

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Printing date 02/17/2015

Reviewed on 02/17/2015

1 Identification

- **Product identifier**
- **Trade name: FLUOSOLV ELECTRIC CLEAN-AID**
- **Product number: nc786 -134**
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Product description** Aerosol
- **Application of the substance / the mixture** Aerosol and cold-cleaning wipe solvent
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
NuGeneration Technologies, LLC (dba NuGenTec)
1155 Park Ave, Emeryville, CA 94608
fluosolv@nugentec.com
For Product Info call 1-(800) 409-3142
www.fluosolv.com
www.nugentec.com/fluosolv
- **Emergency telephone number:**
INFOTRAC day or night - 1-800-535-5053
Outside of continental U.S. call collect 1-352-323-3500

2 Hazard(s) identification

- **Classification of the substance or mixture**
The product does not need classification according to OSHA HazCom Standard 29 CFR paragraph (d) of §1910.1200(g) and GHS Rev 03.
- **Label elements**
- **GHS label elements** Non-Regulated Material
- **Hazard pictograms** Non-Regulated Material
- **Signal word** Non-Regulated Material
- **Hazard statements** Non-Regulated Material
- **Unknown acute toxicity:**
55 percent of the mixture consists of ingredient(s) of unknown toxicity.
- **Classification system: NFPA/HMIS Definitions:** 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Other hazards** None known

3 Composition/information on ingredients

406-58-6	1,1,1,3,3-pentafluorobutane	⚠ Acute Tox. 4, H302; H227	5-10%
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- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous Components:**

CAS: 138495-42-8	Decafluoro Pentane Aquatic Chronic 3, H412	<35%
CAS: 287-92-3 RTECS: GY 2390000	cyclopentane ⚠ Flam. Liq. 2, H225; Aquatic Chronic 3, H412	<15%
CAS: 811-97-2	1,1,1,2-Tetrafluoroethane (HFC-134a) ⚠ Press. Gas, H281; ⚠ Acute Tox. 4, H332	<15%
CAS: 163702-07-6	Methyl nonafluorobutyl ether Aquatic Chronic 3, H412	<5%
CAS: 163702-08-7	Methyl nonafluoroisobutyl ether Aquatic Chronic 3, H412	<5%
CAS: 163702-05-4	Ethyl nonafluorobutyl ether Aquatic Chronic 3, H412	<5%
CAS: 163702-06-5	Ethyl nonafluoroisobutyl ether Aquatic Chronic 3, H412	<5%
CAS: 124-38-9 RTECS: FF 6400000	Carbon Dioxide ⚠ Press. Gas, H280; Simple Asphyxiant	<4%
CAS: 67-63-0 RTECS: NT 8050000	Isopropyl alcohol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	<1%
CAS: 67-64-1 RTECS: AL 3150000	acetone ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	<1%

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Induce vomiting and call for medical help.
- **Information for doctor:** Treat symptomatically and supportively. No specific antidote.
- **Most important symptoms and effects, both acute and delayed** Dizziness
- **Indication of any immediate medical attention and special treatment needed**
Do not administer preparations of the adrenalin-ephedrine-group.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
Closed containers may explode when exposed to extreme heat.

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During heating or in case of fire poisonous gases are produced.

- **Advice for firefighters**

- **Protective equipment:**

Mouth respiratory protective device.

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (ie. sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

Dispose of the collected material according to regulations.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

- **Information about protection against explosions and fires:**

Do not spray on a naked flame or any incandescent material.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep protective respiratory device available.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** *Store in a cool location.*

- **Information about storage in one common storage facility:** *Not required.*

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

- **Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** *No further data; see section 7.*

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· **Control parameters**

· **Components with occupational exposure limits:**

287-92-3 cyclopentane

REL Long-term value: 1720 mg/m³, 600 ppm

TLV Long-term value: 1720 mg/m³, 600 ppm

811-97-2 1,1,1,2-Tetrafluoroethane (HFC-134a)

WEEL Long-term value: 1000 ppm

124-38-9 Carbon Dioxide

PEL Long-term value: 9000 mg/m³, 5000 ppm

REL Short-term value: 54.000 mg/m³, 30.000 ppm

Long-term value: 9000 mg/m³, 5000 ppm

TLV Short-term value: 54.000 mg/m³, 30.000 ppm

Long-term value: 9000 mg/m³, 5000 ppm

67-63-0 Isopropyl alcohol

PEL Long-term value: 980 mg/m³, 400 ppm

REL Short-term value: 1225 mg/m³, 500 ppm

Long-term value: 980 mg/m³, 400 ppm

TLV Short-term value: 984 mg/m³, 400 ppm

Long-term value: 492 mg/m³, 200 ppm

BEI

67-64-1 acetone

PEL Long-term value: 2400 mg/m³, 1000 ppm

REL Long-term value: 590 mg/m³, 250 ppm

TLV Short-term value: (1782) NIC-1187 mg/m³, (750) NIC-500 ppm

Long-term value: (1188) NIC-594 mg/m³, (500) NIC-250 ppm

BEI

· **Ingredients with biological limit values:**

67-63-0 Isopropyl alcohol

BEI 40 mg/L

urine

end of shift at end of workweek

Acetone (background, nonspecific)

67-64-1 acetone

BEI 50 mg/L

urine

end of shift

Acetone (nonspecific)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

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- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure, use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Select glove material based on penetration times, rates of diffusion and degradation.

