

**1 - Identification of the substance/mixture and of the company/undertaking**

**1.1 - Product identifier:** 41395 1200mm I Beam Level  
**1.1.1 Chemical product:** **Substance**  
**1.1.2 Trade name:**  
**1.1.3 REACH Registration name:** Decane  
**1.1.4 REACH Registration number:** 01-2119474199-26-xxxx  
**1.1.5 CE No.:** 204-686-4  
**1.1.6 CAS No. :** 124-18-5

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

**1.2.1 Relevant identified uses:** **Solvent**  
**Raw material for synthesis processes in the chemical industry**

**1.2.2 Main sector of use:**

• **Industrial use:**

Manufacture (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC15, ERC1, ERC4)

Distribution of Substance (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15, ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7)

Formulation & (Re)packing of Substances and Mixtures (PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15, ERC2, SU10)

Use as component in Cleaning Agents (PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13, ERC4)

Use as lubricant (PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17, PROC18, ERC4, ERC7)

Use in Laboratories (PROC10, PROC15, ERC2, ERC4)

Polymer processing (PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC13, PROC14, PROC21, ERC4)

Use in Metal Working Fluids/Rolling Oils (PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17, ERC4)

Use as a fuel (PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16, ERC9a, ERC9b)

• **Professional use:**

Use as component in Cleaning Agents (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, ERC8a, ERC8d)

Use in Laboratories (PROC10, PROC15, ERC8a)

• **Consumer use:**

Use in Cleaning Agents (PC3, PC4, PC8, PC9a, PC9b, PC9c, PC24, PC35, PC38, ERC8a, ERC8d)

Use as lubricant (PC1, PC24, PC31, ERC8a, ERC8d)

Use as a fuel (PC13, ERC9a, ERC9b)

Other Consumer Uses (PC28, PC39, ERC8a, ERC8d)

**1.2.3 Uses advised against:** **This product is not recommended for any industrial, professional or consumer use other than the Identified Uses above.**

**1.3 - Details of the supplier of the safety data sheet:**



Draper Tools Ltd  
Hursley Road  
Chandler's Ford  
Eastleigh  
Hampshire  
SO53 1YF  
Draper Helpline +44 (0) 23 8049 4344

**1.4 - Emergency number:** Draper Helpline +44 (0) 23 8049 4344

**2 - Hazards identification**

**2.1 - Classification of the substance or mixture**



**2.1.1 Classification according to Regulation (EC) no. 1272/2008**

|                         |  |  |
|-------------------------|--|--|
| <b>Classification</b>   | Flammable<br>Category 3  | Aspiration toxicity<br>Category 1  |
| <b>GHS Pictograms</b>   | <br>GHS02 | <br>GHS08 |
| <b>Signal word</b>      | Warning  | Hazard   |
| <b>Hazard statement</b> | H226: Flammable liquid and vapor   | H304: May be fatal if swallowed and enters airways   |

In compliance with Article 2 paragraph 5 of the Regulation (EU) no. 453/2010, is shown below the Classification of the substance in accordance with Directive 67/548/CEE: Xn-R10, R65,R66.  
See Section 16 for full text of the R-Phrases.

**2.2 - Label elements**

**2.2.1 Labelling according to Regulation (EC) No. 1272/2008**

|   |   |  |
|---|---|--|
| <b>Classification</b>                       | Aspiration toxicity<br>Category 1   | Flammable Liquid<br>Category 3   |
| <b>GHS Pictograms</b>                       | <br>GHS08  | <br>GHS02 |
| <b>Signal word</b>                          | Hazard  |  |
| <b>Hazard statement</b>                     | H304: May be fatal if swallowed and enters airways<br>EUH066: Repeated exposure may cause skin dryness or cracking  | H226: Flammable liquid and vapor   |
| <b>Precautionary statement - Prevention</b> | <b>P210: Keep away from heat/sparks/open flames/hot surfaces. — No smoking</b><br><b>P233: Keep container tightly closed</b><br><b>P240: Ground/bond container and receiving equipment</b><br><b>P241: Use explosion-proof electrical/ventilating/lighting equipment</b><br><b>P242: Use only non-sparking tools</b><br><b>P243: Take precautionary measures against static discharge</b><br><b>P280: Wear protective gloves/protective clothing/eye protection/face protection</b> |  |
| <b>Precautionary statement - Response</b>   | <b>P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician</b><br><b>P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.</b><br><b>Rinse skin with water/shower</b><br><b>P331: Do NOT induce vomiting</b><br><b>P370 + P378: In case of fire: Use chemical powder or foam for extinction</b>  |  |
| <b>Precautionary statement - Storage</b>    | <b>P403 + P235: Store in a well-ventilated place. Keep cool</b><br><b>P405: Store locked up</b>   |  |
| <b>Precautionary statement - Disposal</b>   | <b>P501: Dispose of contents/container to an approved waste disposal plant</b>  |  |

**NOTE:** Highlight precautionary statement more important according to supplier, the other are optional. Provided for Regolament (CE) n.1272/2008 Articol 28 paragraph 3, show no more than six precautionary statement.

**CONTAINS:** Decane

**2.3 - Other hazards**

HEALTH RISKS: May be fatal if swallowed and enters airways. Repeated exposure may cause skin dryness or cracking.

PHYSICAL AND CHEMICAL HAZARDS/FIRE AND EXPLOSION HAZARD: The substance is flammable.

ENVIRONMENTAL HAZARDS: Harmful to aquatic life with long lasting effects.

### 2.3.1 Other




#### Results of PBT and vPvB assessment:

Results of Decane:

PBT assessment: Based on available data this substance does not fulfil the classification criteria.

## 3 - Composition/Information on ingredients

### 3.1 - Substance

| Substances | Registration No.              | CAS No.<br>CE No.<br>INDEX No. | Classification<br>according to<br>Directive 67/548/EC   | Classification according to<br>Regulation (EC) no. 1272/2008   | %    |
|------------|-------------------------------|--------------------------------|---|--|------|
| Decane     | 01-<br>2119474199-<br>26-xxxx | 124-18-5<br>204-686-4<br>--    | <br>Xn;<br>R10-R65-R66 |  <br>Flam. Liq. 3,H226<br>Asp. Tox. 1,H304<br>EUH066 | > 99 |

Description of risk phrases (67/548/CE)

R10-Flammable

R65-Harmful: may cause lung damage if swallowed. R66-

Repeated exposure may cause skin dryness or cracking

Note 4 of annexe 1 may be applied. Kinematic viscosity at 40°C < 7 cSt

Description of hazard statements (1272/2008)

H226-Flammable liquid and vapor

H304-May be fatal if swallowed and enters airways EUH066-

Repeated exposure may cause skin dryness or cracking

Classified as harmful owing to the aspiration hazard. Category 1: hydrocarbon with kinematic viscosity at 40°C lower than 20,5 mm<sup>2</sup>/s.

### 3.2 - Mixture

Not applicable. This product is a substance.

## 4 - First aid measures

### 4.1 - Description of first aid measures

In case of incident, consult a doctor, providing the information contained on the label and in this sheet. The medication and use of medical equipment shall be carried out under strict control of the medical personnel. The first intervention – in case of accident – shall be carried out by trained and skilful personnel in order to avoid further complications or damage to the injured person. If the injured person is in a fainting state, do not supply beverages or administer any medicine by mouth. Move away the victim from the accident area, remove all contaminated clothes and the victim in a warm and well-ventilated place until symptoms disappear.

Rescuers protection: do not embark on any action this will entail any personal risk or without suitable training. Practice mouth-to-mouth resuscitation may be dangerous to rescuer.

