcohol (CAS 67-63-0) Methanol (CAS 67-56-1)

n-Hexane (CAS 110-54-3)

US. Rhode Island RTK

1,1-Difluoroethane (CAS 75-37-6)

n-Hexane (CAS 110-54-3)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Methyl isobutyl ketone (CAS 108-10-1) Listed: November 4, 2011

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Methanol (CAS 67-56-1) Listed: March 16, 2012 Methyl isobutyl ketone (CAS 108-10-1) Listed: March 28, 2014

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR

51.100(s))

Consumer products Not regulated

(40 CFR 59, Subpt. C)

Consumer products This product is regulated as an Electronic Cleaner. This product is compliant for use in all 50

states.

VOC content (CA) 75 % 75 % VOC content (OTC)

SDS US

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)	Yes
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

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

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

Issue date 05-07-2015
Prepared by Allison Cho

Version # 01

Further information CRC # 985

HMIS® ratings Health: 1
Flammability: 4
Physical bazard

Physical hazard: 0
Personal protection: B

NFPA ratings Health: 1

Flammability: 4 Instability: 0

NFPA ratings



Disclaimer

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.

Material name: QD® Electronic Cleaner

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).