

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product code : Hygienfresh DeoSpray Red Passion

Trades code : A73-008

Product line: HygienFresh

UFI: NV60-F03D-8006-KR72

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

Mangiaodori &amp; fabrics Deospray Environment

Sectors of use:

Private households (= general public = consumers)[SU21], Public domain (administration, education, entertainment, services, craftsmen)[SU22]

Uses advised against

Do not use for purposes other than those listed

**1.3. Details of the supplier of the safety data sheet**

Tintolav s.r.l. - Via M. D' Antona 7 - 10028 Trofarello (TO) Tel. 011/649.68.27 Fax 011/649.67.42

Email: info@tintolav.com - Sito internet: www.tintolav.com

Email tecnico competente: a.conedera@tintolav.com

National contact: Malta: Emergency Ambulance 112

Accident &amp; Emergency Department 2545 4030

**1.4. Emergency telephone number**

The UK National Poisons Emergency number +44 (0)870 600 6266

London: Emergency 24 hour telephone +44 (0) 207188 0100

**SECTION 2. Hazards identification****2.1. Classification of the substance or mixture**

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:

GHS02, GHS07

Hazard Class and Category Code(s):

Flam. Aerosol 1, Skin Sens. 1, Eye Irrit. 2

Hazard statement Code(s):

H222 - Extremely flammable aerosol.

H229 - Pressurised container: May burst if heated.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

Aerosol that ignites easily even at low temperatures, fire risk

If brought into contact with eyes, the product, causes significant irritations which may last for more than 24 hours.

The product, if brought into contact with skin can cause skin sensitization.

The repeated inhalation of vapors can cause drowsiness and giddiness.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 ° C.

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In conformity to Regulation (EU) 2020/878

The aerosol containers overheated burst and can be ejected with violence from a distance and can take place a dangerous mechanism for the fire.

## 2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s):  
GHS02, GHS07 - Danger



Hazard statement Code(s):  
H222 - Extremely flammable aerosol.  
H229 - Pressurised container: May burst if heated.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.

Supplemental Hazard statement Code(s):  
EUH066 - Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

General

- P101 - If medical advice is needed, have product container or label at hand.
- P102 - Keep out of reach of children.

Prevention

- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P211 - Do not spray on an open flame or other ignition source.
- P251 - Do not pierce or burn, even after use.

Response

- P302+P352 - IF ON SKIN: Wash with plenty of water and soap.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 - If eye irritation persists: Get medical advice/attention.

Storage

- P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Disposal

- P501 - Dispose of contents / container in accordance with local and national regulations.

Contains:

ethanol, Isobutane, Butane, Propane, 1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone, α-Hexylcinnamaldehyde, 4-tert-Butylcyclohexyl acetate  
0,03% of the mixture consists of components whose toxicity is unknown.

Content of VOC ready to use condition: 98,48 %

UFI: NV60-F03D-8006-KR72

## 2.3. Other hazards

The substance / mixture NOT contains substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII

No information on other hazards

## SECTION 3. Composition/information on ingredients

### 3.1 Substances

Irrilevant

### 3.2 Mixtures

Refer to paragraph 16 for full text of hazard statements

Butane contains less than 0,1 % w/w 1,3-butadiene (EINECS No 203-450-8)

Note K - The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w 1,3-butadiene (Einecs No 203-450-8). If the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P210-P403 should apply. This note applies only to certain complex oil-derived substances in Part 3