Rescue personnel should wear appropriate personal protective equipment.

#### 4.1.1 Inhalation

In case of inhalation of overheated product, administer first aid as follows:

move the casualty to a well-ventilated area and keep in the recovery position to aid breathing. In case lack, difficult or breathing arrest, practice mouth-to-mouth resuscitation or administer oxygen of the medical personnel. Practice mouth-to-mouth resuscitation may be dangerous to rescuer. Contact an medical assistance if advice effects to heal persist or are very serious. If the casualty is unconscious, place in the recovery position, and seek immediate medical attention. Ensure adequate ventilation. Loosen tight clothed like collars, ties, belts or bands.

#### 4.1.2 Accidental eye contact

In case of eye contact, rinse thoroughly with plenty of water, holding eyelids upper and lower apart to ensure thorough rinsing for at least 15 minutes. Remove contact lenses, if present and easy to do so. If irritation occurs, contact an ophthalmologist.

#### 4.1.3 Accidental skin contact

In case of skin contact, rinse thoroughly the affected area with plenty of water and soap. Remove contaminated clothing and shoes. If skin irritation persists, seek medical advice. Clean contaminated clothes before use. Clean contaminated shoes before use.

#### 4.1.4 Ingestion

In case the product is accidentally ingested, **do not induce vomiting**, call a doctor immediately. Call a poison control centre or doctor for treatment advice. Rinse mouth with water. Remove any dental prosthesis. Move the casualty to a well-ventilated area and keep in the recovery position to aid breathing. In case the product is accidentally ingested, if the casualty is conscious, turn to drink small water quantity. Stopped if the casualty feel sick, because the vomit may be dangerous. Risk to inhalation if ingested. May enter in the lungs and cause damage. In case the casualty vomiting, the head should keep lower so that do not entry in the lungs. If the casualty is unconscious do not give any to oral. If the casualty is unconscious, place in the recovery position, and seek immediate medical attention. Ensure adequate ventilation. Loosen tight clothes like collars, ties, belts or bands.

### 4.2 - Main symptoms and effects, both acute and delayed

#### Potential acute effects on the health:

Accidental eye contact: Not available main effects or critical danger.

Inhalation: Not available main effects or critical danger.

Accidental skin contact: Not available main effects or critical danger.

Ingestion: May be lethal in case the product is accidentally ingested and enter into the respiratory tract

#### Signal/Symptom of overexpose:

Accidental eye contact: Not available specific data.

Inhalation: Not available specific data.

Accidental skin contact: Not available specific data.

Ingestion: Negative symptom may include the following: nausea or vomit.

### 4.3 - Indication of any immediate medical attention and special treatment

Notes for doctors: Treat symptomatically. In case the product is accidentally ingested or inhalation large quantity, call a poison control centre immediately.

Specific treatment: Not available specific data.

## 5 - Fire-fighting measures

### 5.1 - Exstinguishing media

The product is flammable.

#### 5.1.1 Suitable extinguishing media

Water fog, dry chemical products, foam, carbon dioxide (CO<sub>2</sub>).

#### 5.1.2 Unsuitable extinguishing media

Avoid direct jets of water.

### 5.2 - Special hazard deriving from the substance or mixture

Hazard deriving from the substance: Liquid and vapour flammable. In case of fire or overheated product, happen an pressure increase and the container may be explode. The vapour/gas phase is heavier than air, it may distribute on the ground. Their vapours may be accumulate in down or close areas or move at considerable distance as far as source of combustion and cause re-ignite. Spill on sewer system may be cause fire or explosive risk

Hazardous decomposition products: As a result of the product total combustion, one of the following formations may occur: carbon dioxide (CO<sub>2</sub>), carbon monoxide.

### 5.3 - Advice for firefighters

Equip the fire-fighters with the following protective equipment:

- Heat-resistant and flameproof suit
- Helmet with visor or hood with shield
- Fire-resistant gloves

- Fire-resistant shoes
- Self-contained breathing apparatus or anti-gas mask
- Mask with filter against acids and/or organic vapours with regard to the risks reported in the previous items, the fire size and its localization (open/closed place)
- Suitable fire-fighting protective equipment

Special actions for firefighters protection : Isolate the area promptly keep away evacuate the people than the accident zone in case of fire. Do not embark on any action this will entail any personal risk or without suitable training. Move containers far from fire area if is possible without risk. Use water spray to cool fire exposed surfaces.

Special equipment for firefighters: protection : The fire-fighters must be wear protective equipment and self-contained breathing apparatus (SCBA) at positive pressure with face shield. The protective equipment for the fire-fighters (included helmets, protective boots and gloves) in accordance with european rule EN 469 ensure base level protection for chemical accident.

Extinguishing means : Block any ignition source. If the fire can not out, move away and leave fire to extinguish. Use use atomised water to avoid overheating of containers exposed to the fire.

## 6 - Accidental release measures

### 6.1 - Personal precautions, protective equipment and emergency procedures

Measures to be taken in case of spill of the product:

- Spillage of small entities: stop the leak if without risk. Adsorb spillage with non-combustible materials. Collect in suitable containers and dispose of according to local regulations. Take precautionary measures against electrostatic discharges.
- Spillage of large entities: dike for ahead of liquid spill for later recovery accidental and disposal according to local regulations. Prevent leakage into waterways, sewers, basements of confined areas.

#### 6.1.1 For non-emergency personnel

In case of accidental release of the product, use the following personal protective equipment:

- wear suitable personal protective equipment
- keep away from flames and sparks. Do not smoke.
- do not embark on any action this will entail any personal risk or without suitable training
- evacuate the neighbouring areas
- obstruct unauthorised people entry and not protected
- do not touch or walk on the spilled material
- stop any ignition sources
- no candles, cigarettes or flame in dangerous area
- avoid to breath vapours or mist
- ensure adequate ventilation
- in case of inadequate ventilation wearing self-contained breathing apparatus

#### 6.1.2 For emergency responders

During interventions use:

- if the spillage claim personal protective equipment, see any information in the paragraph 8 for suitable and unsuitable materials
- see also paragraph 6.1.1

### 6.2 Environmental precautions

In case of accidental release/spill:

- intervene to remove or detect the spill and apply the procedures of containment and recovery according to the indications reported in paragraph 6.3.
- avoid waste and downflow spill of material and contact with soil, waterways, drains and sewers
- notify the competent authorities if the product cause environmental pollution (drains, river, soil or air)

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

Slight spills:

- stop the leak if it can be done without risk
- move containers than the spilling area

- dilute to water down and adsorb if is water-soluble
- alternative, or if is water insoluble, adsorb with an dry and inert material and dispose in containers for proper waste disposal
- use spark-proof tools and explosion proof equipment
- disposal through authorized company for waste disposal

Large spills:

- stop the leak if it can be done without risk
- move containers than the spilling area
- draw near the emission source windward
- prevent discharge into sewers, waterways, skirting board or circumscribed zones
- wash the quantity spills into waste treatment system or proceedings as following procedures
- contain and absorb the spilled material with an not combustible material as: sand, earth, vermiculite, diatomite, and collect it in a container to be disposed of according to local or national directives (see section 13)
- use spark-proof tools and explosion proof equipment
- disposal through authorized company for waste disposal
- contaminated absorbent material may cause the same dangerous than material spill

Note: see Section 1 for information about contacts in emergency case and section 13 for information about disposal.

#### 6.4 - Reference to other sections

See paragraph 1 for emergency numbers.

See Section 8 for information on personal protection equipment.

Refer to paragraph 13 for further information about disposal.

