

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hi Tech Air + Vacuum Power # 2016

Print date: 12.02.2014

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

1.1. Product identifier

Hi Tech Air Power / Hi Tech Air + Vacuum Power - Green Clean Art. Nr.: G-2016

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

Use of the substance/mixture

Pressurized Air Spray

1.3. Details of the supplier of the safety data sheet

Company name: Green Clean GmbH
Street: Trimmelkammer Str. 16
Place: A-5120 St. Pantaleon
Telephone: +43 (0)6277 – 62304 Fax: +43 (0)6277 -62304 - 10
e-mail: office@green-clean.at
Contact person: :
e-mail:
Internet: www.green-clean.at
Responsible Department:

1.4. Emergency telephone number: +49-(0)30/19240
Advice Center for Poisoning Symptoms, Berlin

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

This mixture is not classified as dangerous according to Directive 1999/45/EC.

2.2. Label elements

S phrases

Keep out of the reach of children.
Do not breathe Aerosol.
Use only in well-ventilated areas.

Special labelling of certain mixtures

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.
7,0 % by mass of the contents are flammable.

Additional advice on labelling

Contains the following fluorinated greenhouse gas recorded in the Kyoto Protocol (chemical name): R134a;
Total quantity: (please refer to the manufacturer)

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
212-377-0	1,1,1,2-Tetrafluoroethane	75 - 100 %
811-97-2		
	Liquefied gas; H280	
01-2119459374-33		
204-065-8	dimethyl ether	1 - 10 %
115-10-6	F+ - Extremely flammable R12	
603-019-00-8	Flam. Gas 1; H220	

Full text of R and H phrases: see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Move victim out of danger zone. In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).

After inhalation

Provide fresh air. In case of irregular breathing or respiratory arrest provide artificial respiration.

After contact with skin

In cases of frostbite rinse with ample water. Do not remove clothing. In case of skin irritation, seek medical treatment.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

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

Frostbite. disordered cardiac rhythm.

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂). Foam. Extinguishing powder.

Extinguishing media which must not be used for safety reasons

High power water jet.

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO₂). Fluorhydric acid. Vapours may form explosive mixtures with air.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Wear a self-contained breathing apparatus and chemical resistant suit.

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Additional information

Use water spray/stream to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Vapours are heavier than air and will spread at floor level.

Remove all sources of ignition.

Avoid contact with skin, eye and clothing. Do not breathe vapour or spray.

6.2. Environmental precautions

No special environmental protection measures are necessary.

6.3. Methods and material for containment and cleaning up

Provide adequate ventilation. Product leave to vaporize.

6.4. Reference to other sections

Handling, Personal protection equipment: See protective measures under point 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide for sufficient ventilation and punctiform suction at critical points. Do not use in enclosed rooms. Do not breathe aerosol.

Advice on protection against fire and explosion

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Vapours may form explosive mixtures with air. Take precautionary measures against static discharges.

Further information on handling

Press nozzle completely. Do not use can overhaed as liquid propellant can leake.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place.

Advice on storage compatibility

Do not store together with: Oxidizing agents.

Further information on storage conditions

Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122 °F.

7.3. Specific end use(s)

not applicable

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
811-97-2	1,1,1,2-Tetrafluoroethane (HFC 134a)	1000	4240		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL
115-10-6	Dimethyl ether	400	766		TWA (8 h)	WEL
		500	958		STEL (15 min)	WEL

8.2. Exposure controls

Occupational exposure controls

Personal protective equipment has to be chosen in accordance with workplace specific conditions, e. g. concentration of the product. Chemical resistance has to be clarified with the supplier of protective equipment.

Protective and hygiene measures

Wash hands before breaks and at the end of work. Do not eat, drink, smoke or sneeze at the workplace. Take off immediately all contaminated clothing.

