



Zhermack S.p.a

Revision nr. 1

Dated 15/11/2013

Printed on 15/11/2013

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**C300100/C300102/C300104/C300105/ C300106-B –  
FREEALGIN MAXI / EXTRA FAST - BASE**

## Safety data sheet

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

#### 1.1. Product identifier

Code: C300100/C300102/C300104/C300105/ C300106-B  
Product name: FREEALGIN MAXI / EXTRA FAST - BASE

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

Intended use Addition silicone for dental impression material.

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

Name: Zhermack S.p.a  
Full address: Via Bovazecchino  
District and Country: 45021 Badia Polesine (RO)  
Italy  
Tel. +39 0425-597611  
Fax +39 0425-53596

e-mail address of the competent person responsible for the Safety Data Sheet: msds@zhermack.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to

CAV Italia: Centro Antiveleni di Milano: 02 66101029; Centro Antiveleni di Pavia: 0382 24444; Centro Antiveleni di Bergamo: 800 883300; Centro Antiveleni di Firenze: 055 7947819; Centro Antiveleni di Roma: 06 3054343; Centro Antiveleni di Roma: 06 49978000; Centro Antiveleni di Napoli: 081 7472870

Servicio de Información Toxicológica (España): + 34 91 562 04 20 (24h/365 días)

Numéro ORFILA (INRS-France): + 33 (0)1 45 42 59 59 (24h/ 7 jours sur 7)

UK Emergency number: 844 892 0111 (24 hours)

Deutschland Notruf: BERLIN Tel.: 030/19240; HOMBURG Tel.: 06841/19240; BONN Tel.: 0228/19240; MAINZ Tel.: 06131/19240; ERFURT Tel.: 0361/730 730; MÜNCHEN Tel.: 089/19240; FREIBURG Tel.: 0761/19240; NÜRNBERG Tel.: 0911/398-2451; GÖTTINGEN Tel.:0551/19 240

### SECTION 2. Hazards identification.

#### 2.1. Classification of the substance or mixture.

The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). However, since the product contains hazardous substances in concentrations such as to be declared in section no. 3, it requires a safety data sheet with appropriate information, compliant to EC Regulation 1907/2006 and subsequent amendments.

**C300100/C300102/C300104/C300105/ C300106-  
B –  
FREEALGIN MAXI / EXTRA FAST - BASE****2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.**

Hazard classification and indication:

**2.2. Label elements.**

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms: --

Signal words: --

Hazard statements: --

Precautionary statements: --

**Contains:** CRISTOBALITE

Safety data sheet available for professional users on request.

**2.3. Other hazards.**

There is no exposure to breathable free crystalline silica during normal use of this product. For more information see section 11.

**SECTION 3. Composition/information on ingredients.****3.1. Substances.**

Information not relevant.

**3.2. Mixtures.**

Contains:

<b>Identification.</b>	<b>Conc. %.</b>	<b>Classification 67/548/EEC.</b>	<b>Classification 1272/2008 (CLP).</b>
<b>CRISTOBALITE</b>			
CAS. 14464-46-1	5 - 10	Xn R48/20	STOT RE 1 H372
EC. 238-455-4			
INDEX. -			
<b>ISOPENTYL ACETATE</b>			
CAS. 123-92-2	0 - 0,2	R10, R66	Flam. Liq. 3 H226, EUH066
EC. 204-662-3			
INDEX. 607-130-00-2			

Note: Upper limit is not included into the range.

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

**SECTION 4. First aid measures.**

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**4.1. Description of first aid measures.**

EYES: Remove contact lenses, if present Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

## SECTION 5. Firefighting measures.

**5.1. Extinguishing media.**

**SUITABLE EXTINGUISHING EQUIPMENT**

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

**UNSUITABLE EXTINGUISHING EQUIPMENT**

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

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

**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

**5.3. Advice for firefighters.**

**GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## SECTION 6. Accidental release measures.

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any



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contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

#### 6.2. Environmental precautions.

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

#### 6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7. Handling and storage.

#### 7.1. Precautions for safe handling.

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

#### 7.3. Specific end use(s).

Information not available.