## 7 - Handling and Storage

### 7.1 - Precautions for safe handling

#### 7.1.1 Recommendations for handling

Instructions for safety handling:

- ensure adequate ventilation
- wear protective clothing
- do not breath vapours or aerosol
- keep away from flames and sparks. Do not smoke.
- wearing personal protection equipment (see section 8)
- do not swallow
- avoid contact with eyes, skin and clothing
- avoid to breath vapours or mist
- in case of inadequate ventilation wearing self-contained breathing apparatus
- no access to storage areas and confined spaces unless adequately ventilated
- keep in original container or in alternative container approved and maked by compatible material, keep saled closed when do not use

Measures to prevent fire:

- avoid accumulation of electrostatic charges
- the product can not be used in areas where there are lights and other sources of ignition
- use explosion-proof electrical (ventilating, lighting and material handling)
- use only non-sparking tools
- empty containers retain product residue and can be dangerous
- do not reused the container

#### 7.1.2 Advice on general occupational hygiene

During handling use the protective equipment reported in paragraph 8 of this sheet and follow the following procedures:

- do not eat, drink and smoke in the handling, storage or treatment areas
- personnel who using the product must washing hands before eat, drink and smoke
- take off contaminated clothes and protective equipment before enter into cafeteria
- for further information about personal hygiene see also section 8

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

Observe the following precautions when storing the product:

- keep the product chemical-physical characteristics in mind to avoid any interactions with other products (see paragraph 10)
- storage in according to law in force
- keep in original container the light of the sun protected in dry, cool and well-ventilated area, far from other incompatible materials and from food and drink
- store locked up
- stop any combustion sources
- separate from oxidizing materials
- keep container hermetically sealed until just use
- opened containers must be carefully reseal and upright to avoid product accidental spill
- do not store in containers without labelling
- use suitable containers to avoid ambient pollution

German storage class (TRGS 510): 10; combustible fluids not present in Storage Class 3.

Suitable materials and coating: Carbon Steel, Stainless Steel, Polyethylene, Polypropylene, Polyester Teflon.

Non-suitable materials and coating: Natural rubber, Butyl Rubber, EPDM rubber, Polystyrene.

The compatibility with plastic materials may change; it is advisable to check it before use. Usual shipping containers: tank wagons, road tankers, drums and canisters.

The containers, included the empty ones already used, shall be kept in ventilated places at a room temperature between  $-5$  e  $50^{\circ}\text{C}$ , with the safety closure device enabled.

OTHER WARNINGS: Empty containers retain residue and can be dangerous. Continue to follow all the precautions.

## 7.3 - Specific end uses

Look up identified uses in paragraph 1 for informations about protective equipment and operative condition to provide specific informations available into the exposure scenery (if available).

## 8 - Exposure control and personal protection

*The following information refers to the industrial handling of the product.*

This paragraph contain informations and general advice. Look up identified uses in paragraph 1 for informations about protective equipment and operative condition to provide specific informations available into the exposure scenery.

Use the product according to the indications reported in this sheet, paying particular attention to the indications contained in paragraph 7.1. Use the protective equipment described in the following paragraph 8.2.

It is recommended an air extraction system when the product is in confined spaces as well as it is heated at a temperature higher than the room temperature.

The Safety Data Sheet (SDS) is an informative document that takes into account the chemical nature of a hazardous substance or mixture and the negative effects it may cause.

PPE stands for Personal Protective Equipment and shall be compulsorily used when facing a "Residual Risk". The "Residual Risk" belongs to a working situation and it is tightly linked to the conditions in the working environment and the organization of the work. The references to the PPE to be used – contained in the Safety Data Sheet – can only be informative, they cannot hence go beyond the limits imposed by the attributions of responsibilities.

The responsibility of choice of the suitable PPE according to the risk conditions in the working environment shall be on the EMPLOYER.

### 8.1 - Control parameters

Exposure limits for decane present:

TLV-TWA (8h.):  $1200 \text{ mg/m}^3$  EU OEL (Europe).

### Recommend Monitoring Procedures

If this product contain ingredients with exposure limits, could requested personal monitoring, of work atmosphere and biological to determined ventilated efficacy or other control measures and/or need to wearing self-contained breathing apparatus. Do reference to European Standard EN 689 for methods to exposure inhalation of chemical products valuation and guide lines to determined hazard substances.

## DERIVED NO EFFECT LEVEL (DNEL)

### Decane:

|   |                     |                             |
|---|---------------------|-----------------------------|
| Workers, Dermal, Acute/short-term exposure      | - Systemic effects: | Not relevant/not applicable |
| Workers, Inhalation, Acute/short-term exposure  | - Systemic effects: | Not relevant/not applicable |
| Workers, Dermal, Acute/short-term exposure      | - Local effects:    | Not relevant/not applicable |
| Workers, Inhalation, Acute/short-term exposure  | - Local effects:    | Not relevant/not applicable |
| Workers, Dermal, Long-term exposure             | - Systemic effects: | Not relevant/not applicable |
| Workers, Inhalation, Long-term exposure         | - Systemic effects: | Not relevant/not applicable |
| Workers, Dermal, Long-term exposure             | - Local effects:    | Not relevant/not applicable |
| Workers, Inhalation, Long-term exposure         | - Local effects:    | Not relevant/not applicable |
| Consumer, Dermal, Acute/short-term exposure     | - Systemic effects: | Not relevant/not applicable |
| Consumer, Inhalation, Acute/short-term exposure | - Systemic effects: | Not relevant/not applicable |
| Consumer, Oral, Acute/short-term exposure       | - Systemic effects: | Not relevant/not applicable |
| Consumer, Dermal, Acute/short-term exposure     | - Local effects:    | Not relevant/not applicable |
| Consumer, Inhalation, Acute/short-term exposure | - Local effects:    | Not relevant/not applicable |
| Consumer, Dermal, Long-term exposure            | - Systemic effects: | Not relevant/not applicable |
| Consumer, Inhalation, Long-term exposure        | - Systemic effects: | Not relevant/not applicable |
| Consumer, Oral, Long-term exposure              | - Systemic effects: | Not relevant/not applicable |
| Consumer, Dermal, Long-term exposure            | - Local effects:    | Not relevant/not applicable |
| Consumer, Dermal, Long-term exposure            | - Local effects:    | Not relevant/not applicable |

## PREDICTED NO EFFECT CONCENTRATION (PNEC)

### Decane:

|                          |                             |
|--------------------------|-----------------------------|
| Water fresh:             | Not relevant/not applicable |
| Marine water:            | Not relevant/not applicable |
| Intermittent releases:   | Not relevant/not applicable |
| STP:                     | Not relevant/not applicable |
| Sediment (marine water): | Not relevant/not applicable |
| Soil:                    | Not relevant/not applicable |
| Dietary:                 | Not relevant/not applicable |

## 8.2 - Exposure controls

### 8.2.1 *Appropriate engineering controls*

In the open circuit systems – where the contact with the product may occur – wear safety goggles, clothing with long sleeves and chemical impermeable gloves. In the event that the product concentration in the air should exceed the limits reported in this section and if the systems, operational procedures and other means to limit the exposure of workers should not be adequate, a protective equipment of the respiratory tract is necessary.

### 8.2.2 *Individual protection measures, such as personal protective equipment*

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

#### **SPECIFIC HYGIENE MEASURES:**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

#### **PERSONAL HYGIENE:**

provide the working environment with structures suitable for allowing people to wash.

