

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 25.11.2009

Revision: 19.11.2009

1 Identification of substance/preparation and of the company/undertaking:

Product details:

- Trade name: **406B Superwash Cleaner Degreaser**
- Application of the substance / the preparation Cleaner for electronics

Supplier/Manufacturer:

MG Chemicals
9347 - 193rd Street
Surrey, B.C., Canada
V4N 4E7

1-800-201-8822 - 0
1-604-888-3084 - 0

Distributor:

Solid State Supplies Ltd.
Eastlands Lane
Paddock Wood
Kent, TN12 6BU
United Kingdom
Telephone: +44 (0) 1892 836836

www.sssp.com

- Email competent person: sonja.fischer@kft.de

Information department:

See supplier/manufacturer
Technical Support: Phone 1-604-888-3084 - 128
For updates on this SDS please download from www.mgchemicals.com

- Emergency information: National Poisons Information Centre Tel.: +44 (0)870 6006266

2 Hazards identification

Hazard description:

Xi Irritant
F Highly flammable
N Dangerous for the environment

Information pertaining to particular dangers for man and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EC" in the latest valid version.

Warning! Pressurized container.

Has a narcotizing effect.

R 11 Highly flammable.

R 38 Irritating to skin.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 67 Vapours may cause drowsiness and dizziness.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

100.0 % by mass of the contents are flammable

Classification system:

The classification was made according to the latest editions of the EC-lists, and expanded using company data and specialized literature.

GHS label elements

H222 - Extremely flammable aerosol.

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**Warning**

H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.



H411 - Toxic to aquatic life with long lasting effects.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

100.0 % by mass of the contents are flammable

• **General:** P102 Keep out of reach of children.

• **Prevention:**

P273 Avoid release to the environment.

P271 Use only outdoors or in a well-ventilated area.

P260 Do not breathe spray.

• **Response:**

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

• **Disposal:**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Additional information:**

Upon strong heating flammable vapour/air mixtures are formed which are heavier than air and spread on the ground.

3 Composition/information on ingredients

• **Chemical characterization**

• **Description:** Mixture of the substances listed below with nonhazardous additions.

• **Dangerous components:**

CAS: 107-83-5 EINECS: 203-523-4 Index number: 601-007-00-7	2-methylpentane Xn, Xi, F, N; R 11-38-51/53-65-67 Danger: flame 2.6/2; health hazard 3.10/1 Warning: exclamation mark 3.2/2, 3.8/3 environment 4.1.C/2	30-55%
CAS: 75-37-6 EINECS: 200-866-1	1,1-difluoroethane F+; R 12 Danger: flame 2.2/1 Warning: gas cylinder 2.5/L	25-35%
CAS: 96-14-0 EINECS: 202-481-4 Index number: 601-007-00-7	3-methylpentane Xn, Xi, F, N; R 11-38-51/53-65-67 Danger: flame 2.6/2; health hazard 3.10/1 Warning: exclamation mark 3.2/2, 3.8/3 environment 4.1.C/2	10-15%
CAS: 79-29-8 EINECS: 201-193-6 Index number: 601-007-00-7	2,3-dimethylbutane Xn, Xi, F, N; R 11-38-51/53-65-67 Danger: flame 2.6/2; health hazard 3.10/1 Warning: exclamation mark 3.2/2, 3.8/3 environment 4.1.C/2	10-25%

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CAS: 75-83-2	2,2-dimethylbutane	5-10%
EINECS: 200-906-8	Xn, Xi, F, N; R 11-38-51/53-65-67	
Index number: 601-007-00-7	Danger: health hazard 3.10/1	
	Warning: exclamation mark 3.2/2, 3.8/3	
	environment 4.1.C/2	

CAS: 110-54-3	n-hexane	1-2.5%
EINECS: 203-777-6	Repr. Cat. 3; Xn, Xi, F, N; R 11-38-48/20-62-51/53-65-67	
Index number: 601-037-00-0	Danger: flame 2.6/2; health hazard 3.10/1, 3.7/2, 3.9/2	
	Warning: exclamation mark 3.2/2, 3.8/3	
	environment 4.1.C/2	

• **Additional information** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

• **General information:**

Remove affected persons from danger area and lay them down.
Immediately remove any clothing soiled by the product.

• **After inhalation:**

Supply fresh air.
Remove victim from contaminated area. If breathing is difficult, give oxygen.
Seek medical treatment.
In case of unconsciousness, place patients on their side in a stable position for transportation.

• **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

• **After eye contact:**

Rinse the eyes with open eyelids for 10 - 15 minutes with water.
Seek medical treatment.

• **After swallowing:**

Make the person drink a lot of water. Do not induce vomiting because of the danger of aspiration.
Never give anything by mouth to a unconscious person.
If vomiting occurs spontaneously:

Hold the head of the casualty low with the body in a prone position in order to avoid penetration of vomit into the air tube (danger of aspiration).

