

Circuit Wash

SDS Number: A208J

Revision Date: 10/16/2017

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1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

Distributed By: Wechem, Inc
5734 Susitna Dr
Harahan, LA 70123

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Product Name: Circuit Wash
Revision Date: 10/16/2017
SDS Number: A208J
Product Code: A280
Product Use: Electronic Contact Cleaner and Degreaser

Emergency Telephone Number:
INFOTRAC
1-800-535-5053

2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Acute toxicity, 4 Inhalation
Physical, Gases Under Pressure, Liquefied Gas
Environmental, Hazards to the aquatic environment - Chronic, 3

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **WARNING**

GHS Hazard Pictograms:



GHS Hazard Statements:

H332 - Harmful if inhaled
H280 - Contains gas under pressure; may explode if heated
H412 - Harmful to aquatic life with long lasting effects

GHS Precautionary Statements:

P260 - Avoid breathing gas.
P271 - Use only outdoors or in a well-ventilated area.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P410+403 - Protect from sunlight. Store in a well ventilated place.
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

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Route of Entry: Ingestion, Inhalation, skin absorption, eye
Target Organs: N/A
Inhalation: Harmful if inhaled.
Skin Contact: No adverse effects due to skin contact.
Eye Contact: Direct contact with eyes may cause temporary irritation.
Ingestion: Expected to be a low ingestion hazard.

3 COMPOSITION/INFORMATION OF INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
156-60-5	40-60%	1,2-Dichloroethylene
811-97-2	20-40%	1,1,1,2-Tetrafluoroethane
163702-07-6	2.5-10%	Methyl Nonafluorobutyl Ether
163702-08-7	2.5-10%	Methyl Nonafluoroisobutyl Ether
Other components below reportable levels 10-20%		

4 FIRST AID MEASURES

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin Contact: Wash off with soap and water. Get medical attention if irritation develops or persists.
Eye Contact: Rinse with water. Get medical attention if irritation develops or persists.
Ingestion: Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects: Direct contact with eyes may cause temporary irritation.

Indication of immediated medical attention and special treatment: Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involve, and take precautions to protect themselves.

5 FIRE FIGHTING MEASURES

Flammability: Not available
Flash Point: Not Flammable
Autoignition Temp: 744.8 F (396C) estimated
 Extinguishing media: Water fog. Dry chemical powder. Carbon dioxide (CO2).

During fire, gases hazardous to health may be formed.

Special Fire fighting procedures: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special Fire fighting procedures:
 In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. 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.

Cool containers exposed to flames with water until well after the fire is out.

Contents under pressure. Pressurized container may explode when exposed to heat or flame.

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ACCIDENTAL RELEASE MEASURES

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases 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 gas. 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. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

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 cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.

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.

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HANDLING AND STORAGE

Handling Precautions:

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. Ground and bond containers when transferring material. Close valve after each use and when empty. Do not re-use empty containers. Avoid breathing gas. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Storage Requirements:

Level 1 Aerosol.

Contents under pressure. Do not expose to heat or store at temperatures above 120 F/49 C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a well-ventilated place. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Store away from incompatible materials (see Section 10 of the SDS).

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EXPOSURE CONTROLS/PERSONAL PROTECTION

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.

Personal Protective Equipment:

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

Protective gloves: Appropriate chemical resistant gloves.

Eye protection: Safety glasses with side shields/ goggles are recommended.

Wear appropriate chemical resistant clothing.

Wear appropriate thermal protective clothing, when necessary.

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.

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1,2-Dichloroethylene cas#:(156-60-5) [40-60%]

Components with workplace control parameters

TWA 200 ppm USA. ACGIH Threshold Limit Values (TLV)
Central Nervous System impairment Eye irritation

1,1,1,2- Tetraflouroethane cas#:(811-97-2) [20-40%]

Components with workplace control parameters

TWA 1,000 ppm USA. Workplace Environmental Exposure Levels (WEEL)

Methyl Nonafluorobutyl Ether (CAS 163702-07-6)

TWA 750 ppm USA. Workplace Environmental Exposure Levels (WEEL)

Methyl Nonafluoroisobutyl Ether (CAS 163702-08-7)

TWA 750 ppm USA. Workplace Environmental Exposure Levels (WEEL)

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Aerosol	Odor:	Not available
Physical State:	Gas.	Solubility:	Not available
Spec Grav./Density:	1.20 estimated	Flash Point:	Not Flammable
Boiling Point:	188.96 F (87.2 C) estimated	VOC:	70% wt
pH:	Not available	Auto-Ignition Temp:	Not available
		UFL/LFL:	13.7% / 6.7%

10 STABILITY AND REACTIVITY

Chemical Stability:	Stable and non-reactive under normal conditions of use, storage and transport.
Conditions to Avoid:	Heat. Contact with incompatible materials.
Materials to Avoid:	Strong oxidizing agents.
Hazardous Decomposition:	None known.
Hazardous Polymerization:	Does not occur.

11 TOXICOLOGICAL INFORMATION

- Ingestion Expected to be a low ingestion hazard.
- Inhalation Harmful if inhaled.
- Skin Contact No adverse effects due to skin contact are expected.
- Eye Contact Direct contact with eyes may cause temporary irritation.

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Acute toxicity: Harmful if inhaled.

Direct contact with eyes may cause temporary irritation.

This product is not expected to cause skin sensitization.

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

This product is not expected to cause reproductive or developmental effects.

Product is not likely to be an aspiration hazard due to the form of the product.

Chronic effects: Prolonged inhalation may be harmful.

