

# MATERIAL SAFETY DATA SHEET // INUTEQ-PAC15°C ACCORDING TO REGULATION (EC) NO. 1907/2006

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INUTEQ-PAC15°C is a water insoluble organic phase change material (PCM) derived from plant-based feedstocks and has the form of a crystalline wax or oily liquid (depending on temperature).

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

### 1.1 Product identifier

Trade name INUTEQ-PAC@15C



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

Use of the substance/Mixture:

Heat transfer agents

### 1.3 Details of the supplier of the safety data sheet

Company: INUTEQ B.V.  
Osnabrückstraat 30  
7418 BN Deventer  
Tel. :+31850653797  
support@inuteq.com

### 1.4 Emergency telephone number

USA: 24 Hour Emergency Response Information CHEMTREC toll free: 1-800-424-9300; direct/international: 1-703-527-3887. CANADA: CANUTEC 1-888-CAN-UTEC (226-8832), 613-996-6666 or \*666. EUROPE: 00 32 3575 5555. ASIA PACIFIC - excl. China: +65 6542-9595. CHINA: +86 816-635 2206. AUSTRALIA: +61 2 9616 5890. SOUTH AFRICA: +32 3 575 55 55. BRASIL: Sutrans 0800 707 7022 / 0800 707 1767. LATAM: Suatrans (+55) 11 98149-0850 / (+55) 19 3833-5300. INDIA: +91 22 30948601/2. JAPAN: +65 6542 9595 (24時間日本語対応無料通話, シンガポール). TÜRKIYE: Sağlık Bakanlığı Ulusal Zehir Merkezi - 114

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture Classification (REGULATION) (EC) No 1272/2008

Skin sensitisation, Category 1 H317:  
May cause an allergic skin reaction.

### 2.2 Label elements Labelling (REGULATION) (EC) No 1272/2008

Not a hazardous substance or mixture.  
Hazard pictograms:



Signal word: Warning  
Hazard statements: H317  
May cause an allergic skin reaction.  
Precautionary statements

### Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves.

### Response:

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P263 + P364 Take off contaminated clothing and wash it before reuse.

### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/ information on ingredients

### 3.1 Components

#### Hazardous components

CAS-No. 5303-24-2, Classification: Skin Sens. 1; H317, Concentration (% w/w) >= 90 - <= 100  
EG-No.: 226-149-3  
Index No. / Registration number: 01-2120768399-34-0000

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

If inhaled: If breathed in, move person into fresh air. If symptoms persist, call a physician.

In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If symptoms persist, call a physician.

In case of eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed: If swallowed, call a poison control centre or doctor immediately.

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

Symptoms: None known.

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

Treatment: None known.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media:  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media:  
High volume water jet

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

Specific hazards during firefighting:  
In case of fire hazardous decomposition products may be produced such as:  
Carbon oxides

Do not use a solid water stream as it may scatter and spread fire.

### 5.3 Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

Further information: Prevent fire extinguishing water from contaminating surface water or the ground water system. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Use personal protective equipment.

### 6.2 Environmental precautions

Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.

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

Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

### 6.4 Reference to other sections:

None.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling:  
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Avoid contact with skin, eyes and clothing.  
Handle in accordance with good industrial hygiene and safety practice.

Advice on protection against fire and explosion:  
Normal measures for preventive fire protection.

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

Requirements for storage areas and containers:  
Store in original container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed in a dry and well-ventilated place.

Advice on common storage:  
No special restrictions on storage with other products.

Further information on storage stability:  
Stable under recommended storage conditions.

### 7.3 Specific end use(s)

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls/Personal protective

Eye protection:      Tightly fitting safety goggles  
Hand protection  
Remarks:              Impervious gloves  
Skin and body protection:      Impervious clothing  
Respiratory protection:      In the case of vapour formation use a respirator with an ap-proved filter.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:          liquid  
Colour:                  pale, yellow  
Odour:                   slight  
Odour Threshold:      No data available  
pH:                        Not applicable  
Melting point:         approximately 15 °C

Boiling point:          No data available  
Decomposition temperature:      No data available  
Flash point:            206 °C  
Method:                  open cup  
Evaporation rate:      No data available  
Flammability (solid, gas):      No data available  
Upper explosion limit / Upper flammability limit:      No data available  
Lower explosion limit/Lower flammability limit:      No data available  
Vapour pressure:        No data available  
Relative vapour density:      No data available  
Density:                  0.859 g/cm<sup>3</sup> (20 °C)  
                                 0.896 g/cm<sup>3</sup> (10 °C)  
Solid form  
Solubility(ies)  
Water solubility:        insoluble  
Solubility in other solvents:      not determined  
Partition coefficient octanol/water:      No data available  
Auto-ignition temperature:      No data available  
Decomposition temperature:      No data available  
Viscosity  
Viscosity, dynamic:      7.83 mPa.s (25 °C)  
Viscosity, kinematic:      No data available  
Explosive properties:      Classification Code: No data available  
Oxidizing properties:      No data available