| Substance   | Concentration[ w/w] | Classification   | Index        | CAS        | EINECS    | REACH |
|---|---------------------|--|--------------|------------|-----------|-------|
| Butane<br>Note: K   | >= 35 < 50%         | Flam. Gas 1A, H220   | 601-004-00-0 | 106-97-8   | 203-448-7 | NR    |
| Isobutane   | >= 15 < 25%         | Flam. Gas 1A, H220   | 601-004-00-0 | 75-28-5    | 200-857-2 | NR    |
| Propane   | >= 15 < 25%         | Flam. Gas 1A, H220;<br>Press. Gas, H280                                | 601-003-00-5 | 74-98-6    | 200-827-9 | NR    |
| ethanol   | >= 5 < 15%          | Flam. Liq. 2, H225   | 603-002-00-5 | 64-17-5    | 200-578-6 | NR    |
| Propan-2-ol - FEMA 2929   | >= 1 < 5%           | Flam. Liq. 2, H225;<br>Eye Irrit. 2, H319;<br>STOT SE 3, H336          | 603-117-00-0 | 67-63-0    | 200-661-7 | NR    |
| 1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone - FEMA 0 | >= 0,1 < 1%         | Skin Irrit. 2, H315;<br>Skin Sens. 1, H317;<br>Aquatic Chronic 2, H411 | ND           | 54464-57-2 | 259-174-3 | NR    |
| α-Hexylcinnamaldehyde   | >= 0,1 < 1%         | Skin Sens. 1, H317;<br>Aquatic Chronic 2, H411                         | ND           | 101-86-0   | 202-983-3 | NR    |
| 4-tert-Butylcyclohexyl acetate - FEMA 0   | >= 0,1 < 1%         | Skin Sens. 1B, H317;<br>Aquatic Chronic 2, H411                        | ND           | 32210-23-4 | 250-954-9 | NR    |

### Fractionated global values

|      |         |      |        |      |        |      |         |
|------|---------|------|--------|------|--------|------|---------|
| H225 | = 10,00 | H319 | = 3,28 | H336 | = 3,00 | H220 | = 88,30 |
| H280 | = 19,43 | H315 | = 0,60 | H317 | = 0,81 | H411 | = 0,83  |
| H226 | = 0,04  | H400 | = 0,06 | H410 | = 0,06 | H318 | = 0,02  |
| H373 | = 0,02  | H412 | = 0,02 | H335 | = 0,02 | H302 | = 0,00  |

## SECTION 4. First aid measures

### 4.1. Description of first aid measures

Inhalation:

Air the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated area. If you feel unwell seek medical advice.

Direct contact with skin (of the pure product).:

Take contaminated clothing Immediately off.

Wash immediately with plenty of running water and possibly with soap, the areas of the body that have, or are only suspected to have, come in contact with the product.

In case of contact with skin, wash immediately with water and soap.

Direct contact with eyes (of the pure product):

Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect your eyes with a dry sterile gauze. Seek medical advice immediately

Ingestion:

Not hazardous. It's possible to give activated charcoal in water or liquid paraffin medicine

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

No data available.

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

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If medical advice is needed, have product container or label at hand.

### **SECTION 5. Firefighting measures**

#### **5.1. Extinguishing media**

Advised extinguishing agents:

CO2 or dry powder extinguisher

Extinguishing means to avoid:

Direct jets of water

#### **5.2. Special hazards arising from the substance or mixture**

The aerosol containers overheated burst and can be ejected with violence from a distance and can take place a dangerous mechanism for the fire.

Manufactured under pressure in sealed metal container (test pressure 15 bar max). Cool containers with water spray trying to remove them from the fire. The aerosol containers can be overheated and burst violently ejected from a distance ( protect the head using a safety helmet).

#### **5.3. Advice for firefighters**

Use protection for the breathing apparatus

Safety helmet and full protective suit.

The spray water can be used to protect the people involved in the extinction

You may also use selfrespirator, especially when working in confined and poorly ventilated area and if you use halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...)

Keep containers cool with water spray

### **SECTION 6. Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

6.1.1 For non-emergency personnel:

Leave the area surrounding the spill or release. Do not smoke

Leave the surrounding area recalling that any overheating could project the cylinder at a considerable distance.

Wear gloves and protective clothing

6.1.2 For emergency responders:

Given the airtightness of the aerosol can, it is quite unlikely that there will be significant spills. However, in the event that any container is damaged such as to cause a leak, isolate the cylinder in question by taking it to the open air or covering it with inert and non-combustible material (e.g. sand, earth, vermiculite) and taking care to avoid any ignition point which could pose a serious fire risk.  
Wear protective gloves and clothing. Suitable: latex, nitrile, PVC  
Eliminate all open flames and possible sources of ignition. Not smoking.  
Provide adequate ventilation.  
Evacuate the danger area and, if necessary, consult an expert.