## SECTION 8. Exposure controls/personal protection.

#### 8.1. Control parameters.

Regulatory References:

United Kingdom EH40/2005 Workplace exposure limits. Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations (as amended).

Éire Code of Practice Chemical Agent Regulations 2011.

OEL EU Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.

TLV-ACGIH ACGIH 2012

## CRISTOBALITE

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**Threshold Limit Value.**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
OEL	IRL	0,1			
TLV-ACGIH		0,025			

**ISOPENTYL ACETATE**

**Threshold Limit Value.**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
OEL	EU	270	50	540	100

**Predicted no-effect concentration - PNEC.**

Normal value for the terrestrial compartment	4,15	mg/kg
Normal value in fresh water	0,22	mg/l
Normal value in marine water	0,0022	mg/l
Normal value for fresh water sediment	17,87	mg/kg
Normal value for marine water sediment	1,787	mg/kg
Normal value of STP microorganisms	30	mg/l

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers.			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND	1,47 mg/kg/d				
Inhalation.			VND	5,1 mg/m3			VND	20,8 mg/m3
Skin.			VND	1,47 mg/kg/d			VND	2,85 mg/kg/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

**8.2. Exposure controls.**

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration. Personal protection equipment must comply with the rules in force indicated below.

**HAND PROTECTION**

Protect hands with category II (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in PVC, neoprene, nitril or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves` limit depends on the duration of exposure.

**EYE PROTECTION**

Wear protective airtight goggles (ref. standard EN 166).

**SKIN PROTECTION**

Wear category II professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN 344). Wash body with soap and water after removing overalls.

**RESPIRATORY PROTECTION**

If the threshold value (if available) for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction

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established by the company's prevention and protection service is exceeded, wear a mask with an A or universal filter, the class (1, 2 or 3) of which must be chosen according to the limit concentration of use (ref. standard EN 141).

The use of respiratory tract protection equipment, such as masks like that indicated above, is necessary to reduce worker exposure in the absence of technical measures. The protection provided by masks is in any case limited.

If the substance in question is odourless or its olfactory threshold is higher than the relative exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism; consequently, personal protective equipment must be managed so as to guarantee maximum protection (e.g. by reducing the replacement times for used PPE).

**ENVIRONMENTAL EXPOSURE CONTROLS.**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Appearance	viscous fluid
Colour	light blue
Odour	fruity and flower flavour
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	Not available.
Initial boiling point.	Not available.
Boiling range.	Not available.
Flash point.	Not available.
Evaporation Rate	NA
Flammability of solids and gases	Not available.
Lower flammability limit.	Not available.
Upper flammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	Not available.
Solubility	insoluble in water
Partition coefficient: n-octanol/water	NA
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

**9.2. Other information.**

Information not available.

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

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There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability.**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions.**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid.**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials.**

Information not available.

**10.6. Hazardous decomposition products.**

Information not available.

**SECTION 11. Toxicological information.****11.1. Information on toxicological effects.**

CRISTOBALITE

LD50 (Oral). > 2000 mg/kg (OECD 401, rat, MSDS supplier)

LC50 (Inhalation). > 2,6 mg/l (OECD 403, rat, MSDS supplier)

*"For the purposes of classification of health hazards (part 3), the route of exposure, information on mechanisms and metabolism studies are useful for determining the relevance of effects in humans. If this information raises doubts as to their relevance in humans, in spite of the indisputable data legitimacy and quality, a lower classification may be justified. When there is scientific evidence that the mechanism or mode of action is not relevant to humans, the substance or mixture should not be classified (annex I, section 1.1.1.5, EC Regulation 1272/2008)".*

Monitoring activities conducted at the company related to possible inhalation exposure, in accordance with industrial hygiene standards for paste and fluid products, showed levels of exposure to free crystalline silica (breathable part) below the limit of quantification of the method, therefore exposure is not expected during the use indicated in section 1.2 for this specific product.