Change the suits, overalls, the clothing wore under suits and shoes if they are impregnated with the product. In fact, these protections, useful to minimize the contact, may become contamination sources if they are used after they were impregnated with the product

#### **WORKING METHOD:**

both the use and choice of the personal protective equipment depend on the product risk, the working conditions and the processing. In general, it is recommended to use the safety goggles with side shields, working clothes that protect the arms, legs and body as minimum protection. Moreover, every visitor entering the area where the product is handled should at least wear safety goggles with side shields.

#### **EXPOSURE CONTROL:**

keep the hygiene of the working place, use correct working methods and, in the event that the product is used by operators with dry skin or in cold environments, follow the instructions of the next passage.



Change the gloves which were used (polyvinyl chloride, polyethylene, neoprene, non-natural rubber) when there are wear signs, cracks or internal contaminations.

In the event that the concentrations in air may exceed the limits given in this section, it is recommended to use a mask with filter to protect from overexposure through inhalation. The filter typology depends on the quantity and type of chemicals which are handled in the workplace.

#### **SKIN CARE:**

personal hygiene is the most effective protection factor. Do not use abrasives or solvents. The use of repair creams after working is advisable to regenerate the lipid layer and it is recommended in the wintertime for those operators with dry skin. In fact, low temperatures and humidity may cause skin abrasions, thus making the workers more vulnerable to the action of the existing chemicals.

#### **Eyes/face protection**

During handling protect your eyes with:

- safety goggles in accordance to approved standard must be used when the risk valuation need to avoid exposure to liquid splashing, spray, gas or power. Recommend: anti-spray goggles.

#### **Skin protection**

##### *Hand protection:*

Choice suitable glove not only for its material made, but also for its characteristics of quality and each manufacturers peculiarity. Observe instruction the manufacturer supplied about permeability and penetration time. Consider the local conditions where used the product, as cut hazard, abrasion and contact duration. Pay attention who daily use, the gloves chemical resist lifetime, may be considerable more less than penetration time measured according to EN 374. This bring about to many external factors as for example temperature.

- gloves suitable for protecting against continuous contact:  
Material: fluorinated rubber  
Breakthrough time:  $\geq 480$  min  
Material thickness: 0,4 mm
- gloves suitable for protecting against splashes:  
Material: Nitrile Rubber (NBR)/ Nitrile latex  
Breakthrough time:  $\geq 240$  min  
Material thickness: 0,35 mm
- unsuitable gloves:  
Material: natural rubber/natural latex, polychloroprene, butyl rubber, PVC

##### *Skin and body protection:*

- protective suit, complete chemical resistant clothing
- protective suitable shoes

#### **Respiratory protection**

Usually do not request any respiratory protection. In case of not adequate ventilation, exceed exposure limit at work, more olfactory disturb or in presence of aerosol, mist or vapour, is necessary use a respiratory protection mask ambient air independent or a respiratory protection mask with A filter that is respective combined filter (in presence of aerosol, mist or vapour, for example A-P2 or ABEX-P2) in according with EN141.

#### **Thermal hazards**

The product is not used at high temperatures. No personal protective equipment against thermal hazards is expected. Cracking hazard in case the product is used at high temperatures.

#### **8.2.3 Environmental exposure controls**

General information:

Do not discharge the product into drains.

In case of spill into rivers, lakes or drains, notify the competent authorities according to local laws and provisions.

Could controlled emissions of equipment ventilation or of working process to hold in accordance to national directives of regulations on ambiental protection. In same case, should be need cleaning watercourse, addition filters or make changes to process equipment to reduced emissions at acceptable levels.

## 9 - Physical and chemical properties

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### 9.1 - Information on basic physical and chemical properties

- 9.1.1 Appearance**  
Physical state (at 20°C and at 101,3 kPa): liquid  
Colour: colourless, clear
- 9.1.2 Odour:** odourless
- 9.1.3 Odour threshold:** data not available
- 9.1.4 pH:** N.A
- 9.1.5 Pour point:** -27°C
- 9.1.6 Initial boiling point and boiling range:** 166 - 180°C; 1.013 hPa
- 9.1.7 Flash point:** 52°C; 1.013 hPa
- 9.1.8 Evaporation rate:** Data not available.
- 9.1.9 Inflammability (solid, gas):** not applicable (the product is liquid)
- 9.1.10 Lower explosive limit:** 0,6 % Vol
- 9.1.11 Upper flammability limit:** 7 % Vol
- 9.1.12 Vapour pressure:** mass. 2,26 hPa; 20°C
- 9.1.13 Vapour density (air=1):** 4,9
- 9.1.14 Density:** ca. 0,734 g/cm<sup>3</sup>
- 9.1.15 Solubility in water:** 0,00005 g/l ; ca. 20°C; 1.013 hPa
- 9.1.16 N-octanol/water partition coefficient:** 5,86
- 9.1.17 Auto-ignition temperature:** > 280°C
- 9.1.18 Decomposition temperature:** the product breaks down due to cracking or combustion.
- 9.1.19 Viscosity:** 1,26 cSt; 20°C
- 9.1.20 Explosive properties:** No.
- 9.1.21 Oxidising properties:** Note: not applicable.

### 9.2 - Other information

- 9.2.1 Solubility in other solvents:** Medium: Hydrocarbons; 20°C; soluble
- 9.2.2 Surface tension:** <24,6 mN/m; 20°C

### 9.3 - Other data

Colour Saybolt: +30  
Colour Hazen (ASTM D 1209): 5

**N.B.: Data reported here are typical average values and not specification limits.**

## 10 - Stability and reactivity

---

### 10.1 - Reactivity

Possibility of hazardous reactions.

### 10.2 - Chemical stability

The product shall be considered:

- stable, but may become unstable under particular conditions (see paragraphs 10.3 and 10.4)
- no decomposition if storage in accordance as suitable.

### 10.3 - Possibility of hazardous reactions

Under normal conditions of handling and storage, do not happen hazardous reactions.

### 10.4 - Conditions to avoid

Avoid any possible combustion sources (flames, sparks). Do not pressurise, cut, weld, braze, solder, grind, or expose containers to heat or combustion sources. Avoid vapours accumulate in down or close areas.

### 10.5 - Incompatible materials

Reactive or incompatible with following materials: oxidants materials.

### 10.6 - Hazardous decomposition products

In stored and handling normal conditions, do not should produce hazardous decomposition products.

No decomposition if storage in accordance as suitable.

Heating can release vapours that readily flammable.

Thermal decomposition: stable under normal conditions.

## 11 - Toxicological information

### 11.1 - Information on toxicological effects

#### 11.1.1 Acute toxicity

##### By mouth

Decane:

DL50 rat: > 2.000 mg/kg; 401 Guidelines for the OECD

Test (literature value)

##### By inhalation

Decane:

CL50 rat: > 5000 mg/m<sup>3</sup>; 8 h; 403 Guidelines for the OECD

Test Atmosphere test: vapour

(literature value)

##### Through skin

Decane:

DL50 rabbit: > 2.000 mg/kg; 402 Guidelines for the OECD Test

(literature value)

**Result Acute Toxicity:** Based of the above values, the product is not classified in the categories of acute toxicity.

#### 11.1.2 Skin corrosion/ Irritation

##### Irritant for skin

Decane:

On rabbit: not irritant; 404 Guidelines for the OECD Test

(literature value)

| Product Name /ingredient | Result   | Species | Score | Exposure | Observation |
|--------------------------|--|---------|-------|----------|-------------|
| Decane                   | Skin - Primary index of dermal irritation (PDII) | rabbit  | 0     | -        | -           |
|                          | Skin - Edema                                     | rabbit  | 1,1   | -        | -           |
|                          | Skin - Erythema/Excoriation                      | rabbit  | 1,1   | -        | -           |
|                          | Eyes - Edema of conjunctivas                     | rabbit  | 0     | -        | -           |

### 11.1.3 Serious eye damage/irritation

#### Irritant for the eyes

Decane:

On rabbit: not irritant; 405 Guidelines for the OECD Test (literature value).