Seek medical treatment.

• **Information for doctor:**

• **The following symptoms may occur:**

After inhalation:

Irritation of mucuous membranes
irritant effect on the respiratory tract
stupor

Unconsciousness

After swallowing:

Gastric or intestinal disorders.
weakness

• **Treatment:** Symptomatic treatment

5 Fire fighting measures

• **Suitable extinguishing agents:**

Water jet spray
Extinguishing powder
Carbon dioxide (CO₂)
Use fire fighting measures that suit the environment.

• **For safety reasons unsuitable extinguishing agents:** Direct jet water

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- **Special hazards caused by the material, its products of combustion or resulting gases:**
vapors travel along the ground to a distant ignition source and flash back.
Dangerous decomposition product see chapter 10: stability and reactivity
 - **Protective equipment:**
Do not inhale combustion vapours.
Wear self-contained respiratory protective device.
 - **Additional information:**
Heating leads to pressure increase entailing danger of bursting and explosion. Immediately cool neighbouring packages and containers with sprayed water and, if possible, remove them out of the danger zone
-

6 Accidental release measures

- **Person-related safety precautions:**



Wear protective equipment. Keep unprotected persons away.

Do not smoke - keep ignition sources away
Ensure adequate ventilation

- **Measures for environmental protection:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to penetrate the ground/soil.
In case of seepage into the ground inform responsible authorities.
 - **Measures for cleaning/collecting:**
Ensure adequate ventilation.
Absorb with non-combustible material like sand, soil or diatomite.
Send for recovery or disposal in suitable receptacles.
Wash spill area with soap and water.
Dispose contaminated material as waste according to item 13.
 - **Additional information:**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
-

7 Handling and storage

- **Handling**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Avoid contact with eyes and skin.
Avoid inhalation of vapours.
- **Information about protection against explosions and fires:**



Keep ignition sources away - Do not smoke.

Protect against electrostatic charges

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

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

- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Store cool and dry in a well ventilated area.

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Observe official regulations on storing packagings with pressurized containers.
Pay attention to special rules for the storage of flammable liquids.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.
Store away from feed.
Store away from oxidizing agents.
Store separately from:

Organic peroxides (5.2)
do not store with oxygen bottles.

- **Further information about storage conditions:**

Keep receptacle tightly sealed.
Do not gas tight seal receptacle.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

- **Storage class 2B** pressurized gas containers

8 Exposure controls and personal protection

- **Additional information about design of technical systems:**

Install appropriate mechanical ventilation.
No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

- **110-54-3 n-hexane**

IOELV (European Union)	Long-term value: 72 mg/m ³ , 20 ppm
WEL (Great Britain)	Long-term value: 72 mg/m ³ , 20 ppm
OEL (Ireland)	Long-term value: 70 mg/m ³ , 20 ppm
	IOELV

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

- **Personal protective equipment**

- **General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Use skin protection cream for skin protection.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
Provide eye bath.

- **Breathing equipment:**

Not necessary, if you follow the instructions for use.
In case of unintentional release of substance, exceeding the occupational exposure limit value:
Short term filter device:
Filter AX. (colour coding brown; DIN EN 141)

- **Protection of hands:**

Chemical resistant 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.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves:**

The selection of suitable depends upon the material, and also upon the quality of the gloves. The degree of protection will vary 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 penetration time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Tightly sealed goggles.

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- **Body protection:** Protective work clothing.
-

9 Physical and chemical properties:

- **General Information**

Form: Aerosol
Colour: According to product specification
Odour: like hydrocarbons

- **Change in condition:**

Melting point/Melting range: not determined
Boiling point/Boiling range: 55°C

- **Flash point:** -29°C

- **Flammability (solid, gaseous)**

Heat of Combustion: 36,3 kjoule/g

- **Self ignition temperature:** Self igniting possible

- **Danger of explosion:** Aerosol.
Pressurized container.
Do not pierce.

- **Vapour pressure:** 3241 hPa

- **Density:** 0.8 g/cm³

- **Solubility in / Miscibility with**

Water: Insoluble

- **pH-value:** 7
-

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**

Avoid temperatures >50°C.

No decomposition if used and stored according to specifications.

- **Materials to be avoided:**

Alkali metals
 Alkaline-earth metals
 Strong oxidants
 Peroxides
 Oxygen

- **Dangerous reactions:** Reactions with above-mentioned substances

- **Dangerous products of decomposition:**

In the case of fire or at high temperatures the formation of the following decomposition products is possible.