However, the actual levels of free crystalline silica (breathable part) present in the workplace must be obtained through monitoring as required by regulations for the safety and health of workers.

**SECTION 12. Ecological information.****12.1. Toxicity.**

Information not available.

**12.2. Persistence and degradability.**

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CRISTOBALITE  
NOT rapidly biodegradable.

**12.3. Bioaccumulative potential.**

Information not available.

**12.4. Mobility in soil.**

Information not available.

**12.5. Results of PBT and vPvB assessment.**

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

**12.6. Other adverse effects.**

Information not available.

## SECTION 13. Disposal considerations.

**13.1. Waste treatment methods.**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Avoid littering. Do not contaminate soil, sewers and waterways.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## SECTION 14. Transport information.

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

## SECTION 15. Regulatory information.

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

Seveso category. None.

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.  
Point. 3

Substances in Candidate List (Art. 59 REACH).

None.



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None.

Substances subject to exportation reporting pursuant to (EC) Reg. 689/2008:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Information not available.

**15.2. Chemical safety assessment.**

No chemical safety assessment has been processed for the mixture and the substances it contains.

**SECTION 16. Other information.**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>STOT RE 1</b>	Specific target organ toxicity - repeated exposure, category 1
<b>H226</b>	Flammable liquid and vapour.
<b>H372</b>	Causes damage to organs through prolonged or repeated exposure.
<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

<b>R10</b>	FLAMMABLE.
<b>R48/20</b>	HARMFUL: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE THROUGH INHALATION.
<b>R66</b>	REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule

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- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation.

**GENERAL BIBLIOGRAPHY**

1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament
8. The Merck Index. - 10th Edition
9. Handling Chemical Safety
10. Niosh - Registry of Toxic Effects of Chemical Substances
11. INRS - Fiche Toxicologique (toxicological sheet)
12. Patty - Industrial Hygiene and Toxicology
13. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
14. ECHA website

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.



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## Safety data sheet

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

#### 1.1. Product identifier

Code: C300100/C300102/C300104/C300105/ C300106-B  
Product name: FREEALGIN MAXI / EXTRA FAST - BASE

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

Intended use Addition silicone for dental impression material.

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

Name: Zhermack S.p.a  
Full address: Via Bovazecchino  
District and Country: 45021 Badia Polesine (RO)  
Italy  
Tel. +39 0425-597611  
Fax +39 0425-53596

e-mail address of the competent person responsible for the Safety Data Sheet: msds@zhermack.com

#### 1.4. Emergency telephone number

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Servicio de Información Toxicológica (España): + 34 91 562 04 20 (24h/365 días)

Numéro ORFILA (INRS-France): + 33 (0)1 45 42 59 59 (24h/ 7 jours sur 7)

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Deutschland Notruf: BERLIN Tel.: 030/19240; HOMBURG Tel.: 06841/19240; BONN Tel.: 0228/19240; MAINZ Tel.: 06131/19240; ERFURT Tel.: 0361/730 730; MÜNCHEN Tel.: 089/19240; FREIBURG Tel.: 0761/19240; NÜRNBERG Tel.: 0911/398-2451; GÖTTINGEN Tel.:0551/19 240

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Hazard classification and indication:

**2.2. Label elements.**

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms: --

Signal words: --

Hazard statements: --

Precautionary statements: --

**Contains:** CRISTOBALITE

Safety data sheet available for professional users on request.

**2.3. Other hazards.**

There is no exposure to breathable free crystalline silica during normal use of this product. For more information see section 11.

**SECTION 3. Composition/information on ingredients.****3.1. Substances.**

Information not relevant.