## 6.2. Environmental precautions

Contain spill  
Inform the competent authorities.  
Discharge the remains in compliance with the regulations

## 6.3. Methods and material for containment and cleaning up

6.3.1 For containment:  
Rapidly recover the product, wear a mask and protective clothing  
Recover the product for reuse, if possible, or the removal.

6.3.2 For cleaning up:  
After wiping up, wash with water the area and materials involved

6.3.3 Other information:  
None in particular.

## 6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

# SECTION 7. Handling and storage

## 7.1. Precautions for safe handling

Avoid contact and inhalation of vapors  
Use extreme caution when handling the product. Avoid shock or friction.  
Do not smoke at work  
At work do not eat or drink.  
Vapors are heavier than air and may spread close to the ground and form explosive mixtures with air. Prevent formation of flammable or explosive concentrations in the air.  
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 ° C.  
Do not pierce or burn, even after the use. Do not spray on flame or incandescent objects. Use in adequately ventilated areas.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
See also paragraph 8 below.

## 7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabeled containers.  
Keep containers upright and safe by avoiding the possibility of falls or collisions.  
Pressurized container. Store in a ventilated place, in original packaging away from heat and sunlight.  
Keep away from open flames, sparks and heat sources. Avoid direct sunlight exposure.

## 7.3. Specific end use(s)

Private households (= general public = consumers):  
Handle with care.

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Store in ventilated place away from heat sources,  
Keep the container tightly closed.

Public domain (administration, education, entertainment, services, craftsmen):  
Handle with care. Store in a ventilated area and away from heat, keep the container tightly closed.

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters

Related to contained substances:

Butane:

TLV (ACGIH) = 1000 ppm

ACGIH TLV (United States, 3/2012).

TWA: 1000 ppm 8 hour (s).

NIOSH REL (United States, 1/2013).

TWA: 1900 mg/m 10 hour (s).

TWA: 800 ppm 10 hour (s).

OSHA PEL 1989 (United States, 3/1989).

TWA: 1900 mg/m 8 hour (s).

TWA: 800 ppm 8 hour (s).

Butane EH40 WEL TWA 600 ppm 1.450 mg/m<sup>3</sup>

Isobutane:

ACGIH TLV (United States, 3/2012).

TWA: 1000 ppm 8 hour (s).

NIOSH REL (United States, 1/2013).

TWA: 1900 mg/m 10 hour (s).

TWA: 800 ppm 10 hour (s)

Propane:

TLV: (Aliphatic hydrocarbon gases) 1000 ppm as TWA; (ACGIH 2005).

ACGIH TLV (United States, 3/2012).

TWA: 1000 ppm 8 hour (s).

NIOSH REL (United States, 1/2013).

TWA: 1800 mg/m 10 hour (s).

TWA: 1000 ppm 10 hour (s).

OSHA PEL (United States, 6/2010).

TWA: 1800 mg/m 8 hour (s).

TWA: 1000 ppm 8 hour (s).

OSHA PEL 1989 (United States, 3/1989).

TWA: 1800 mg/m 8 hour (s).

TWA: 1000 ppm 8 hour (s)

ethanol:

Component CAS-No. Value Control parameters

Basis

Ethanol-17-64 TWA 5 ppm 1.000

1.920 mg/m<sup>3</sup>

UK. EH40 WEL-Workplace Exposure Limits

Remarks Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used

Propan-2-ol:

TLV: TWA 200 ppm 400 ppm as STEL A4 (not classifiable as a human carcinogen); (ACGIH 2004).

MAK: 200 ppm 500 mg/m peak limitation Category: II (2); Risk group for pregnancy: C; (DFG 2004).

