

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 08/13/2014 : Version:

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Trade name : JOHNSEN'S ELECTRONIC CLEANER 10 OZ.

Product code : 4600

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Electronic Cleaner

1.3. Details of the supplier of the safety data sheet

Technical Chemical Company P.O. BOX 139 Cleburne, Texas 76033 T 817-645-6088

1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Aerosol 1 H222
Compressed gas H280
Muta. 1B H340
Carc. 1B H350
Repr. 2 H361
STOT SE 1 H370
STOT RE 2 H373

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



 \Diamond



GHS02 GHS04

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H222 - Extremely flammable aerosol

H280 - Contains gas under pressure; may explode if heated

H340 - May cause genetic defects

H350 - May cause cancer

H361 - Suspected of damaging fertility or the unborn child

H370 - Causes damage to organs

H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) : P201 - Obtain special instructions

P202 - Do not handle until all safety precautions have been read and understood P210 - Keep away from heat,sparks,open flames,hot surfaces. - No smoking

P211 - Do not spray on an open flame or other ignition source P251 - Pressurized container: Do not pierce or burn, even after use

P260 - Do not breathe dust,fumes,gas,mist,vapor spray P264 - Wash affected areas thoroughly after handling P270 - Do not eat, drink or smoke when using this product

P280 - Wear protective gloves, protective clothing, eye protection, face protection

P307+P311 - If exposed: Call a poison center/doctor

P308+P313 - If exposed or concerned: Get medical advice/attention

P314 - Get medical advice/attention if you feel unwell P321 - Specific treatment: See section 4.1 on this label

P405 - Store locked up

P410+P403 - Protect from sunlight. Store in a well-ventilated place

P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with

local, regional, national, international regulations.

2.3. Other hazards

Other hazards not contributing to the : Contains gas under pressure; may explode if heated.

20/08/2014 EN (English US) 1/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

classification

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Naphtha (petroleum), hydrotreated light	(CAS No) 64742-49-0	57.6 - 72	Muta. 1B, H340 Carc. 1B, H350 Asp. Tox. 1, H304
1,1-Difluoroethane, liquefied, under pressure	(CAS No) 75-37-6	10 - 30	Liquefied gas, H280
n-hexane	(CAS No) 110-54-3	0.72 - 3.6	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Methanol	(CAS No) 67-56-1	1 - 5	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:dust,mist), H331 STOT SE 1, H370

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTER or doctor/physician.

First-aid measures after inhalation : Cough. Remove to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by

warm water rinse.

First-aid measures after eye contact

: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Direct contact with the eyes is likely to be irritating. Obtain medical attention

if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Suspected of damaging fertility or the unborn child. May cause genetic defects. May cause

cancer. Causes damage to organs.

Symptoms/injuries after inhalation : Shortness of breath.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable gas. Extremely flammable aerosol.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns

and injuries.

5.3. Advice for firefighters

Firefighting instructions : Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition

sources if safe to do so. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. DO NOT

fight fire when fire reaches explosives. Evacuate area.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Aerosol level 3

20/08/2014 EN (English US) 2/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

: Eliminate every possible source of ignition. No naked lights. No smoking. Isolate from fire, if possible, without unnecessary risk. Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust,fume,gas,mist,vapor spray.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Dam up the liquid spill.

Methods for cleaning up : Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed

: Flammable gas. Hazardous waste due to potential risk of explosion. Pressurized container: Do not pierce or burn, even after use.

Precautions for safe handling

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not spray on an open flame or other ignition source. Obtain special instructions. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so. Avoid breathing dust,fume,gas,mist,vapor spray. Do not breathe dust,fumes,gas,mist,vapor spray.

Hygiene measures : Wash affected areas thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures

: Proper grounding procedures to avoid static electricity should be followed.

Storage conditions

: Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use. Do not expose to temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place.

: Strong bases. Strong acids.

Incompatible products Incompatible materials

: Sources of ignition. Direct sunlight. Heat sources.

Storage area : Store in a well-ventilated place.