**3.2. Mixtures.**

Contains:

<b>Identification.</b>	<b>Conc. %.</b>	<b>Classification 67/548/EEC.</b>	<b>Classification 1272/2008 (CLP).</b>
<b>CRISTOBALITE</b>			
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**4.1. Description of first aid measures.**

EYES: Remove contact lenses, if present Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

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

**5.1. Extinguishing media.**

**SUITABLE EXTINGUISHING EQUIPMENT**

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

**UNSUITABLE EXTINGUISHING EQUIPMENT**

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

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

**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

**5.3. Advice for firefighters.**

**GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any



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contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

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The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

#### 6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7. Handling and storage.

#### 7.1. Precautions for safe handling.

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

#### 7.3. Specific end use(s).

Information not available.

## SECTION 8. Exposure controls/personal protection.

#### 8.1. Control parameters.

Regulatory References:

United Kingdom EH40/2005 Workplace exposure limits. Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations (as amended).

Éire Code of Practice Chemical Agent Regulations 2011.

OEL EU Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.

TLV-ACGIH ACGIH 2012

## CRISTOBALITE

**C300100/C300102/C300104/C300105/ C300106-  
 B –  
 FREEALGIN MAXI / EXTRA FAST - BASE**

**Threshold Limit Value.**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
OEL	IRL	0,1			
TLV-ACGIH		0,025			

**ISOPENTYL ACETATE**

**Threshold Limit Value.**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
OEL	EU	270	50	540	100

**Predicted no-effect concentration - PNEC.**

Normal value for the terrestrial compartment	4,15	mg/kg
Normal value in fresh water	0,22	mg/l
Normal value in marine water	0,0022	mg/l
Normal value for fresh water sediment	17,87	mg/kg
Normal value for marine water sediment	1,787	mg/kg
Normal value of STP microorganisms	30	mg/l

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers.			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND	1,47 mg/kg/d				
Inhalation.			VND	5,1 mg/m3			VND	20,8 mg/m3
Skin.			VND	1,47 mg/kg/d			VND	2,85 mg/kg/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

**8.2. Exposure controls.**

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration. Personal protection equipment must comply with the rules in force indicated below.

**HAND PROTECTION**

Protect hands with category II (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in PVC, neoprene, nitril or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves` limit depends on the duration of exposure.

**EYE PROTECTION**

Wear protective airtight goggles (ref. standard EN 166).

**SKIN PROTECTION**

Wear category II professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN 344). Wash body with soap and water after removing overalls.

**RESPIRATORY PROTECTION**

If the threshold value (if available) for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction

**C300100/C300102/C300104/C300105/ C300106-  
B –  
FREEALGIN MAXI / EXTRA FAST - BASE**

established by the company's prevention and protection service is exceeded, wear a mask with an A or universal filter, the class (1, 2 or 3) of which must be chosen according to the limit concentration of use (ref. standard EN 141).

The use of respiratory tract protection equipment, such as masks like that indicated above, is necessary to reduce worker exposure in the absence of technical measures. The protection provided by masks is in any case limited.

If the substance in question is odourless or its olfactory threshold is higher than the relative exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism; consequently, personal protective equipment must be managed so as to guarantee maximum protection (e.g. by reducing the replacement times for used PPE).

**ENVIRONMENTAL EXPOSURE CONTROLS.**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Appearance	viscous fluid
Colour	light blue
Odour	fruity and flower flavour
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	Not available.
Initial boiling point.	Not available.
Boiling range.	Not available.
Flash point.	Not available.
Evaporation Rate	NA
Flammability of solids and gases	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	Not available.
Solubility	insoluble in water
Partition coefficient: n-octanol/water	NA
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

**9.2. Other information.**

Information not available.

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



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There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability.**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions.**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid.**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials.**

Information not available.

**10.6. Hazardous decomposition products.**

Information not available.