### 11.1.4 Respiratory or skin sensitisation

Decane:

guinea-pig: non sensitising; 406 Guidelines for the OECD Test (literature value).

| Product Name/ingredient | Exposure route | Species    | Result          |
|-------------------------|----------------|------------|-----------------|
| Decane                  | Skin           | Guinea-pig | non sensitising |

### 11.1.5 CMR Effects

#### Germ cell mutagenicity

##### Genetic toxicity in vitro

decane:

Vitro assays do not revealed mutagenic effects

##### Genetic toxicity in vivo

decane:

Vivo assays do not revealed mutagenic effects

| Product Name/ingredient | Proof | Experiment                                      | Result   |
|-------------------------|-------|---|----------|
| Decane                  | -     | Experiment: In vitro<br>Object: Bacteria        | Negative |
|                         | -     | Experiment: In vitro<br>Object: Mammal - Animal | Negative |

#### Carcinogenicity

##### Carcinogenicity

decane:

rat; Inhalation; Subchronic Toxicity; 5 days/week; 453 Guidelines for the OECD Test

Test on animals do not revealed cancerogenic effect

(literature value)

Group observation

#### Toxicity to reproduction

##### Reproductive toxicity decane: rat; Oral

NOAEL ((parents)): > 1.000 mg/kg

NOAEL (F1): > 1.000 mg/kg; OECD TG 422

| Product Name/ingredient | Maternal Toxicity | Fertility | Toxicity for development | Species | Amount | Exposure |
|-------------------------|-------------------|-----------|--------------------------|---------|--------|----------|
| Decane                  | Negative          | Negative  | Negative                 | Rat     | Oral   | -        |

**Teratogenicity**  
**Teratogenicity**

decane:  
rat; inhalation; 10 days; 6 hours/day  
NOAEL: 5,22 mg/l  
NOAEL (female pregnant): 5,22 mg/l; OECD TG 414  
(literature value)  
Experiment on fertility and on growth toxicity do not revealed any effect on reproduction.

| Product Name/ingredient | Result          | Species | Amount | Exposure |
|-------------------------|-----------------|---------|--------|----------|
| Decane                  | Negative - Oral | Rat     | -      | -        |

**11.1.6 Specific target organ toxicity (STOT)**

**Single exposure**  
**Remark**

decane:  
The substance or the mixture is not classified as specific target organ intoxicate, by single exposure.

**Repeated exposure**  
**Remark**

decane:  
The substance or the mixture is not classified as specific target organ intoxicate, by repeated exposure.

**Toxicity at repeated exposure**

decane:  
rat; Oral; 90 days  
NOAEL: > 5.000 mg/kg; OECD TG 408  
(literature value)

decane:  
rat; Inhalation; Subchronic Toxicity; NOAEC: 10,4 mg/l  
Atmosphere test: vapour; OECD TG 413  
(literature value)

**11.1.7 Aspiration hazard**  
**Aspiration toxicity**

decane:  
may be fatal in case of ingestion or penetration in the respiratory tract.

| Product name/ingredient | Result                         |
|-------------------------|--------------------------------|
| Decane                  | ASPIRATION HAZARD - Category 1 |

**Potential acute effects on health**

Accidental eye contact: Not available main effects or critical danger.  
Inhalation: Not available main effects or critical danger.  
Accidental skin contact: Defatting effect on skin. May cause dryness or irritation on the skin.  
Ingestion: May be lethal in case the product is accidentally ingested and enter into the respiratory tract

**Signal/Symptom connected to chemicals, physicals and toxicologicals characteristics**

Accidental eye contact: Not available specific data.  
Inhalation: Not available specific data.  
Accidental skin contact: Negative symptom may include the following: irritation, dryness, cracking.  
Ingestion: Negative symptom may include the following: nausea or vomit.

**Delay and immediate effects and also cronic effects caused to exposure at short and long term**

**Short time exposure**

**Immediate potential effects:** Not available data.  
**Delay potential effects:** Not available data.

**Long time exposure**

**Immediate potential effects:** Not available data.  
**Delays potential effects:** Not available data.

### Potential chronic effects on health

| Product name/ingredient | Result                           | Species | Amount                   | Exposure                 |
|-------------------------|----------------------------------|---------|--------------------------|--------------------------|
| Decane                  | Subacute NOAEL Oral              | Rat     | ≥ 1000 mg/kg             | 14 days; 7 days for week |
|                         | Subacute NOAEL Inhalation Vapour | Rat     | ≥ 6000 mg/m <sup>3</sup> | 13 weeks; 6 hours at day |

**General:** Frequent and prolonged contact may damage the skin and may cause irritation, cracking and/or dermatitis.

**Carcinogenicity:** Not available main effects or critical danger.

**Mutagenicity:** Not available main effects or critical danger.

**Teratogenic:** Not available main effects or critical danger.

**Effects on the development:** Not available main effects or critical danger.

**Effects on fertility:** Not available main effects or critical danger.

**Other information:** Not available.

#### 11.1.8 Human experience

decane:  
Repeated exposure may cause skin dryness or cracking.

#### 11.1.9 Toxicity informations

decane:  
Toxic kinetic  
The substance do not good absorbed through skin  
The substance is readily adsorbed by ingestion and inhalation  
The substance is metabolized and eliminated secretion.  
The substance is readily eliminated from body.

### 12 - Ecological information

*This substance is classified as Volatile Organic Compound in accordance with Directive 2004/42/EC.*

#### 12.1 - Toxicity

**Toxicity to fish**  
decane:  
LL50 (96 h) Oncorhynchus mykiss (Rainbow trout): > 10 - 100 mg/l; Semi-static proof; 203 Guidelines for the OECD Test  
Test value/literature value typical  
In the range of solubility in water not toxic under the test conditions.  
(literature value)

**Toxicity to fish-chronic toxicity**  
decane:  
NOEL (28 d) Oncorhynchus mykiss (Rainbow trout): > 0,1 - 1 mg/l; Growth velocity; QSAR  
(literature value)

**Toxicity to Daphnia and other aquatic invertebrate**  
decane:  
EL50 (48 h) Daphnia magna (Grea water flea): > 100 mg/l; Static proof.  
In the range of solubility in water not toxic under the test conditions.  
(literature value)

**Toxicity to aquatic plants**  
decane:  
EL50 (96 h) Chaetogammarus marinus: > 100 mg/l; Semi-static proof  
(literature value)  
In the range of solubility in water not toxic under the test conditions.

**Toxicity to aquatic plants**  
decane:  
ErL50 (72 h) Pseudokirchneriella subcapitata: > 100 mg/l; Growth inhibitor;  
OECD TG 201; (literature value)

**Toxicity to bacteria**      decane:  
examination is not necessary.  
Justification:  
Ready biodegradable

**Toxicity in other earthly mammal**      decane:  
examination is not necessary.  
Justification:  
Have large data on mammalian, study on birds are unnecessary.