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.
- **Eye protection:** Safety glasses

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Aerosol
Color:	Colorless
· Odor:	Weak, characteristic
· Odor threshold:	Not determined.

- **pH-value:** not applicable

- **Change in condition**

Melting point/Melting range:	--
Boiling point/Boiling range:	-78 °C (-108 °F) (Aerosol)

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 380 °C (716 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower:	none
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Upper:	none
· Vapor pressure @ 20 °C (68 °F):	5716 hPa (4287 mm Hg) (Aerosol)
· Density @ 20 °C (68 °F):	1.3 g/cm ³ (10.849 lbs/gal) (Liquid)
· Relative density	Not determined.
· Vapour density @ 20 °C (68 °F)	3.6 (air=1) (heavier than air)
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water @ 20 °C (68 °F):	Not miscible
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	18.0 %
VOC content:	17.0 % (Empirically Calculated)
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** Stable under normal conditions
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Heat, flame and ignition sources.
- **Incompatible materials:**
Avoid contact with Alkali metals and Alkaline earth metals, powdered metal salts, strong bases
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritating effect.
- **on the eye:** No irritating effect.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
- **Carcinogenic categories**

 · **IARC (International Agency for Research on Cancer)**

67-63-0 Isopropyl alcohol

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· **NTP (National Toxicology Program)**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Contact manufacturer for recycling information.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

Not classified as dangerous in the meaning of transport regulations.

DOT only - when shipped in packages with > 1470 lbs., use UN3082

· **DOT, ADR, IMDG, IATA**

UN1950

· **ADN**

Non-Regulated Material

· **UN proper shipping name**

· **DOT, ADN**

Non-Regulated Material

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<ul style="list-style-type: none"> · IMDG · IATA 	<p>AEROSOLS, AEROSOLS, non-flammable</p>
<ul style="list-style-type: none"> · Transport hazard class(es) 	<p>Not classified as dangerous in the meaning of transport regulations. DOT only - when shipped in packages with > 1470 lbs., use: UN3082, Environmentally Hazardous Substance,</p>
<ul style="list-style-type: none"> · DOT 	
 <p>Consumer Commodity</p>	
<ul style="list-style-type: none"> · Class · Label 	<p>2.2 2.2</p>
<ul style="list-style-type: none"> · ADR · Class · Label · ADN/R Class: 	<p>2 5A Gases Gases 2.2 Non-Regulated Material</p>
<ul style="list-style-type: none"> · Packing group · DOT, ADR · IMDG, IATA 	<p>N/A Non-Regulated Material III</p>
<ul style="list-style-type: none"> · Environmental hazards: 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Special precautions for user · EMS Number: 	<p>Warning: Gases F-D,S-U</p>
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations 	<p>On passenger aircraft/rail: 75 kg On cargo aircraft only: 150 kg</p>
<ul style="list-style-type: none"> · ADR · Excepted quantities (EQ) 	<p>Code: E0 Not permitted as Excepted Quantity</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1L Code: E0 Not permitted as Excepted Quantity</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN1950 Aerosol, 2.2</p>

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15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

67-63-0 Isopropyl alcohol

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

67-64-1 acetone

I

· **TLV (Threshold Limit Value established by ACGIH)**

67-63-0 Isopropyl alcohol

A4

67-64-1 acetone

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

- **GHS label elements** Non-Regulated Material
- **Hazard pictograms** Non-Regulated Material
- **Signal word** Non-Regulated Material
- **Hazard statements** Non-Regulated Material

· **National regulations:**

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

· **State Right to Know**

All ingredients are listed.

· **Other regulations, limitations and prohibitive regulations**

CERCLA Reportable Quantity: 1470 lbs, based on the percentage composition of this chemical in the product.:

trans-Dichloroethylene

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· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision** 02/17/2015 / 21

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMSI: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

Press. Gas: Gases under pressure: Compressed gas

Press. Gas: Gases under pressure: Refrigerated liquefied gas

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Acute Tox. 4: Acute toxicity, Hazard Category 4

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

· *** Data compared to the previous version altered.**

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