Respiratory protection

Respiratory protection required in case of: insufficient ventilation.
Filter respirator (full mask or mouth-piece) with filter: AX

Hand protection

Suitable material: PVA (Polyvinyl alcohol).
Type of chemical protective gloves to choose depends on the concentration and quantity of dangerous substances as well as on work place specifications.

Eye protection

Tightly sealed safety glasses.

Skin protection

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

Environmental exposure controls

refer to chapter 7. No further action is necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Aerosol
Colour: colourless
Odour: like: ether

Test method

pH-Value: not applicable

Changes in the physical state

Melting point: not applicable
Boiling point: not applicable
Flash point: not applicable

Explosive properties

In use, may form flammable/explosive vapour-air mixture.

Lower explosion limits: 3,4 vol. %

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Upper explosion limits:	18 vol. %
Ignition temperature:	not determined
Vapour pressure:	6000 hPa
Density:	ca. 1,2 g/cm ³
Water solubility:	practically insoluble
Viscosity / dynamic:	not applicable
Viscosity / kinematic:	not applicable
Vapour density:	not determined
Evaporation rate:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Not known when used in accordance with instructions.

10.2. Chemical stability

Stable at standard ambient conditions (room temperature).

10.3. Possibility of hazardous reactions

Exothermic reactions with: Oxidizing agents, strong.

10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

10.5. Incompatible materials

No further data available.

10.6. Hazardous decomposition products

Hazardous decomposition products: Carbon monoxide. Carbon dioxide. Fluorhydric acid. Fluorine phosgene.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

The classification was undertaken in accordance with the calculation method governed by the Preparations Directive (1999/45/EC). There are no data available on the mixture itself.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
811-97-2	1,1,1,2-Tetrafluoroethane				
	inhalative (4 h) vapour	LC50	500000 mg/l	Rat.	

Irritation and corrosivity

Irritant effect on the eye: mild irritant.
Irritant effect on the skin: mild irritant.
Irritant effect on the respiratory tract: Not an irritant.

Sensitising effects

no danger of sensitization.

Carcinogenic/mutagenic/toxic effects for reproduction

The components in this formulation do not meet the criteria for classification as CMR category 1 or 2.

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Further information

Can cause frostbite.

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

No indication of bio-accumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
115-10-6	dimethyl ether	0,1

12.4. Mobility in soil

At normal temperatures a very volatile or gaseous product, which can escape into the atmosphere.

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

Ozone depletion potential (ODP): 0 (R134a)

Global Warming potential (GWP): 1300 (R134a)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Waste disposal according to official state regulations.

Waste disposal number of waste from residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing dangerous substances
Classified as hazardous waste.

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances
Classified as hazardous waste.

Contaminated packaging

Waste disposal according to official state regulations.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.2

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Classification code: 5A
Limited quantity: 1 L
Transport category: 3
Tunnel restriction code: E

Other applicable information (land transport)

Transport as "limited quantity" according to chapter 3.4 ADR/RID.

Inland waterways transport (ADN)

14.1. UN number: UN1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.2



Classification code: 5A
Limited quantity: 1 L

Marine transport (IMDG)

14.1. UN number: UN1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2, see SP63

Limited quantity: See SP277
EmS: F-D, S-U

Air transport (ICAO)

14.1. UN number: UN1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.2
14.4. Packing group: -
Hazard label: 2.2



Limited quantity Passenger: 30 kg G

14.5. Environmental hazards

Dangerous for the environment: no

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14.6. Special precautions for user

see chapter 6 - 8

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

irrelevant

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

1999/13/EC (VOC): 100 %

Additional information

Volatile organic compounds (VOC) in percentage by weight: (Switzerland) 5 - 10 %

National regulatory information

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Full text of R phrases referred to under Sections 2 and 3

Extremely flammable.

Full text of H statements referred to under Sections 2 and 3

Extremely flammable gas.

Contains gas under pressure; may explode if heated.

Further Information

Data sources: Data arise from reference works and literature.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)