**SECTION 11. Toxicological information.****11.1. Information on toxicological effects.**

CRISTOBALITE

LD50 (Oral). > 2000 mg/kg (OECD 401, rat, MSDS supplier)

LC50 (Inhalation). > 2,6 mg/l (OECD 403, rat, MSDS supplier)

*"For the purposes of classification of health hazards (part 3), the route of exposure, information on mechanisms and metabolism studies are useful for determining the relevance of effects in humans. If this information raises doubts as to their relevance in humans, in spite of the indisputable data legitimacy and quality, a lower classification may be justified. When there is scientific evidence that the mechanism or mode of action is not relevant to humans, the substance or mixture should not be classified (annex I, section 1.1.1.5, EC Regulation 1272/2008)".*

Monitoring activities conducted at the company related to possible inhalation exposure, in accordance with industrial hygiene standards for paste and fluid products, showed levels of exposure to free crystalline silica (breathable part) below the limit of quantification of the method, therefore exposure is not expected during the use indicated in section 1.2 for this specific product.

However, the actual levels of free crystalline silica (breathable part) present in the workplace must be obtained through monitoring as required by regulations for the safety and health of workers.

**SECTION 12. Ecological information.****12.1. Toxicity.**

Information not available.

**12.2. Persistence and degradability.**



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CRISTOBALITE  
NOT rapidly biodegradable.

**12.3. Bioaccumulative potential.**

Information not available.

**12.4. Mobility in soil.**

Information not available.

**12.5. Results of PBT and vPvB assessment.**

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

**12.6. Other adverse effects.**

Information not available.

## SECTION 13. Disposal considerations.

**13.1. Waste treatment methods.**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Avoid littering. Do not contaminate soil, sewers and waterways.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## SECTION 14. Transport information.

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

## SECTION 15. Regulatory information.

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

Seveso category. None.

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.  
Point. 3

Substances in Candidate List (Art. 59 REACH).

None.

**C300100/C300102/C300104/C300105/ C300106-  
B –  
FREEALGIN MAXI / EXTRA FAST - BASE**Substances subject to authorisation (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 689/2008:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Information not available.

**15.2. Chemical safety assessment.**

No chemical safety assessment has been processed for the mixture and the substances it contains.

**SECTION 16. Other information.**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>STOT RE 1</b>	Specific target organ toxicity - repeated exposure, category 1
<b>H226</b>	Flammable liquid and vapour.
<b>H372</b>	Causes damage to organs through prolonged or repeated exposure.
<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

<b>R10</b>	FLAMMABLE.
<b>R48/20</b>	HARMFUL: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE THROUGH INHALATION.
<b>R66</b>	REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule

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- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation.

**GENERAL BIBLIOGRAPHY**

1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament
8. The Merck Index. - 10th Edition
9. Handling Chemical Safety
10. Niosh - Registry of Toxic Effects of Chemical Substances
11. INRS - Fiche Toxicologique (toxicological sheet)
12. Patty - Industrial Hygiene and Toxicology
13. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
14. ECHA website

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

## Safety data sheet

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

#### 1.1. Product identifier

Code: C700025  
Product name: UNIVERSAL TRAY ADHESIVE 10 ml

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

Intended use: For professional use only. Adhesive for impression silicones.

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

Name: Zhermack S.p.a  
Full address: Via Bovazecchino  
District and Country: 45021 Badia Polesine (RO)  
Italy  
Tel. +39 0425-597611  
Fax +39 0425-53596

e-mail address of the competent person responsible for the Safety Data Sheet: msds@zhermack.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to

CAV Italia: Centro Antiveleni di Milano: 02 66101029; Centro Antiveleni di Pavia: 0382 24444; Centro Antiveleni di Bergamo: 800 883300; Centro Antiveleni di Firenze: 055 7947819; Centro Antiveleni di Roma: 06 3054343; Centro Antiveleni di Roma: 06 49978000; Centro Antiveleni di Napoli: 081 7472870

Servicio de Información Toxicológica (España): + 34 91 562 04 20 (24h/365 días)

Numéro ORFILA (INRS-France): + 33 (0)1 45 42 59 59 (24h/ 7 jours sur 7)

UK Emergency number: 844 892 0111 (24 hours)

Deutschland Notruf: BERLIN Tel.: 030/19240; HOMBURG Tel.: 06841/19240; BONN Tel.: 0228/19240; MAINZ Tel.: 06131/19240; ERFURT Tel.: 0361/730 730; MÜNCHEN Tel.: 089/19240; FREIBURG Tel.: 0761/19240; NÜRNBERG Tel.: 0911/398-2451; GÖTTINGEN Tel.:0551/19 240