- Substance: ethanol

DNEL

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Systemic effects Long term Workers inhalation = 950 (mg/m<sup>3</sup>)  
Systemic effects Long term Workers dermal = 343 (mg/kg bw/day)  
Systemic effects Long term Consumers inhalation = 114 (mg/m<sup>3</sup>)  
Systemic effects Long term Consumers dermal = 206 (mg/kg bw/day)  
Systemic effects Long term Consumers oral = 87 (mg/kg bw/day)  
PNEC  
Sweet water = 0,96 (mg/l)  
sediment Sweet water = 3,6 (mg/kg/sediment)  
Sea water = 0,79 (mg/l)  
sediment Sea water = 2,9 (mg/kg/sediment)  
intermittent emissions = 2,75 (mg/l)  
STP = 580 (mg/l)  
ground = 0,63 (mg/kg ground)

- Substance: Propan-2-ol

DNEL

Systemic effects Long term Workers inhalation = 500 (mg/m<sup>3</sup>)  
Systemic effects Long term Workers dermal = 888 (mg/kg bw/day)  
Systemic effects Long term Consumers inhalation = 89 (mg/m<sup>3</sup>)  
Systemic effects Long term Consumers dermal = 26 (mg/kg bw/day)  
Systemic effects Long term Consumers oral = 26 (mg/kg bw/day)  
PNEC  
Sweet water = 140,9 (mg/l)  
sediment Sweet water = 552 (mg/kg/sediment)  
Sea water = 140,9 (mg/l)  
sediment Sea water = 552 (mg/kg/sediment)  
intermittent emissions = 140,9 (mg/l)  
STP = 2251 (mg/l)  
ground = 28 (mg/kg ground)

- Substance: 1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone

DNEL

Systemic effects Long term Workers inhalation = 1,76 (mg/m<sup>3</sup>)  
Systemic effects Long term Workers dermal = 1,73 (mg/kg bw/day)  
Systemic effects Short term Workers inhalation = 1,76 (mg/m<sup>3</sup>)  
Systemic effects Short term Workers dermal = 1,73 (mg/kg bw/day)  
PNEC  
Sweet water = 0,0028 (mg/l)  
sediment Sweet water = 3,73 (mg/kg/sediment)  
Sea water = 0,00028 (mg/l)  
sediment Sea water = 0,75 (mg/kg/sediment)  
ground = 0,705 (mg/kg ground)

- Substance:  $\alpha$ -Hexylcinnamaldehyde

DNEL

Systemic effects Long term Workers inhalation = 0,000078 (mg/m<sup>3</sup>)  
Systemic effects Short term Workers inhalation = 0,00628 (mg/m<sup>3</sup>)  
PNEC  
Sweet water = 0,03 (mg/l)  
sediment Sweet water = 47,7 (mg/kg/sediment)  
Sea water = 0,003 (mg/l)  
sediment Sea water = 4,77 (mg/kg/sediment)  
ground = 9,51 (mg/kg ground)



**8.2. Exposure controls**

Appropriate engineering controls:  
Private households (= general public = consumers):  
No specific checks planned

Public domain (administration, education, entertainment, services, craftsmen):  
No specific monitoring foreseen

Individual protection measures:

(a) Eye / face protection  
Wear safety goggles to EN-166

(b) Skin protection

(i) Hand protection  
Handle with gloves. Gloves must be checked before use. Use a technique suitable for removing gloves (without touching the outer surface of the glove) to avoid the skin contact with this product. Dispose of contaminated gloves after use in accordance with current legislation and good laboratory practices. Wash and dry your hands. The selected protective gloves have to satisfy the requirements of EU directive 89/686 / EEC and the resulting EN 374 standards.

Full contact

Material: Nitrile rubber

minimum thickness: 0.11 mm

breakthrough time: 480 min

The choice of an appropriate glove depends not only on the material but also on other quality characteristics which vary from one manufacturer to another.

For the choice of the type of gloves to use, consult the supplier / manufacturer of the gloves.

Observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

(ii) Other  
Avoid direct contact with the skin  
Better is to use cotton antistatic clothing

(c) Respiratory protection  
Work in a sufficiently ventilated to avoid inhaling the product.

(d) Thermal hazards  
No hazard to report

Environmental exposure controls:

Use according to good working practices to avoid pollution into the environment.

