



# Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 02/02/2015

Reviewed on 02/02/2015

## 1 Identification

- **Product identifier**
- **Trade name:** Biodegradable Mold Release Aerosol
- **Article number:** DAC 85851
- **Application of the substance / the mixture** Mold Release Agent.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
DAC Industries, Inc.  
1636 Gervais Avenue Suite 9  
Maplewood, MN 55109  
Phone: (651) 748-1750
- **Emergency telephone number:**  
ChemTel Inc.  
(800)255-3924, +1 (813)248-0585

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



Flam. Aerosol 1 H222 Extremely flammable aerosol.



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

- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS04

- **Signal word** Danger
- **Hazard statements**  
H222 Extremely flammable aerosol.  
H280 Contains gas under pressure; may explode if heated.
- **Precautionary statements**  
P210 Keep away from heat, sparks, open flames, and hot surfaces. - No smoking.  
P251 Pressurized container: Do not pierce or burn, even after use.  
P211 Do not spray on an open flame or other ignition source.  
P280 Wear protective gloves and eye protection.  
P273 Avoid release to the environment.  
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 122 °F (50 °C).  
P403 Store in a well-ventilated place.

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- **Hazard description:**
- **WHMIS-symbols:**  
A - Compressed gas  
B5 - Flammable aerosol



- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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

HEALTH	1	Health = 1
FIRE	4	Fire = 4
REACTIVITY	3	Reactivity = 3

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

106-97-8	butane	Flam. Gas 1, H220 Press. Gas, H280	50-100%
74-98-6	propane	Flam. Gas 1, H220 Press. Gas, H280	25-50%
142-82-5	heptane	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336	≤ 2.5%

- **Additional information:**

For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Take affected persons out into the fresh air.

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- **After inhalation:**  
Supply fresh air; consult doctor in case of complaints.  
Provide oxygen treatment if affected person has difficulty breathing.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
In cases of frostbite, rinse with plenty of water. Do not remove clothing.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Protect unharmed eye.  
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; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
Headache  
Breathing difficulty  
Frostbite  
Coughing  
Dizziness
- **Danger**  
Danger of impaired breathing.  
Danger of pulmonary edema.  
Danger of pneumonia.  
Vapors have narcotic effect.  
Danger of convulsion.  
Danger of disturbed cardiac rhythm.  
Condition may deteriorate with alcohol consumption.
- **Indication of any immediate medical attention and special treatment needed**  
Medical supervision for at least 48 hours.  
Later observation for pneumonia and pulmonary edema.  
If necessary oxygen respiration treatment.  
Treat frost-bitten areas appropriately.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
Alcohol resistant foam  
Fire-extinguishing powder  
Gaseous extinguishing agents  
Carbon dioxide
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.  
Danger of receptacles bursting because of high vapor pressure if heated.

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- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information**  
Eliminate all ignition sources if safe to do so.  
Cool endangered receptacles with water fog.  
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Use respiratory protective device against the effects of fumes/dust/aerosol.  
Ensure adequate ventilation.  
Wear protective equipment. Keep unprotected persons away.  
Keep away from ignition sources.  
Protect from heat.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Allow to evaporate.  
Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).  
Dispose contaminated material as waste according to item 13.  
Send for recovery or disposal in suitable receptacles.
- **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.  
Open and handle receptacle with care.  
Keep away from heat and direct sunlight.
- **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.  
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 120 °F / 49 °C, i.e. electric lights. Do not pierce or burn, even after use.  
Emergency cooling must be available in case of nearby fire.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location.

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- Provide ventilation for receptacles.  
 Observe official regulations on storing packagings with pressurized containers.  
 Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**  
 Store away from foodstuffs.  
 Store away from oxidizing agents.
  - **Further information about storage conditions:**  
 Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.  
 Keep receptacle tightly sealed.  
 Protect from heat and direct sunlight.  
 Storage Temperatures : <122 ° F / <50 °C.
  - **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 item 7.
- **Control parameters**

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

**106-97-8 butane**

REL (USA)	Long-term value: 1900 mg/m <sup>3</sup> , 800 ppm
TLV (USA)	Short-term value: 2370 mg/m <sup>3</sup> , 1000 ppm
EL (Canada)	Short-term value: 750 ppm Long-term value: 600 ppm
EV (Canada)	Long-term value: 800 ppm
LMPE (Mexico)	Long-term value: 1000 ppm

**74-98-6 propane**

PEL (USA)	Long-term value: 1800 mg/m <sup>3</sup> , 1000 ppm
REL (USA)	Long-term value: 1800 mg/m <sup>3</sup> , 1000 ppm
TLV (USA)	refer to Appendix F
EL (Canada)	Long-term value: 1000 ppm
EV (Canada)	Long-term value: 1.000 ppm
LMPE (Mexico)	Long-term value: 1000 ppm