### SECTION 2. Hazards identification.

#### 2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

##### 2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Flam. Liq. 2	H225
Repr. 2	H361d
Asp. Tox. 1	H304
STOT RE 2	H373
Skin Irrit. 2	H315

**C700025 - UNIVERSAL TRAY ADHESIVE 10 ml****2.1.2. 67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.**

Danger Symbols:

F-Xn

R phrases:

11-20/21-38-48/20-Repr. Cat. 3 63-65

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

**2.2. Label elements.**

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.



Signal words:

Danger

**H225**

Highly flammable liquid and vapour.

**H361d**

Suspected of damaging the unborn child.

**H304**

May be fatal if swallowed and enters airways.

**H373**

May cause damage to organs through prolonged or repeated exposure.

**H315**

Causes skin irritation.

**P201**

Obtain special instructions before use.

**P210**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

**P233**

Keep container tightly closed.

**P280**

Wear protective gloves / protective clothing / eye protection / face protection.

**P301+P310**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

**P303+P361+P353**

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

**Contains:**

TOLUENE

XYLENE (MIXTURE OF ISOMERS)

**2.3. Other hazards.**

Information not available.

**SECTION 3. Composition/information on ingredients.****3.1. Substances.**

Information not relevant.

**3.2. Mixtures.**

Contains:

**Identification.****ETHYLBENZENE****Conc. %.**

9 - 19

**Classification 67/548/EEC.**

F R11, Xn R20

**Classification 1272/2008 (CLP).**

Flam. Liq. 2 H225, Acute Tox. 4 H332

CAS. 100-41-4

EC. 202-849-4

**C700025 - UNIVERSAL TRAY ADHESIVE 10 ml**

INDEX. 601-023-00-4

**TOLUENE**

CAS. 108-88-3

10 - 20

Repr. Cat. 3 R63, R67, F R11, Xn  
R48/20, Xi R38Flam. Liq. 2 H225, Repr. 2 H361d, STOT RE 2  
H373, Skin Irrit. 2 H315, STOT SE 3 H336

EC. 203-625-9

INDEX. 601-021-00-3

Reg. no. 01-2119471310-51-XXXX

**XYLENE (MIXTURE OF ISOMERS)**

CAS. 1330-20-7

10 - 20

R10, Xn R20/21, Xn R48/20, Xn R65, Xi  
R36/37/38, Note CFlam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox.  
4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye  
Irrit. 2A H319, Skin Irrit. 2 H315, STOT SE 3  
H335, Note C

EC. 215-535-7

INDEX. 601-022-00-9

Reg. no. 01-2119488216-32-XXXX

Note: Upper limit is not included into the range.

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

**SECTION 4. First aid measures.****4.1. Description of first aid measures.**

EYES: Remove contact lenses, if present Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

**SECTION 5. Firefighting measures.****5.1. Extinguishing media.****SUITABLE EXTINGUISHING EQUIPMENT**

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

**UNSUITABLE EXTINGUISHING EQUIPMENT**

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

**5.2. Special hazards arising from the substance or mixture.****HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

**5.3. Advice for firefighters.**

**GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

**SECTION 6. Accidental release measures.****6.1. Personal precautions, protective equipment and emergency procedures.**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

**6.2. Environmental precautions.**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections.**

Any information on personal protection and disposal is given in sections 8 and 13.

**SECTION 7. Handling and storage.****7.1. Precautions for safe handling.**

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s).**

Information not available.