### 12.2 - Persistence and degradability

**Biodegradability Decane:**      Biodegradable rapidly > 60%; 28 d  
(literature value)

| Product name/ingredient | Proof  | Result                  | Amount | Inoculum |
|-------------------------|--|-------------------------|--------|----------|
| Decane                  | 301F Ready Biodegradability - Manometric Respirometry Test | 77 % - easily - 28 days | -      | -        |

**Conclusion/summar:** Biodegradability on rotation ventilate discs: > 96% eliminate in 24 day

| Product name/ingredient | Half-life in water | Photolysis   | Biodegradability |
|-------------------------|--------------------|--------------|------------------|
| Decane                  | -                  | < 28 day (s) | Easily           |

### Phototransformation in air:

The half-life of decane is 0.963 day. This value is largest below on the limite increment (2 days). For this reason, decane do not persistence.

### 12.3 - Bioaccumulative potential

**Bioaccumulation**      Decane:  
Bioconcentration Factor (BCF): 114,3; calculated  
The bioaccumulation unlikely.  
(literature value)

| Product name/ingredient | LogPow | BCF | Potential |
|-------------------------|--------|-----|-----------|
| Decane                  | 5,86   | -   | high      |

### 12.4 - Mobility in soil

**Mobility:**      Decane:  
log Koc: 4.16; (calculated)  
motionless

### 12.5 - Results of PBT and vPvB assessment

**Results of PBT assessment:**      Decane:  
Based on available data this substance does not fulfil the classification criteria.

### 12.6 - Other adverse effects

**General information Decane:**  
Unknown.

### 12.7 Additional ecological information Distribution modelling

| Distribution in media | Percent (%) |
|-----------------------|-------------|
| Air                   | 48.68       |
| Water                 | 5.98        |
| Soil                  | 9.49        |
| Sediment              | 35.91       |

## 13 - Disposal considerations

### 13.1 - Waste treatment methods

This product shall be classified as: **hazardous special waste**. Recover or recycle, if possible. This product CANNOT be disposed of in dumps and/or through public sewers, channels, waterways, watercourses or rivers. This product does not produce ashes and can be incinerated in suitable thermal disposal plants in accordance with the regulations in force. The waste originating from or contaminated by the product shall have to be classified, stored and sent to a suitable disposal plant complying with the national and regional regulations in force. For handling and storing the waste originating from or contaminated by the product, apply the procedures and precautions described in paragraphs 6, 7 and 8 of this Sheet.

#### 13.1.1 Containers disposal

Containers, even if completely empty, must not be disposed of properly. The containers of the product must be subjected to a proper waste disposal site prior to disposal. The containers containing residual product should be classified, stored and sent to an appropriate treatment facility in compliance with current national and regional regulations.

This material and its container in a safe way. Care must be taken when handling empty containers that have not been cleaned or rinsed. Empty containers or liners may retain some product residues. The vapors emitted from product residues can easily develop an atmosphere or explosive within the container. Do not cut, weld or grind containers used unless they have been thoroughly cleaned inside them. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

#### 13.1.2 European Waste Catalogue Code

According to its use, the product may be catalogued according to different codes. General indications cannot be given. This kind of product does not contain any halogenated compounds.

The user must be aware that the use conditions may change the waste code after the use. Refer to Directive 2001/118/EC for waste definition.

## 14 - Transport information

**Precautions:** The product presents hazards and restrictions on transportation.



Label transport: 3

### 14.1 - UN number

|                              |                 |
|------------------------------|-----------------|
| ADR-RID (Overland transport) | UN number: 2247 |
| IMDG (Transport by sea)      | UN number: 2247 |
| ICAO-IATA (Air transport)    | UN number: 2247 |

### 14.2 - UN proper shipping name

|                              |                                 |
|------------------------------|---------------------------------|
| ADR-RID (Overland transport) | UN proper shipping name: decane |
| IMDG (Transport by sea)      | UN proper shipping name: decane |
| ICAO-IATA (Air transport)    | UN proper shipping name: decane |

### 14.3 - Transport hazard class(es)

|                              |                               |
|------------------------------|-------------------------------|
| ADR-RID (Overland transport) | Hazard class: 3               |
| ADR-RID (Overland transport) | Hazard identification no.: 30 |
| ADR-RID (Overland transport) | Classification code: F1       |
| IMDG (Transport by sea)      | Hazard class: 3               |
| ICAO-IATA (Air transport)    | Hazard class: 3               |

### 14.4 - Packing group

|                              |  |
|------------------------------|--|
| ADR-RID (Overland transport) | Packing group: III                           |
| ADR-RID (Overland transport) | Special provisions: TP1                      |
| ADR-RID (Overland transport) | Limited quantities: 5L                       |
| ADR-RID (Overland transport) | Excepted quantities: E1                      |
| ADR-RID (Overland transport) | Packaging instructions: P001-IBC03-R001-LP01 |



|                              |  |
|------------------------------|--|
| ADR-RID (Overland transport) | Packaging disposition (common): MP19                           |
| ADR-RID (Overland transport) | Tank code: LGBF  |
| ADR-RID (Overland transport) | Restriction tunnel Code: (D/E)                                 |
| IMDG (Transport by sea)      | Packing group:III  |
| ICAO-IATA (Air transport)    | Packing group:III  |
| ICAO-IATA (Air transport)    | Plane passenger and goods: Limited quantities: 60L             |
|                              | Packaging disposition: 309                                     |
| ICAO-IATA (Air transport)    | Only plane goods: Limited quantities: 220 L                    |
|                              | Packaging disposition: 310                                     |
| ICAO-IATA (Air transport)    | Limited quantities - plane passenger: Limited quantities: 10 L |
|                              | Packaging disposition: Y309                                    |

#### 14.5 - Environmental hazards

This substance is not classified as environmentally hazardous. IMDG (Transport by sea) Marine pollutant: No

#### 14.6 - Special precautions for user

IMDG (Transport by sea) Emergency procedure (Ems): F-E, S-E

Use for the transport authorize vehicles for hazard goods transport in according with A.D.R. prescriptions edition in force and national dispositions applicable.

Must be effect the transport on original packing and, however, in packing made with unassailable materials from its content and not capable to generate hazardous reactions with the content. Authorized personnel to the hazard goods loading and unloading must be trained about product risks and possible procedures in emergency case.

#### 14.7 - Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Correct denomination for transport: Alkanes

(C10+) Ship Category: 3

Pollution Category: Y

### 15 - Regulatory information

#### 15.1 - Safety, health and environmental regulations/legislation specific for the substance or

##### mixture NATIONAL AND OTHER RULES

##### Occupational restrictions

Respect occupational restrictions concerning children and young people at work according to Directive 94/33EC and respective National rules.

##### Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

Item in the regulation's list: Directive 96/82/EC is not applied.

##### Regulation UE (CE) n. 1907/2006 (REACH)

##### Annex XIV - Substances List subject at authorization

##### Substances extremely worrying

No components show limitations.

##### **Annex XVII - Restrictions about manufacturing, marketing introduction and use of some substances, product and articles hazardous**

Not applicable.

##### NOTIFICATION STATUS

|   |           |                      |
|---|-----------|----------------------|
| USA Toxic Substance Control Act   | TSCA      | y (positive listing) |
| Canada. Environmental Protection Act (CEPA). Domestic Substance List (DSL). (Can. Gaz. Part II, Vol. 144) | DSL       | y (positive listing) |
| Australia. Industrial Chemical (Notification and Assessment) Act  | AICS      | y (positive listing) |
| New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA   | NZIOC     | y (positive listing) |
| New Zealand   |           |                      |
| Japan. Kashin-Hou Law List  | ENCS (JP) | y (positive listing) |

|  |            |                      |
|--|------------|----------------------|
| Japan. Industrial Safety & Health Law (ISHL) List                            | ISHL (JP)  | y (positive listing) |
| Korea. Toxic Chemical Control Law (TCCL) List                                | KECI (KR)  | y (positive listing) |
| Philippines. The Toxic Substance and Hazardous and Nuclear Waste Control Act | PICCS (PH) | y (positive listing) |
| China. Inventory of Existing Chemical Substance                              | INV (CN)   | y (positive listing) |
| Switzerland Consolidated Inventory   | CH INV     | y (positive listing) |

Please note: the names and CAS numbers which are used for this product in the state inventories may deviate from the information which is listed in chapter 3.