7.3. Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methanol (67-56-1)		
USA ACGIH	ACGIH TWA (mg/m³)	260 mg/m³
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (mg/m³)	325 mg/m³
USA ACGIH	ACGIH STEL (ppm)	250 ppm
USA ACGIH	ACGIH Ceiling (ppm)	1000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm

8.2. Exposure controls

Appropriate engineering controls : Local exhaust venilation, vent hoods.

20/08/2014 EN (English US) 3/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.





Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.
Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is

recommended.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Gas

Appearance : Clear, colorless liquid.

Color : Colorless.

Odor : characteristic.

Odor threshold : No data available pH : No data available Relative evaporation rate (butyl acetate=1) : No data available

Melting point : -62 °C Lowest Component

Freezing point : No data available

Boiling point : 37 °C Lowest Component Flash point : < -18 °C Lowest Component

Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available

Relative density : 0.69

Solubility : Insoluble in water.
Log Pow : No data available
Log Kow : No data available

Viscosity, kinematic : 0.83 cSt

Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Explosive limits : No data available

9.2. Other information

VOC content : 75 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Extremely flammable gas. Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Open flame. Overheating.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

20/08/2014 EN (English US) 4/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity : Not classified

1,1-Difluoroethane, liquefied, under pressure (75-37-6)		
LC50 inhalation rat (mg/l)	176 mg/l/4h (Rat; Literature study)	
LC50 inhalation rat (ppm)	> 437500 ppm/4h Mortality in 2/6 at 43.75% and 1/6 at 38.3%. At ≥ 17.52% lethargy, laboured breathing, reduced responsiveness to sound were observed. At 6.64% only hyperaemia and shallow breathing were observed.	
Methanol (67-56-1)		
LD50 oral rat	>= 2528 mg/kg body weight application as 50% aqueous solution	
LD50 dermal rabbit	17100 mg/kg corresponding to 20 ml/kg bw according to the authors	
LC50 inhalation rat (mg/l)	128.2 mg/l/4h Air	
Skin corrosion/irritation	: Not classified	
Serious eye damage/irritation	: Not classified	
Respiratory or skin sensitization	: Not classified	
Germ cell mutagenicity	: May cause genetic defects.Based on available data, the classification criteria are not met	
Carcinogenicity	: May cause cancer.	
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.Based on available data, the classification criteria are not met	
Specific target organ toxicity (single exposure)	: Causes damage to organs.	
Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.Based on available data, the classification criteria are not met May cause damage to organs through prolonged or repeated exposure	
Aspiration hazard	: Not classifiedBased on available data, the classification criteria are not met	
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.	

SECTION 12: Ecological information

12.1. Toxicity

Symptoms/injuries after inhalation

Methanol (67-56-1)	
LC50 fish 1	15400 mg/l (96 h; Lepomis macrochirus; Lethal)
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna; Lethal)
LC50 fish 2	10800 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	24500 mg/l (48 h; Daphnia magna)
Threshold limit other aquatic organisms 1	6600 mg/l (16 h; Pseudomonas putida)
Threshold limit algae 1	530 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2	8000 mg/l (168 h; Scenedesmus quadricauda)

: Shortness of breath.

Persistence and degradability

Threshold limit algae 2	8000 mg/l (168 h; Scenedesmus quadricauda)		
2.2. Persistence and degradability			
JOHNSEN'S ELECTRONIC CLEANER 10 OZ.	JOHNSEN'S ELECTRONIC CLEANER 10 OZ.		
Persistence and degradability	Not established.		
1,1-Difluoroethane, liquefied, under pressure	(75-37-6)		
Persistence and degradability	Biodegradability in water: no data available.		
Methanol (67-56-1)			
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.		
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O ₂ /g substance		
Chemical oxygen demand (COD)	1.42 g O ₂ /g substance		
ThOD	1.5 g O ₂ /g substance		
BOD (% of ThOD)	0.8 % ThOD		
n-hexane (110-54-3)			
Persistence and degradability	May cause long-term adverse effects in the environment.		
Naphtha (petroleum), hydrotreated light (64742-49-0)			

20/08/2014 EN (English US) 5/9

Not established.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

1	23	Ri	naccum	ulative	notential

JOHNSEN'S ELECTRONIC CLEANER 10 OZ.	
Bioaccumulative potential	Not established.

1,1-Difluoroethane, liquefied, under pressure (75-37-6)

Log Fow	0.75 (Experimental value)		
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).		