**SECTION 9. Physical and chemical properties****9.1. Information on basic physical and chemical properties**

| Physical and chemical properties | Value                           | Determination method |
|----------------------------------|---------------------------------|----------------------|
| Appearance                       | Aerosol                         |                      |
| Colour                           | colorless liquid under pressure |                      |
| Odour                            | characteristic                  |                      |



| Physical and chemical properties             | Value                  | Determination method |
|--|------------------------|----------------------|
| Odour threshold                              | not determined         |                      |
| pH   | not determined         |                      |
| Melting point/freezing point                 | < -100 °C (liquid gas) |                      |
| Initial boiling point and boiling range      | > -42 °C (liquid gas)  |                      |
| Flash point                                  | < -80 °C (liquid gas)  | ASTM D92             |
| Evaporation rate                             | not determined         |                      |
| Flammability (solid, gas)                    | flammable              |                      |
| Upper/lower flammability or explosive limits | 9,5% vol / 1,8% vol    |                      |
| Vapour pressure                              | 3,2 bar                |                      |
| Vapour density                               | > 2 (liquid gas)       |                      |
| Relative density                             | 0,65 kg/l              |                      |
| Solubility                                   | fat soluble            |                      |
| Water solubility                             | not determined         |                      |
| Partition coefficient: n-octanol/water       | not determined         |                      |
| Auto-ignition temperature                    | > 400 °C               |                      |
| Decomposition temperature                    | not determined         |                      |
| Viscosity                                    | not determined         |                      |
| Explosive properties                         | not explosive          |                      |
| Oxidising properties                         | non-oxidizing          |                      |
| Container volume                             | 520 ml / 210 ml        |                      |
| Product volume                               | 400 ml / 150 ml        |                      |
| Pressure to 20°C                             | 3,2 bar                |                      |
| Deformation pressure                         | 16,5 bar               |                      |
| Burst pressure of the container              | 18 bar                 |                      |
| Flash point of liquid phase                  | < 21 °C                |                      |
| Propellant inflammability                    | < 0 °C                 |                      |

**9.2. Other information**

Content of VOC ready to use condition: 98,48 %

**SECTION 10. Stability and reactivity****10.1. Reactivity**

No reactivity hazards

**10.2. Chemical stability**

No hazardous reaction when handled and stored according to provisions.

**10.3. Possibility of hazardous reactions**

There are no hazardous reactions

**10.4. Conditions to avoid**

Avoid heating the product, it could explode.

Avoid contact with combustible materials. The product could catch fire.

heat, open flames, sparks or hot surfaces.

The aerosol product is stable for a period exceeding 36 months and in normal storage conditions can not take place dangerous reactions as the container is almost hermetically sealed.

To avoid that the metal container can deteriorate, keep away from acidic or basic products. Attention to the heat as temperatures exceeding 50 ° C has increased pressure inside the container that gets to deformation of the cylinder until the outbreak.

**10.5. Incompatible materials**

It can generate inflammable gases to contact with elementary metals, nitrides, strong reducing agents.

It can generate toxic gases to contact with oxidants mineral acids, organic peroxides, organic water peroxides.

It can ignite in contact with oxidants mineral acids, organic nitrides, peroxides and water peroxides, strong oxidants agents.

**10.6. Hazardous decomposition products**

Does not decompose when used for intended uses.

**SECTION 11. Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

ATE(mix) oral = ∞

ATE(mix) dermal = ∞

ATE(mix) inhal = ∞

(a) acute toxicity: ethanol: LD50 Oral-rat-7.060 mg/kg

Remarks: Lungs, Thorax, or Respiration: Other changes.

LC50 Inhalation-rat-10:0-20000 ppm

1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone: TOXIC DOSE 1-LD > 50 5000 mg/kg (oral rat)

TOXIC DOSE 2-LD > 50 5000 mg/kg (skn-rbt)

α-Hexylcinnamaldehyde: Oral (rat) LD50: 2450 mg/kg

4-tert-Butylcyclohexyl acetate: Rats (10 per dose, sex and strain not reported) were administered 4-tert-butylcyclohexyl acetate by gavage at 5000 mg/kg-bw. No information on mortality was reported

Rabbits (4, sex and strain not reported) were administered 4-tert-butylcyclohexyl acetate dermally at 5000 mg/kg-bw. One rabbit died.

