

# Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and  
OSHA GHS

Printing date 16.02.2015

Revision: 16.02.2015

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

- **1.1 Product identifier**
- **Trade name:** Blow-Hard® O.S. Extra™
- **Article number:** F17080-0200
- **CAS Number:**  
811-97-2
- **EC number:**  
212-377-0
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
Bel-Art Products  
661 Route 23  
Wayne, NJ 07470  
(800) 423-5278
- **1.4 Emergency telephone number:** +1 (800) 457-4280

## SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Classifications listed also are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).



gas cylinder

Press. Gas C H280 Contains gas under pressure; may explode if heated.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
R44: Risk of explosion if heated under confinement.
- **Information concerning particular hazards for human and environment:** Not applicable.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is additionally classified and labelled according to the Globally Harmonized System within the United States (GHS).  
The substance is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS04

- **Signal word** Warning
- **Hazard statements**  
H280 Contains gas under pressure; may explode if heated.

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- **Precautionary statements**

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

- **Additional information:**

Asphyxiant gas.

EUH044 Risk of explosion if heated under confinement.

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

- **Hazard description:**

- **WHMIS-symbols:**

A - Compressed gas



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



Health = 0

Fire = 0

Reactivity = 0

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



Health = 0

Fire = 0

Reactivity = 0

- **HMIS Long Term Health Hazard Substances**

Substance is not listed.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

- **3.1 Substances**

- **CAS No. Description**

811-97-2 Norflurane

- **Identification number(s)**

· **EC number:** 212-377-0

## SECTION 4: First aid measures

- **4.1 Description of first aid measures**

· **General information:** No special measures required.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

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- **After skin contact:**  
In cases of frostbite, rinse with plenty of water. Do not remove clothing.  
Seek medical treatment in case of complaints.
- **After eye contact:**  
Remove contact lenses if worn.  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Unlikely route of exposure.  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**  
Frostbite  
Nausea  
Dizziness  
Coughing
- **Hazards** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
Treat frost-bitten areas appropriately.

## SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information**  
Cool endangered receptacles with water fog or haze.  
If aerosols are bursting, stay clear until bursting is completed. Aerosol containers can be projectiles when bursting.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Use personal protective equipment as required.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Send for recovery or disposal in suitable receptacles.  
Dispose contaminated material as waste according to item 13.

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- **6.4 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.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

No special precautions are necessary if used correctly.

Use only in well ventilated areas.

Pressurized container: Do not pierce or burn, even after use.

Wash hands before breaks and at the end of work.

- **Information about fire - and explosion protection:**

Protect from heat.

Prevent impact and friction.

Pressurised 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 onto a naked flame or any incandescent material.

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

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Store only in the original receptacle.

Avoid storage near extreme heat, ignition sources or open flame.

- **Information about storage in one common storage facility:** Store away from foodstuffs.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Store receptacle in a well ventilated area.

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

## SECTION 8: Exposure controls/personal protection

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

- **8.1 Control parameters**

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

<b>811-97-2 Norflurane</b>
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WEEL (USA)   Long-term value: 1000 ppm
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- **DNELs** No further relevant information available.

- **PNECs** No further relevant information available.

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

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

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Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Use only in well ventilated areas.

• **Respiratory protection:**

Not necessary if room is well-ventilated.

Use suitable respiratory protective device in case of insufficient ventilation.

For spills, respiratory protection may be advisable.

• **Protection of hands:**

Wear protective gloves to handle contents of damaged or leaking units.

Gloves should provide protection from freezing temperatures.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

• **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.

• **Eye protection:**



Safety glasses

• **Body protection:** Protection may be required for spills.

• **Limitation and supervision of exposure into the environment**

No further relevant information available.

• **Risk management measures**

See Section 7 for additional information.

No further relevant information available.

## SECTION 9: Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**

• **General Information**

• **Appearance:**

Form: Liquefied gas

Colour: Colourless

• **Odour:** Slight, ethereal

• **Odour threshold:** Not determined.

• **pH-value:** Not determined.

• **Change in condition**

Melting point/Melting range: Not Determined.

Boiling point/Boiling range: -26 °C (-15 °F)

• **Flash point:** Not applicable.

• **Flammability (solid, gaseous):** Not determined.

• **Auto/Self-ignition temperature:** Not determined.