### 9.2 Other information

Self-ignition:          No data available

## SECTION 10: Stability and reactivity

10.1 Reactivity              No data available

10.2 Chemical stability      No data available

10.3 Possibility of hazardous reactions      Stable under recommended storage conditions.

10.4 Conditions to avoid      None known.

10.5 Incompatible materials  
Materials to avoid:      Strong oxidizing agents

10.6 Hazardous decomposition products      No data available

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity  
Product:  
Acute oral toxicity:      No data available  
Acute inhalation

toxicity:                  No data available  
Acute dermal toxicity:      No data available

Skin corrosion/irritation  
Product  
Remarks:                  No data available

Serious eye damage/eye irritation  
Product:  
Remarks                      : No data available

Respiratory or skin sensitisation  
Product:  
Remarks                      : no data available

Components:  
Lauryl nonanoate:  
Exposure routes:      Skin contact  
Assessment:              May cause sensitisation by skin contact.  
Method:                    OECD Test Guideline 442B  
GLP:                        yes

Germ cell mutagenicity  
Product:  
Genotoxicity in vitro:      Remarks: No data available

Carcinogenicity  
Product:  
Carcinogenicity-Assess:      No data available

STOT - single exposure  
Product  
Assessment:                  No data available

STOT - repeated exposure  
Product:                      No data available

Aspiration toxicity  
Product:                      No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

Product:  
Toxicity to fish:              Remarks: No data available

### 12.2 Persistence and degradability

Product  
Biodegradability:  
Remarks: No data available

### 12.3 Bioaccumulative potential

Product:  
Bioaccumulation:  
Remarks: No data available

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## 12.4 Mobility in soil

Product:  
Distribution among environmental compartments  
Remarks: No data available

## 12.5 Results of PBT and vPvB assessment

**Product:**  
**Assessment:** This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6 Other adverse effects

Product:  
Additional ecological information: No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product: Dispose of in accordance with local regulations.

Contaminated packaging: Empty remaining contents. Do not re-use empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## SECTION 14: Transport information

### 14.1 UN number

Not regulated as a dangerous good

### 14.2 UN proper shipping name

Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

### 14.4 Packing group

Not regulated as a dangerous good

### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Not applicable

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for products as supplied

## SECTION 15: Regulatory information

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

#### The components of this product are reported in the following inventories:

REACH: One the inventory, or in compliance with the inventory  
DSL: This product contains one or several components that are not on the Canadian DSL nor NDSL.  
ENCS: On the inventory, or in compliance with the inventory  
ISHL: On the inventory, or in compliance with the inventory  
KECI: On the inventory, or in compliance with the inventory

### 15.2 Chemical safety assessment

This information is not available

## SECTION 16: Other information

Full text of other abbreviations  
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways;  
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road;  
AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed [Adverse] Effect Concentration; NO(A)EL - No Observed

[Adverse] Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative: Additions, Deletions, Revisions

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## INUTEQ-SEAL® (PACKAGING FILM)

- 1. Composition**  
Film based on thermoplastic polyurethane.
- 2. Possible Hazards**  
Polyurethane films are not hazardous articles under the Council of the European Communities Directives. Polyurethane films do not present any specific hazards to health or safety when used in accordance with reasonable industrial practice, hygiene and good housekeeping.
- 3. First aid measures**  
Skin contact; Injuries from molten material require medical treatment. Cool immediately with water and consult a physician.
- 4. Fire-fighting measures**  
Extinguishing Media: water, foam, dry powder, carbon dioxide.
- 5. Accidental release measures**  
No special measures required.
- 6. Handling and storage**  
No special protective measures against fire and explosion required. Store the films in a cool, dry place.
- 7. Physical and chemical properties**  
Odour: natural / transparent Ignition temperature: >250C
- 8. Ecological information**  
No effects known to be harmful to the environment. Non-water hazardous.
- 9. Disposal considerations**  
Polyurethane films may be discharged or incinerated together with household refuse if local official regulations are observed. The material can be recycled in its original and uncontaminated condition.

### Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.