National Legislation: Whereas applicable, refer to the following regulations:  
 Presidential Decree (D.P.R.) 175/88 as amended  
 Presidential Decree 303/56 of 19/05/1956  
 Ministerial Circulars 45 and 61  
 Law Decree 81/2008 as amended

National Legislation : Other regulations in force:

- threshold limit values (TLV) and exposure biological indicators (EBI) ACGIH 1998 as amended.
- Protection of workers against risks relating to exposure to the chemical, physical and biological agents at work (LAW DECREE 212 of 30/07/1990) (published in: **Official Journal of the Italian Republic no. 181 of 04/08/1990**)
- General regulations for the working hygiene (Presidential Decree 303/56 of 19/03/1956) (published in: **Ordinary Supplement of the Official Journal no. 105 of 30/04/1956**) as amended.
- Rules and tables on the occupational diseases in the industry (Presidential Decree 336 of 13/04/1994) (Published in: **Official Journal of the Italian Republic no. 131 of 07/06/1994**) as amended.
- Working safety (Law Decree 626 of 19/09/94) (Implementation of Directives 89/391/EEC, 89/654/EEC, 89/655/EEC, 89/656/EEC, 90/269/EEC, 90/270/EEC, 90/394/EEC and 90/679/EEC, 93/88/EEC, 97/42/CEC and 1999/38/EC concerning the improvement of safety and health of workers at work) (published in: **Ordinary Supplement of the Official Journal no. 265 of 12/11/1994**)
- Relevant incident risks (Seveso bis) (Law Decree 334 of 17/08/1999) (Implementation of Directive 96/82/EC concerning the prevention of major-accident hazards involving dangerous substances) (published in: **Ordinary Supplement of the Official Journal no. 228 of 28/09/1999**) as amended.
- Regulations on the emissions (M.D. of 12/7/90) (Guidelines for the limitation of the emissions from the industrial facilities and the setting of the minimal values of emission) (published in: **Ordinary Supplement of the Official Journal no. 176 of 30/07/1990**)
- Regulations on the atmospheric pollution (M.D. of 12/7/90- Guidelines for the limitation of the emissions from the industrial facilities and the setting of the minimal values of emission and of Presidential Decree of 25/07/1991- published in: **Official Journal of the Italian Republic no. 175 of 27/07/1991**) as amended.
- Regulations on the water protection (LAW DECREE 152 of 11/5/99) (Rules on the water protection from the pollution and implementation of Directive 91/271/EEC concerning the treatment of urban waste water and of Directive 91/676/EEC concerning the protection of waters against pollution caused by the nitrates from agricultural sources) (published in: **Ordinary Supplement of the Official Journal no. 124 of 29/05/1999**) as amended.
- Regulations on the disposal and transport of hazardous waste (Law Decree 22/97- Implementation of Directives 91/156/EEC on waste, 91/689/EEC on hazardous waste and 94/62/EC on packaging and packaging waste – published in : **Ordinary Supplement of the Official Journal no. 38 of 15/02/1997** and Law Decree 389/97-Amendments and integrations to the Law Decree 5 February 1997, no. 22, regarding waste, hazardous waste, packaging and packaging waste – published in: **Official Journal of the Italian Republic no. 261 of 08/11/1997**) as amended.
- Land transport regulations ADR/RID – M.D. of 4/9/1996- Implementation of Directive 94/55/EC of the Council concerning the approximation of the laws of the Member States with regard to the transport of dangerous goods by road (published in: **Ordinary Supplement of the Official Journal no. 282 of 02/12/1996**) as amended.
- Ministerial Circulars 45 and 61 as amended.
- Consolidation act on classification, packaging and labelling of hazardous substances (with implementation of Directive EC until 22° Adaptation): M.D. of 28/4/1997 – Implementation of Article 37, paragraphs 1 and 2, of the Law Decree 3 February 1997, no. 52, concerning the classification, packaging and labelling of the hazardous substances (published in: **Ordinary Supplement of the Official Journal no. 192 of 19/08/1997**) as amended.
- Regulations on classification, packaging and labelling of dangerous products (L.D. 285 of 16/07/1998- Implementation of Community Directives regarding the classification, packaging and labelling of dangerous products, complying with Article 38 of the Law 24 April 1998, no. 128) (published in: **Official Journal of the Italian Republic no. 191 of 18/08/1998**) as amended.
- Implementation of 24th Adaptation EC (M.D. 175 of 07/07/1999 – Rules relating to classification, packaging and labelling of dangerous substances as implementation of Directive 98/73/EC) (published in: **Ordinary Supplement of the Official Journal no. 226 of 25/09/1999**) as amended.

- Regulations for the compilation of the Safety Sheets (with implementation until Directive 93/112 EC) (M.D. of 4/4/97 – Implementation of Article 25, paragraphs 1 and 2 of the Law Decree 3 February 1997, no. 52, regarding the classification, packaging and labelling of dangerous substances, with regard to the safety sheet on safety) (published in : **Official Journal of the Italian Republic** n° 169 of 22/07/1997) as amended.
- Implementation of 24th and 25th Adaptation EC (M.D. 10/04/2000 – Implementation of Directives 98/73/EC and 98/98/EC, respectively adapting to Directive 67/548/EEC for the 24th and 25th time) (published in: **Ordinary Supplement of the Official Journal** no. 205 of 02/09/2000) as amended.
- **Directive EEC/EAEC/EC no. 45 of 31/05/1999**  
1999/45/EC: Directive of the European Parliament and Council, of 31 May 1999, concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to classification, packaging and labelling of dangerous products.
- **The product was recorded with the code AUT9, as provided for by the ex-Ministerial Decree of 19/04/2000 replaced by Decree no.65 of 14 March 2003.**
- **Ministerial Decree of 26/01/2001**- Regulations relating to classification, packaging and labelling of dangerous substances as implementing Directive 2000/32/EC (adapting to technical progress of Directive 67/548/EEC for the 26th time).
- **Ministerial Decree of 11/04/2001**- Implementation of the Directive 2000/33/EC adapting to technical progress of Directive 67/548/EEC for the 27th time, regarding the classification, packaging and labelling of dangerous substances.
- **Community Directive 2001/59/EC** of 06/08/2001, adapting to technical progress of Directive 67/548/EEC for the 28th time regarding the classification, packaging and labelling of dangerous substances.
- **Community Directive 2001/58/EC** of 27/07/01, amending for the second time Directive 91/155/EC defining and laying down the detailed arrangements for the system of specific information relating to dangerous products in implementation of Article 14 of Directive 1999/45/EC
- **Law Decree of 14 March 2003, no. 65 and Law Decree no. 260 of 28 July 2004** – Implementation of Directives 1999/45/EC and 2001/60/EC relating to the classification, packaging and labelling of dangerous products
- **Decree of 16 January 2004, no.44** – Implementation of Directive 1999/13/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities according to Article 3, paragraph 2 of the Presidential Decree of 24 May 1988, no. 203.
- **Decree 28/02/2006** – Implementation of Directive 2004/74/EC, adapting to technical progress of Directive 67/548/EEC for the 29th time regarding the classification, packaging and labelling of dangerous substances.
- **Regulation (CE) n. 1907/2006** concerning registration, evaluation, authorization and restriction of chemicals (REACH) and establishing a European agency for chemicals.
- **Decree 04/02/2008** - Implementation of Directive 2006/15/CE, which defines a second list of the occupational exposure limit values as implementation of Council Directives 98/24/CE and modifying Directives 91/322/CEE and 200/39/CE.
- **Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008** on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- **Commission Regulation (EC) no 552/2009 of 22 June 2009** - amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards Annex XVII
- **Commission Regulation (EC) No 790/2009 of 10 August 2009** amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **Commission Regulation (EU) No 276/2010 of 31 March 2010**, amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards Annex XVII (dichloromethane, lamp oils and grill lighter fluids and organostannic compounds)
- **Commission Regulation (EU) no. 453/2010 of 20 May 2010**, amending Regulation (EC) no. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- **Commission Regulation (UE) No 286/2011 of 10 March 2011**, amending, adapting to technical progress and scientific, of Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- **Commission Regulation (EU) No 109/2012 of 9 February 2012**, amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards Annex XVII (CMR substances)
- **Commission Regulation (EU) No 618/2012 of 10 July 2012**, amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **Commission Regulation (EU) No 126/2013 of 13 February 2013** amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- **Commission Regulation (EU) No 348/2013 of 17 April 2013** amending Annex XIV to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