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- **Decomposition temperature:** Not determined.
- **Self-igniting:** Not determined.
- **Danger of explosion:** Not determined.
- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.
- **Vapour pressure at 25 °C (77 °F):** 4730 mmHg
- **Density:** 1,21 g/cm<sup>3</sup> (10,097 lbs/gal)
- **Relative density:** Not determined.
- **Vapour density at 25 °C (77 °F)** 3,18 (Air = 1)
- **Evaporation rate:** Not applicable.
- **Solubility in / Miscibility with water at 25 °C (77 °F):** 67 mg/l
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- **9.2 Other information:** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.  
Pressurized container: Do not pierce or burn, even after use.
- **10.3 Possibility of hazardous reactions**  
Danger of receptacles bursting because of high vapour pressure when heated.
- **10.4 Conditions to avoid** Excessive heat.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
Hydrogen fluoride  
Carbon dioxide

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect:**
- **on the skin:** No irritant effect.

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- **on the eye:** No irritating effect.
- **Sensitisation:** No sensitising effects known.
- **Additional toxicological information:** Asphyxiant gas.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** Does not accumulate in organisms.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Avoid transfer into the environment.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Contact waste processors for recycling information.  
Smaller quantities can be disposed of with household waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

## SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR, IMDG, IATA** UN3159
- **14.2 UN proper shipping name**
- **DOT, IATA** 1,1,1,2-Tetrafluoroethane
- **ADR** 3159 1,1,1,2-TETRAFLUOROETHANE  
(REFRIGERANT GAS R 134a)
- **IMDG** 1,1,1,2-TETRAFLUOROETHANE (REFRIGERANT  
GAS R 134a)
- **14.3 Transport hazard class(es)**
- **DOT**



- **Class** 2.2

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<b>· Label</b>	2.2	
<hr style="border-top: 1px dashed black;"/>		
<b>· ADR</b>		
		
<b>· Class</b>	2.2 2A	
<b>· Label</b>	2.2	
<hr style="border-top: 1px dashed black;"/>		
<b>· IMDG, IATA</b>		
		
<b>· Class</b>	2.2	
<b>· Label</b>	2.2	
<b>· 14.4 Packing group</b>		
<b>· DOT, ADR, IMDG, IATA</b>	Not Regulated	
<b>· 14.5 Environmental hazards:</b>		
<b>· Marine pollutant:</b>	No	
<b>· 14.6 Special precautions for user</b>	Not applicable.	
<b>· Danger code (Kemler):</b>	20	
<b>· EMS Number:</b>	F-C,S-V	
<b>· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.	
<b>· Transport/Additional information:</b>		
<hr style="border-top: 1px dashed black;"/>		
<b>· ADR</b>		
<b>· Limited quantities (LQ)</b>	120 ml	
<b>· Excepted quantities (EQ)</b>	Code: E1	
	Maximum net quantity per inner packaging: 30 ml	
	Maximum net quantity per outer packaging: 1000 ml	
<b>· Transport category</b>	3	
<b>· Tunnel restriction code</b>	C/E	
<hr style="border-top: 1px dashed black;"/>		
<b>· IMDG</b>		
<b>· Limited quantities (LQ)</b>	120 ml	
<b>· Excepted quantities (EQ)</b>	Code: E1	
	Maximum net quantity per inner packaging: 30 ml	
	Maximum net quantity per outer packaging: 1000 ml	
<b>· UN "Model Regulation":</b>	UN3159, 1,1,1,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 134a), 2.2	

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### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

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

Substance is not listed.

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

Substance is not listed.

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

Substance is listed.

- **Proposition 65 (California):**

- **Chemicals known to cause cancer:**

Substance is not listed.

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

Substance is not listed.

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

Substance is not listed.

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

Substance is not listed.

- **Carcinogenic Categories**

- **EPA (Environmental Protection Agency)**

Substance is not listed.

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

Substance is not listed.

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

Substance is not listed.

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

Substance is not listed.

- **Canada**

- **Canadian Domestic Substances List (DSL)**

Substance is listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

Substance is not listed.

- **Canadian Ingredient Disclosure list (limit 1%)**

Substance is not listed.

- **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

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· **Substances of very high concern (SVHC) according to REACH, Article 57**

Substance is not listed.

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

## SECTION 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.

· **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)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

Press. Gas C: Gases under pressure: Compressed gas

· **Sources**

SDS Prepared by:

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