Methanol (67-56-1)	
BCF fish 1	< 10 (Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500)

n-hexane (110-54-3)	
Bioaccumulative potential	Not established.

Naphtha (petroleum), hydrotreated light (64742-49-0)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

Methanol (67-56-1)	
Surface tension	0.023 N/m (20 °C)

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Container under pressure. Do not drill or burn even after use. Dispose of contents/container to appropriate waste

disposal facility, in accordance with local, regional, national, international regulations.

Additional information : Flammable vapors may accumulate in the container.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): UN1950, Aerosols, 2.1, Limited Quantity
ICAO/IATA (air): UN1950, Aerosols, 2.1, Limited Quantity
IMO/IMDG (water): UN1950, Aerosols, 2.1, Limited Quantity

Special Provisions: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

14.2. UN proper shipping name

DOT Proper Shipping Name : Aerosols

flammable, (each not exceeding 1 L capacity)

: 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Department of Transportation (DOT) Hazard

Classes

Hazard labels (DOT) : 2.1 - Flammable gas



DOT Special Provisions (49 CFR 172.102) : N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

DOT Packaging Exceptions (49 CFR 173.xxx) : 306

DOT Packaging Non Bulk (49 CFR 173.xxx) : None

DOT Packaging Bulk (49 CFR 173.xxx) : None

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

20/08/2014 EN (English US) 6/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a

passenger vessel.

DOT Vessel Stowage Other : 48 - Stow "away from" sources of heat,87 - Stow "separated from" Class 1 (explosives) except

Division 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 75 kg

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 150 kg

CFR 175.75)

SECTION 15: Regulatory information

15.1. US Federal regulations

JOHNSEN'S ELECTRONIC CLEANER 10 O	Z.
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
	Fire hazard
	Immediate (acute) health hazard

1,1-Difluoroethane, liquefied, under pressure (75-37-6)

SARA Section 311/312 Hazard Classes

Fire hazard
Sudden release of pressure hazard
Immediate (acute) health hazard

Methanol (67-56-1)

Listed on United States SARA Section 313 Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes

Immediate (acute) health hazard
Delayed (chronic) health hazard
Fire hazard

15.2. International regulations

CANADA

JOHNSEN'S ELECTRONIC CLEANER 10 OZ.	10 OZ.		
WHMIS Classification	Class B Division 5 - Flammable Aerosol Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects		

1,1-Difluoroethane, liquefied, under pressure (75-37-6)	
WHMIS Classification	Class A - Compressed Gas Class B Division 5 - Flammable Aerosol

Methanol (67-56-1)	7-56-1)	
WHMIS Classification	Class B Division 2 - Flammable Liquid	
	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects	
	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects	
	Class D Division 2 Subdivision B - Toxic material causing other toxic effects	

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.2; R45 Muta.Cat.2; R46 Repr.Cat.3; R62 F+; R12 Xn; R20/21/22 Xn; R68/20/21/22

Full text of R-phrases: see section 16

15.2.2. National regulations

No additional information available

15.3. US State regulations

20/08/2014 EN (English US) 7/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

1,1-Difluoroethane, liquefied, under pressure (75-37-6)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

SECTION 16: Other information

Indication of changes : Revision - See : *.

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1B	Carcinogenicity Category 1B
Compressed gas	Gases under pressure Compressed gas
Flam. Aerosol 1	Flammable aerosol Category 1
Flam. Liq. 2	Flammable liquids Category 2
Liquefied gas	Gases under pressure Liquefied gas
Muta. 1B	Germ cell mutagenicity Category 1B
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H222	Extremely flammable aerosol
H225	Highly flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H301	Toxic if swallowed
H304	May be fatal if swallowed and enters airways
H311	Toxic in contact with skin
H315	Causes skin irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child
H370	Causes damage to organs
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt

medical attention is given.

NFPA fire hazard : 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn

readily.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions,

and are not reactive with water.



Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 4 Severe Hazard Physical : 1 Slight Hazard

Personal Protection : B

SDS US (GHS HazCom 2012) - Technical Chemical



20/08/2014 EN (English US) 8/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

20/08/2014 EN (English US) 9/9