- **Commission Regulation (EU) No 487/2013 of 8 May 2013** amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **Commission Regulation (EU) No 758/2013 of 7 August 2013** correcting Annex VI to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **Commission Regulation (EU) No 944/2013 of 2 October 2013** amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **Directive 2014/27/EU of the European Parliament and of the Council of 26 February 2014** amending Council Directives 92/58/EEC, 92/85/EEC, 94/33/EC, 98/24/EC and Directive 2004/37/EC of the European Parliament and of the Council, in order to align them to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
- **Commission Regulation (EU) No 605/2014 of 5 June 2014** amending, for the purposes of introducing hazard and precautionary statements in the Croatian language and its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

**15.2 - Chemical safety assessment Decane**

A Chemical Safety Assessment has been carried out for the substance.

**15.3 - Restrictions on marketing and use**

Authorisations and/or restrictions on use (Annex XVII):

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008:

(a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;

(b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;

(c) hazard class 4.1;

(d) hazard class 5.1.

1. Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects,

2. Articles not complying with paragraph 1 shall not be placed on the market.

3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:

- can be used as fuel in decorative oil lamps for supply to the general public, and,
- present an aspiration hazard and are labelled with R65 or H304,

4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).

5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:

(a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage";

(b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage";

40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.

(c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.

6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.

7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'

1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:

- metallic glitter intended mainly for decoration,
- artificial snow and frost,
- “whoopee” cushions,
- silly string aerosols,
- imitation excrement,
- horns for parties,
- decorative flakes and foams,
- artificial cobwebs,
- stink bombs.

2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: “For professional users only”.

3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC (\*\*).

4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

(\*\*) OJ L 147, 9.6.1975, p. 40.

#### 15.4 - Greater hazards

Such substance must be entered in the storage classification summation.

**16 - Other information**

Uses and restrictions : Look up identified uses in paragraph 1 for informations about protective equipment and operative condition to provide specific informations available into the exposure scenery.

SDS distribution : The information contained herein must be available to those who handle the product.

The workers must be, adequately, informed, formatted and trained as them specific job, in according to law in force.

**GLOSSARY OF THE RISK PHRASES AND HAZARD STATEMENTS REPORTED IN THE DOCUMENT**

Description of risk phrases (67/548/CE)

R10-Flammable

R65-Harmful; may cause lung damage if swallowed. R66-

Repeated exposure may cause skin dryness or cracking

Description of hazard statements (1272/2008)

H226-Flammable liquid and vapor

H304-May be fatal if swallowed and enters airways EUH066-

Repeated exposure may cause skin dryness or cracking

*The information contained herein is believed to be accurate and correct based on our present state of knowledge and working experience with this product, and shall not be deemed exhaustive. It is applied to the product complying with the specifications. In case of combinations or mixtures, make sure that no new hazard may occur. It does in no way exempt the user of the product from complying with the ensemble of laws, regulations and administrative provisions concerning the product, working hygiene and safety. This Sheet was drawn by using the program ESWIN together with the database SINTALEX.*

**Key to abbreviations and acronyms**

|             |   |
|-------------|---|
| ACGIH       | American Conference of Governmental Industrial Hygienists (Documentation of the Threshold Limit Values) |
| ADR         | Accord européen relative au transport international des marchandises dangereuses par route              |
| ASTM        | ASTM International, originally knowed as American Society for Testing and Materials (ASTM)              |
| bw          | Body weight   |
| CAS         | Chemical Abstracts Service (division of the American Chemical Society)                                  |
| CMR         | Carcinogen, Mutagen and Reprotoxic  |
| CONCAWE     | CONservation of Clean Air and Water in Europe   |
| CSA         | Chemical Safety Assessment  |
| CSR         | Chemical Safety Report  |
| DMEL        | Derived Minimum Effect Level  |
| DNEL        | Derived No Effect Level   |
| dw          | Dry weight  |
| EC number   | European Chemical number  |
| EC50        | Effective Concentration 50  |
| EINECS      | European Inventory of Existing Commercial Substances  |
| EL50        | Effective Load, 50%   |
| IATA        | International Air Transport Association   |
| ICAO        | International Civil Aviation Oragnization   |
| IC50        | Inhibitor Concentration 50  |
| Codice IMDG | International Maritime Dangerous Good code  |
| LC50        | Lethal Concentration 50   |
| LD50        | Lethal Dose 50  |
| LL50        | Loaded lethal, 50%  |
| LL0         | Loaded lethal, 0%   |
| LOAEL       | Low Observed Adverse Effects Level  |
| NIOSH/OSHA  | Occupational Healt Guidelines for Chemical Hazards (Registry of Toxic Effects of Chemical Substances)   |
| NOEC        | No Observed Effects Concentration   |
| NOAEL       | No Observed Adverse Effects Level   |
| NOEL        | No Observed Effects Level   |
| OECD        | Organization for Cooperation and Economic Development   |
| PNEC        | Predicted No-Effect Concentration   |
| PBT         | Persistent, bioaccumulative and toxic   |

|       |  |
|-------|--|
| RID   | Règlement concernant le transport International ferroviaire des marchandises Dangereuses   |
| RMM   | Risk Management Measure  |
| SNC   | Central Nervous System   |
| STEL  | Short term exposure limit  |
| STOT  | Specific target organ toxicity   |
| TLV   | Threshold limit value (America Conference of Governmental Industrial Hygienists)   |
| TWA   | Time Weighted Average  |
| STEL  | Short term exposure limit  |
| UVCB  | Substances of unknown or variable composition, complex reaction products or Biological material  |
| vPvB  | Very Persistent very bioaccumulative   |
| VOC   | Volatile Organic Compounds   |
| VwVwS | Text of Administrative Regulation on the Classification of Substances hazardous to waters into Water Hazard Classes (Verwaltungsvorschrift wassergefährdende Stoffe - VwVwS) |
| WAF   | Water Accomodatad Fraction   |

**Revision summary:**

This sheet was revised in section/s: 1,2,3,12,15,16.

In those sections, a vertical bar (|) on the left margin indicates the changes made since the previous version. If a section is marked, but it does not point out the bar, then it indicates that the text was cancelled.

SHEET VERSION no. 20 of 10/10/2014

Ref. SA/CE

This version replaces and nullifies all previous versions.

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