**142-82-5 heptane**

PEL (USA)	Long-term value: 2000 mg/m <sup>3</sup> , 500 ppm
REL (USA)	Long-term value: 350 mg/m <sup>3</sup> , 85 ppm Ceiling limit value: 1800* mg/m <sup>3</sup> , 440* ppm *15-min
TLV (USA)	Short-term value: 2050 mg/m <sup>3</sup> , 500 ppm Long-term value: 1640 mg/m <sup>3</sup> , 400 ppm
EL (Canada)	Short-term value: 500 ppm Long-term value: 400 ppm

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EV (Canada)	Short-term value: 2.045 mg/m <sup>3</sup> , 500 ppm Long-term value: 1.635 mg/m <sup>3</sup> , 400 ppm
LMPE (Mexico)	Short-term value: 500 ppm Long-term value: 400 ppm

· **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.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Engineering controls:** No further relevant information available.

· **Breathing equipment:**

Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.

· **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.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the 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 found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Safety glasses

· **Body protection:**

Not required under normal conditions of use.

Protection may be required for spills.

· **Limitation and supervision of exposure into the environment** Avoid release to the environment.

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## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

Form: Aerosol

Color: Whitish

· Odor: Characteristic

· Odor threshold: Not determined.

· pH-value: Not determined.

#### · Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: -42 °C (-44 °F)

· Flash point: -104 °C (-155 °F) (PMCC)

· Flammability (solid, gaseous): Not applicable.

· Auto-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Auto igniting: Product is not self-igniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

#### · Explosion limits:

Lower: 1.5 Vol %

Upper: 10.9 Vol %

· Vapor pressure at 20 °C (68 °F): 50 psig (in can)

· Density at 20 °C (68 °F): 0.56 g/cm<sup>3</sup> (4.673 lbs/gal)

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not applicable.

#### · Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

· Partition coefficient (n-octanol/water): Not determined.

#### · Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

· Other information: No further relevant information available.

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## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
Keep away from heat, sparks, open flames, and hot surfaces. - No smoking.
- **Possibility of hazardous reactions**  
Extremely flammable aerosol.  
Can react violently with oxygen rich (oxidizing) material. Danger of Explosion.  
Develops readily flammable gases / fumes.  
Danger of receptacles bursting because of high vapor pressure if heated.  
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.  
Reacts with peroxides and other radical forming substances.
- **Conditions to avoid**  
Keep ignition sources away - Do not smoke.  
Store away from oxidizing agents.
- **Incompatible materials:** Oxidizing agents
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

### 142-82-5 heptane

Oral	LD50	> 5000 mg/kg (rat) (Estimate)
Inhalative	LC50/4 h	103 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitizing effect by skin contact is possible with prolonged exposure.
- **Additional toxicological information:**  
Irritant  
Danger through skin absorption.  
Inhalation of concentrated vapors as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.  
At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

- **Carcinogenic categories**

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

- **Probable Routes of Exposure**

Inhalation.  
Eye contact.

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Skin contact.

- **Acute effects (acute toxicity, irritation and corrosivity):** Vapors have narcotic effect.
- **Repeated Dose Toxicity:** May cause damage to organs through prolonged or repeated exposure.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** The product contains materials that are harmful to the environment.
- **Persistence and degradability** The product is partially biodegradable. Significant residuals remain.
- **Behavior in environmental systems:**
- **Bioaccumulative potential**  
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
This statement was deduced from the properties of the single components.  
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.  
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **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:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.  
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1950
- **UN proper shipping name**
- **DOT** Aerosols, flammable

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- ADR 1950 AEROSOLS, flammable
- IMDG, IATA AEROSOLS, flammable
- Transport hazard class(es)

· DOT



- Class 2.1
- Label 2.1

· ADR



- Class 2 5F Gases
- Label 2.1

· IMDG, IATA



- Class 2.1
- Label 2.1
- Packing group
- DOT, ADR, IMDG, IATA Not Regulated
- Environmental hazards:
- Marine pollutant: No
- Special precautions for user Warning: Gases
- Danger code (Kemler): -
- EMS Number: F-D,S-U
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
- UN "Model Regulation": UN1950, Aerosols, 2.1

### 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 is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

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- **Proposition 65 (California)**

- **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 is listed.

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

None of the ingredients is listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

142-82-5 heptane

D

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

- **State Right to Know Listings**

None of the ingredients is listed.

- **Canadian substance listings:**

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

All ingredients are listed.

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

None of the ingredients is listed.

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

106-97-8 butane

142-82-5 heptane

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

### 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.

- **Date of preparation / last revision** 02/02/2015 / -

- **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

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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)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
Flam. Gas 1: Flammable gases, Hazard Category 1  
Flam. Aerosol 1: Flammable aerosols, Hazard Category 1  
Press. Gas: Gases under pressure: Compressed gas  
Flam. Liq. 2: Flammable liquids, Hazard Category 2  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3  
Asp. Tox. 1: Aspiration hazard, Hazard Category 1

**Sources**

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