1,2-Dichloroethylene cas#:(156-60-5) [40-60%]

Information on toxicological effects

Acute toxicity:

Oral LD50 LD50 Oral - rat - 1,235 mg/kg

LD50 Oral - mouse - 2,122 mg/kg Remarks: Behavioral:Altered sleep time (including change in righting reflex).

Behavioral:Somnolence (general depressed activity). Behavioral:Ataxia.

Inhalation LC50 LC50 Inhalation - rat - 24100 ppm Remarks: Behavioral:Somnolence (general depressed activity).

Dermal LD50 LD50 Dermal - rabbit - > 5,000 mg/kg Remarks: Prolonged skin contact may cause skin irritation and/or dermatitis. Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

Other information on acute toxicity no data available

Skin corrosion/irritation: Skin - rabbit - Skin irritation - 24 h

Serious eye damage/eye irritation: Eyes - rabbit - Eye irritation

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

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.

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

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.

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.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
no data available

Aspiration hazard

Potential health effects: Inhalation May be harmful if inhaled. Causes respiratory tract irritation. Ingestion Harmful if swallowed. Skin Harmful if absorbed through skin. Causes skin irritation. Eyes Causes eye irritation.

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Signs and Symptoms of Exposure: prolonged or repeated exposure can cause: , narcosis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: no data available

Additional Information:

RTECS: KV9400000

1,1,1,2- Tetraflouroethane cas#:(811-97-2) [20-40%]

Information on toxicological effects

Acute toxicity: no data available

LC50 Inhalation - rat - 4 h - 1,500,000 mg/m3

Dermal: no data available

Skin corrosion/irritation: Skin - rabbit Result: Mild skin irritation - 24 h

Serious eye damage/eye irritation: Eyes - rabbit Result: Mild eye irritation

Respiratory or skin sensitisation: - guinea pig Result: Does not cause skin sensitisation.

Germ cell mutagenicity: Ames test S. typhimurium Result: negative

OECD Test Guideline 486 rat - male DNA repair DNA damage

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.

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

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.

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.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: KI8842500

May be harmful., Prolonged or repeated exposure to skin causes defatting and dermatitis.

Stomach - Irregularities - Based on Human Evidence

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ECOLOGICAL INFORMATION

Ecotoxicity: Harmful to aquatic life with long lasting effects.

No data available on persistence and degradability of this product.
No data available on the bioaccumulative potential of this product.

Partition coefficient n-octanol / water (log Kow)

1,1,1,2- Tetraflouroethane	1.274
1,2-Dichloroethylene	2.06

No data on the mobility in soil.

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

1,2-Dichloroethylene cas#:(156-60-5) [40-60%]

Information on ecological effects

Toxicity:

Toxicity to daphnia EC50 - Daphnia magna (Water flea) - 220.00 mg/l - 48 h.
and other aquatic invertebrates

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

1,1,1,2- Tetraflouroethane cas#:(811-97-2) [20-40%]

Information on ecological effects

Toxicity:

Toxicity to fish semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - 450 mg/l - 96 h.
(Directive 67/548/EEC, Annex V, C.1.)

Toxicity to daphnia and static test EC50 - Daphnia magna (Water flea) - 980 mg/l - 48 h.
other aquatic (Directive 67/548/EEC, Annex V, C.2.) invertebrates

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Toxicity to bacteria Growth inhibition EC50 - Pseudomonas putida - > 730 mg/l - 6 h.

Persistence and degradability: Biodegradability aerobic - Exposure time 28 d Result: 3 % - Not readily biodegradable. (OECD Test Guideline 301D)

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

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DISPOSAL CONSIDERATIONS

Collect and reclaim or dispose in sealed containers at licensed waste disposalsite. Consult authorities before disposal. 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.

Dispose in accordance with all applicable regulations.

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.
1,2-Dichloroethylene (156-60-5) U079

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).

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.

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TRANSPORT INFORMATION

DOT

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable (each not exceeding 1 L capacity)
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	Not applicable
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity until 12/31/2020, the "Consumer Commodity-ORM-D" marking may still be used in place of the new

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limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking on both and may be displayed concurrently.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	Not applicable
Environmental hazards	No
	2L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo	Allowed with restrictions.
Aircraft	
Cargo aircraft only	Allowed with restrictions.
Packaging exceptions	LTD QTY

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	None
Packing group	Not applicable
Environmental hazards	
Marine pollutant	No
EmS	Not available
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging exceptions	LTD QTY
Transport in bulk according to AnnexII of MARPOL 73/78 and the IBC Code	Not applicable.

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REGULATORY INFORMATION

Component (CAS#) [%] - CODES

1,2-Dichloroethylene (156-60-5) [40-60%] CERCLA, MASS, PA, PRIPOL, TOXICRCRA, TSCA, TXHWL

1,1,1,2-Tetrafluoroethane (811-97-2) [20-40%] GADSL, TSCA

Methyl Nonafluorobutyl Ether (163702-07-6) [2.5-10%] TSCA

Methyl Nonafluorisobutyl Ether (163702-08-7) [2.5-10%] TSCA

Regulatory CODE Descriptions

CERCLA = Superfund clean up substance
 MASS = MA Massachusetts Hazardous Substances List
 PA = PA Right-To-Know List of Hazardous Substances

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PRIPOL = Clean Water Act Priority Pollutants
TOXICRCRA = RCRA Toxic Hazardous Wastes (U-List)
TSCA = Toxic Substances Control Act
TXHWL = TX Hazardous Waste List
GADSL = Global Automotive Declarable Substance List (GADSL)

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OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

N/A = Not available N/D = Not determined