(b) skin corrosion/irritation: ethanol: Skin-rabbit

Result: Irritating to skin. -12:0 am

Propan-2-ol: Skin-rabbit

Result: Mild skin irritation

4-tert-Butylcyclohexyl acetate: Rabbits (species, sex and number not specified) were administered

4-tert-butylcyclohexyl acetate dermally to the ears and backs. Observations of the backs included slight erythema after 1 and 5 min, severe erythema and slight edema at 15 min, and severe erythema and edema at 20 hours. On day 8, slight redness and severe scaling were observed. Observations of the ears included severe erythema and edema with blistering after 20 hours. Severe necrosis was recorded on day 8. (Bhatia, S.P., et al., Food and Chemical Toxicology 46 (2008) S36-S41) 4-tert-Butylcyclohexyl acetate was irritating to rabbit skin

(c) serious eye damage/irritation: If brought into contact with eyes, the product, causes significant irritations which may last for more than 24 hours.

ethanol: Eyes-rabbit

Result: Mild eye irritation-12:0 am

(Draize Test)

Propan-2-ol: Eyes-rabbit

Result: Eye irritation- 24 h

4-tert-Butylcyclohexyl acetate: Albino rabbits (3/sex dose not specified) were instilled 0.1 mL aliquot of 0.625%

solution (vehicle not reported) into the right eye of each rabbit with no further treatment while the left eye served as control. Scores were recorded according to the Draize scale. Slight to moderate irritation with conjunctival chemosis and discharge were observed in all three rabbits (mean score for redness and 1.9 for 1 chemosis). All eyes cleared by day 4. (Bhatia, S.P., et al., Food and Chemical Toxicology 46 (2008) S36-S41) 4-tert-Butylcyclohexyl acetate was irritating to rabbit eyes.

(d) respiratory/skin sensitization: The product, if brought into contact with skin can cause skin sensitization.

(e) germ cell mutagenicity: 4-tert-Butylcyclohexyl acetate: Salmonella typhimurium strains TA98, TA100, TA1535, TA1537 and Ta 1538 were exposed to 4-tert-butylcyclohexyl acetate at 8 to 5000 g/plate in a bacterial reverse mutation assay in the presence and absence of metabolic activation. Positive and negative controls were used but their response was not provided. Cytotoxicity was observed at and above 200 g/plate.

4-tert-Butylcyclohexyl acetate was not mutagenic in this assay.

(f) carcinogenicity: based on available data, the classification criteria are not met.

(g) reproductive toxicity: ethanol: Reproductive toxicity-Human-female-Oral

Effects on Newborn: Apgar score (human only). Effects on Newborn: Other measures or neonatal effects.

Effects on Newborn: Drug dependence.

(h) specific target organ toxicity (STOT) single exposure: based on available data, the classification criteria are not met.

(i) specific target organ toxicity (STOT) repeated exposure 4-tert-Butylcyclohexyl acetate: In a modified developmental toxicity screening test (OCED TG 421), Crl: CD pregnant (SD) rats were administered 4-tert-butylcyclohexyl acetate (a mixture of 71% 28% trans and cis) in corn oil by gavage at 0, 40, 160 or 640 mg/kg-bw per day during gestation days 7-20. Rats were Caesarean-sectioned on day 21 of gestation and examined for number and distribution of corpora lutea, implantation sites and placenta. Live and dead fetuses and early and late resorptions were recorded. Fetuses were examined for sex ratio, gross external alterations and skeletal and soft tissue alterations. There were no effects on maternal body weights, weight gain, food consumption or organ weights. Pup viability, body weights, external observations and microscopic examination showed no significant alterations that could be related to the administration of the test substance.

NOAEL (maternal or developmental toxicity) = 640 mg/kg-bw/day (based on no effects at the highest dose tested)

(j) aspiration hazard: based on available data, the classification criteria are not met.

Related to contained substances:

Butane:

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 658

Isobutane:

LD50 (rat) Oral (mg/kg body weight) = 570000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 570000

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 658000

Propane:

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 410000

ethanol:

ROUTES of EXPOSURE: the substance can be absorbed into the body by inhalation of its fumes and ingestion.