Carbon monoxide and carbon dioxide
 Halogens
 Halogen acids
 carbonyl halides
 Hydrofluoric acid

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11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
 - 75-37-6 1,1-difluoroethane**
 - Inhalative LC₅₀/4 h 977 mg/l (mus)
 - 110-54-3 n-hexane**
 - Oral LD₅₀ > 5000 mg/kg (rat)
 - Dermal LD₅₀ > 2000 mg/kg (rabbit)
 - Inhalative LC₀₁/4h > 3367 mg/l (rat)
 - LC₅₀/4 h 1500 mg/l (rat)
- **Primary irritant effect:**
- **on the skin:**
 - Irritant to skin and mucous membranes.
 - Defatting effect on the skin.
 - Continuing or repeated contact with the skin may cause dermatitis.
- **on the eye:** Light irritation possible
- **Sensitization:** No sensitizing effects known.
- **Other information (about experimental toxicology):**
- **Carcinogenic effects:** Presently there are no information available indicating carcinogenic, mutagenic or teratogenic effects.
- **Subacute to chronic toxicity:**
 - long permanent exposition may cause a slight fibrosis in the lung. Persons with existing respiratory problems (for example asthma, chronic obstructive pulmonary disease) maybe react stronger on the product
- **Additional toxicological information:**
 - The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
 - Irritant
 - After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

12 Ecological information

- **Ecotoxicological effects:**
- **Aquatic toxicity:**
 - 75-37-6 1,1-difluoroethane**
 - EC₅₀/48h 720 mg/l (daphnia magna)
 - LC₅₀/96h 733 mg/l (fish)
 - 110-54-3 n-hexane**
 - LC₅₀/24h >50 mg/l (daphnia magna)
 - 4 mg/l (fish)
- **Remark:** Toxic for fish
- **General notes:**
 - Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
 - According to appendix 4 of VwVwS dated 27.7.2005 (German regulation)
 - Also poisonous for fish and plankton in water bodies.
 - Toxic for aquatic organisms

13 Disposal considerations

- **Product:**
- **Recommendation:**



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

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Disposal according to instructions of local authorities.

- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.
-

14 Transport information

· Land transport ADR/RID (cross-border)



- **ADR/RID class:** 2 5F Gases.
- **Danger code (Kemler):** -
- **UN-Number:** 1950
- **Packaging group:** -
- **Label:** 2.1
- **Special marking:** Symbol (fish and tree)
- **Description of goods:**
- **Limited quantities (LQ)** LQ2
- **Transport category** 2
- **Tunnel restriction code** D
- **Remarks:** Limited Quantity: 1 kg inner packing, 30 kg packaging unit

· Maritime transport IMDG:



- **IMDG Class:** 2.1
- **UN Number:** 1950
- **Label:** 2.1
- **Packaging group:** -
- **EMS Number:** F-D,S-U
- **Marine pollutant:** No
- **Proper shipping name:** AEROSOLS

· Air transport ICAO-TI and IATA-DGR:



- **ICAO/IATA Class:** 2.1
- **UN/ID Number:** 1950
- **Label:** 2.1
- **Packaging group:** -
- **Proper shipping name:** AEROSOLS, flammable
- **Remarks:** Packing Instructions:
For Limited Quantities: Y203(Max Net Qty/Pkg: 30 kg G)
Passenger and Cargo Aircraft: 203 (Max Net Qty/Pkg: 75 kg)
Cargo Aircraft only: 203 (Max Net Qty/Pkg: 150 kg)
- **UN "Model Regulation":** UN1950, DRUCKGASPACKUNGEN, 2.1

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- **Environmental hazards:** Product contains environmentally hazardous substances: 2-methylpentane
-

15 Regulatory information:

- **Markings according to EC guidelines:**

The product has been classified and marked in accordance with EC Directives / Ordinance on Hazardous Materials

- **Code letter and hazard designation of product:**



Xi Irritant
F Highly flammable
N Dangerous for the environment

- **Risk phrases:**

- 11 Highly flammable.
- 38 Irritating to skin.
- 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 67 Vapours may cause drowsiness and dizziness.

- **Safety phrases:**

- 2 Keep out of the reach of children.
- 23 Do not breathe aerosol.
- 29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
- 51 Use only in well-ventilated areas.

- **Special labelling of certain preparations:**

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

100.0 % by mass of the contents are flammable

- **National regulations**

- **Technical guidance (air):**

- **Class Share in %**

· I	2.1
· NK	9.1

- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
-

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant R-phrases:**

- 11 Highly flammable.
- 12 Extremely flammable.
- 38 Irritating to skin.
- 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 62 Possible risk of impaired fertility.
- 65 Harmful: may cause lung damage if swallowed.
- 67 Vapours may cause drowsiness and dizziness.

- **Department issuing MSDS:**

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• **Contact:** Dr. Sonja Fischer• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

• **Sources:** MSDS of the supplier

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