INHALATION RISK: A harmful contamination of the air will be reached quite slowly due to evaporation of the substance at 20 C.

Effects of short-term exposure: the substance is irritating to the eyes. Inhalation of high vapour can cause irritation of the eyes and respiratory tract. The substance may cause effects on the central nervous system effects of

REPEATED EXPOSURE or long term: the liquid degreasing the skin features. The substance may have an effect on the high central nervous system respiratory tract, causing irritation, headaches, fatigue and lack of concentration. See Notes.

ACUTE HAZARDS/Symptoms INHALATION Cough. Headaches. Fatigue. Drowsiness.

CUTE CUTE.

EYE Redness. Pain. Burning.

SWALLOWED burning sensation. Headaches. Confusion. Vertigo. State of unconsciousness.

NOT and consumption of ethanol during pregnancy can have adverse effects on the unborn child. Chronic ethanol ingestion can cause cirrhosis of the liver.

LD50 (rat) Oral (mg/kg body weight) = 7060

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 20000

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 20000

Propan-2-ol:

ROUTES of EXPOSURE: the substance can be absorbed into the body by inhalation of its fumes.

INHALATION RISK: A harmful contamination of the air will be reached quite slowly due to evaporation of the substance at 20 C; However, for spraying or scattering, much more quickly.

Effects of short-term exposure: the substance is irritating to the eyes and the respiratory tract the substance may cause effects on the central nervous system, causing depression. Much greater exposure to the OEL may lead to unconsciousness.

Effects of REPEATED EXPOSURE or long term: the liquid degreasing the skin features.

ACUTE HAZARDS/Symptoms INHALATION Cough. Vertigo. Drowsiness. Headaches. Sore throat. See If Swallowed. CUTE CUTE.

EYE Redness.

INGESTION abdominal pain. Difficulty in breathing. Nausea. State of unconsciousness. Vomiting. (Further see inhalation).

N O T and use of alcoholic beverages enhances the harmful effect.

LD50 (rat) Oral (mg/kg body weight) = 2100

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2100

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 29

1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone:

LD50 (rat) Oral (mg/kg body weight) = 5000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000

$\alpha$ -Hexylcinnamaldehyde:

LD50 (rat) Oral (mg/kg body weight) = 2450

4-tert-Butylcyclohexyl acetate:

LD50 (rat) Oral (mg/kg body weight) = 5000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000

## 11.2. Information on other hazards

No data available.

## SECTION 12. Ecological information

### 12.1. Toxicity

Related to contained substances:

Butane:

C(E)L50 (mg/l) = 7,71

Isobutane:

C(E)L50 (mg/l) = 7,71

Propane:

C(E)L50 (mg/l) = 7,71

ethanol:

C(E)L50 (mg/l) = 11200

Propan-2-ol:

Toxicity to fish LC50-Pimephales promelas (fathead minnow)-9, 640.00 mg/l-96 h

Toxicity to daphnia and other aquatic invertebrates

-EC50 Daphnia magna (Water flea)-5, 102.00 mg/l- 24 h  
EC50 Immobilization-Daphnia magna (Water flea)-6.851 mg/l- 24h  
C(E)L50 (mg/l) = 5102

1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone:  
Endpoint: LC50 species: lepomis macrochirus (fish-salt Bluegrill) = 1.30 mg/l-h Duration: 96-Note:: method: OECD 203 TG  
Endpoint: EC50-species: Daphnia magna (Water flea) = 1.38 mg/l-h Duration: 48-comments:: semi-static test method: OECD TG 202  
Endpoint: EC50 Desmodesmus subspicatus-species (green algae) = 2.60 mg/l-h Duration: 72-  
Note:: static test method: OECD TG201  
C(E)L50 (mg/l) = 1,3

$\alpha$ -Hexylcinnamaldehyde:  
Freshwater Fish Toxicity: acute LC50 >1-10 mg/L  
Freshwater Invertebrates Toxicity: acute EC <1 mg/L  
Algal Toxicity: acute EC <1 mg/L.  
C(E)L50 (mg/l) = 0,99

4-tert-Butylcyclohexyl acetate:  
Golden ide (Leuciscus idus) were exposed to 4-tert-butylcyclohexyl acetate at nominal concentrations of 0, 10, 13, 16 and 20 mg/L under static conditions for 48 hours. EF Marlowet was used as a solubilizer. Mortality was 0, 10, 100 and 80% at 10, 13, 16 and 20 mg/L.  
48-h LC50 = 14 mg/L  
Water fleas (Daphnia magna) were exposed to 4-tert-butylcyclohexyl acetate at nominal concentrations of 2.8 to 28.4 mg/L (measured concentrations, 2.4 to 28.4 mg/L) under static conditions for 48 hours.  
48-h EC50 = 23.4 mg/L  
C(E)L50 (mg/l) = 14

Use according to good working practices to avoid pollution into the environment.

## 12.2. Persistence and degradability

No data available.

## 12.3. Bioaccumulative potential

No data available.

## 12.4. Mobility in soil

No data available.

## 12.5. Results of PBT and vPvB assessment

No PBT/vPvB ingredient is present

## 12.6. Endocrine disrupting properties

No data available.

**12.7. Other adverse effects**

No adverse effects

**SECTION 13. Disposal considerations****13.1. Waste treatment methods**

The waste must be disposed of in compliance with the regulations in force delivering empty containers for final disposal and equipped to safely handle pressurized containers containing flammable liquids and gas waste. The empty container heated to temperatures exceeding 70 ° C can burst.

Recover if possible. Send to authorized discharge plants or for incineration under controlled conditions. Operate according to local and National rules in force

**SECTION 14. Transport information****14.1. UN number or ID number**

ADR/RID/IMDG/ICAO-IATA: 1950

ADR exemption because compliance with the following characteristics:

Combination packagings: per inner packaging 1 L per package 30 Kg

Inner packagings placed in shrink-wrapped or stretch-wrapped trays: per inner packaging 1 L per package 20 Kg

**14.2. UN proper shipping name**

ADR/RID/IMDG: AEROSOL infiammabili

ADR/RID/IMDG: AEROSOL flammable

ICAO-IATA: AEROSOL flammable

**14.3. Transport hazard class(es)**

ADR/RID/IMDG/ICAO-IATA: Class : 2

ADR/RID/IMDG/ICAO-IATA: Label : Limited quantities

ADR: Tunnel restriction code : D

ADR/RID/IMDG/ICAO-IATA: Limited quantities : 1 L

IMDG - EmS : F-D, S-U

**14.4. Packing group**

ADR/RID/IMDG/ICAO-IATA: --

**14.5. Environmental hazards**

ADR/RID/ICAO-IATA: Product is not environmentally hazardous

IMDG: Marine polluting agent : Not

**14.6. Special precautions for user**

No data available.

**14.7. Maritime transport in bulk according to IMO instruments**

It is not intended to carry bulk

**SECTION 15. Regulatory information**

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

Seveso category:

P3a - FLAMMABLE AEROSOLS

REGULATION (EU) No 1357/2014 - waste:

HP3 - Flammable

**15.2. Chemical safety assessment**

The supplier has made an assessment of chemical safety

**SECTION 16. Other information****16.1. Other information**

Description of the hazard statements exposed to point 3

H220 = Extremely flammable gas.

H280 = Contains gas under pressure; may explode if heated.

H225 = Highly flammable liquid and vapour.

H319 = Causes serious eye irritation.

H336 = May cause drowsiness or dizziness.

H315 = Causes skin irritation.

H317 = May cause an allergic skin reaction.

H411 = Toxic to aquatic life with long lasting effects.

Classification based on data of all mixture components

Main normative references:

Directive 1999/45/EC

Directive 2001/60/EC

Regulation 1272/2008/EC

Regulation 2010/453/EC

\*\* The information contained herein is based on our knowledge at the date above.

Related solely to the product and do not constitute a guarantee of a particular quality.

It is the duty of the user to ensure that these are appropriate and complete information regarding the specific use intended.

This data sheet cancels and replaces any previous edition.