**SECTION 8. Exposure controls/personal protection.****8.1. Control parameters.**

## Regulatory References:

United Kingdom	EH40/2005 Workplace exposure limits. Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations (as amended).
Éire	Code of Practice Chemical Agent Regulations 2011.
OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.
TLV-ACGIH	ACGIH 2012

**ETHYLBENZENE**

## Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
WEL	UK	441	100	552	125	SKIN
OEL	IRL	442	100	884	200	SKIN
OEL	EU	442	100	884	200	SKIN
TLV-ACGIH		20	100		87	

**TOLUENE**

## Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
WEL	UK	191	50	384	100	SKIN
OEL	IRL	192	50	384	100	SKIN
OEL	EU	192	50	384	100	SKIN
TLV-ACGIH		75,4	20			

**XYLENE (MIXTURE OF ISOMERS)**

## Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	221	50	442	100	SKIN
OEL	IRL	221	50	442	100	SKIN
TLV-ACGIH		434	100	651	150	
WEL	UK	220	50	441	100	

## Predicted no-effect concentration - PNEC.

Normal value in fresh water	2,31	mg/kg
Normal value for water, intermittent release	0,327	mg/l
Normal value in marine water	0,327	mg/l
Normal value for fresh water sediment	12,46	mg/kg
Normal value for marine water sediment	12,46	mg/kg
Normal value of STP microorganisms	6,58	mg/l

## Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers. Acute local	Effects on consumers			Effects on workers			
		Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND	1,6 mg/kg				
Inhalation.	VND	174 mg/m3	174 mg/m3	14,8 mg/m3	VND	289 mg/m3	VND	77 mg/m3
Skin.			VND	108 mg/kg			VND	180 mg/kg

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

### **8.2. Exposure controls.**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

#### **HAND PROTECTION**

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

#### **SKIN PROTECTION**

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

#### **EYE PROTECTION**

Wear airtight protective goggles (see standard EN 166).

#### **RESPIRATORY PROTECTION**

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

## **SECTION 9. Physical and chemical properties.**

### **9.1. Information on basic physical and chemical properties.**

Appearance	fluid
Colour	light blue
Odour	characteristic of solvent
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	Not available.
Initial boiling point.	Not available.
Boiling range.	Not available.

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Flash point.	20 °C.
Evaporation Rate	Not available.
Flammability of solids and gases	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	1,011 Kg/l
Solubility	partially miscible
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

**9.2. Other information.**

Information not available.

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

There are no particular risks of reaction with other substances in normal conditions of use.

TOLUENE: breaks down in sunlight.

**10.2. Chemical stability.**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions.**

The vapours may also form explosive mixtures with the air.

ETHYLBENZENE: reacts violently with strong oxidising agents and attacks various types of plastics. Can form explosive mixtures with the air.

TOLUENE: risk of explosion on contact with fuming sulphuric acid, nitric acid, silver perchlorates, nitrogen dioxide, non-metal halogenides, acetic acid, organic nitrocompounds. Can form explosive mixtures with the air. May react dangerously with: strong oxidising agents, strong acids, sulphur (in the presence of heat).

XILENE: è stabile, ma può dare reazioni violente in presenza di ossidanti forti come acido solforico, nitrico, perclorati. Può formare miscele esplosive con l'aria.

**10.4. Conditions to avoid.**

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

**10.5. Incompatible materials.**

Information not available.

**10.6. Hazardous decomposition products.**

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

ETHYLBENZENE: methane, styrene, hydrogen, ethane.

**SECTION 11. Toxicological information.****11.1. Information on toxicological effects.**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

This product must be handled carefully because of its possible teratogenic effects, which may be toxic and damage the foetus development.

The introduction of even small quantities of this liquid into the respiratory system in case of ingestion or vomit may cause bronchopneumonia and pulmonary edema.

This product may cause functional disorders or morphological mutations after repeated or prolonged exposure and/or may accumulate inside the human body and is thus graded as dangerous.

Acute effects: contact with skin may cause: irritation, erythema, edema, dryness and chapped skin. Vapour inhalation may slightly irritate the upper respiratory tract. Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.

**ETHYLBENZENE**

LD50 (Oral). 3500 mg/kg Rat

LD50 (Cutánea). 15354 mg/kg Rabbit

LC50 (Inhalación). 6,2 mg/l/4h (publication, mouse, ECHA dossier).

**Irritation/Corrosion**

Skin irritation: Slightly irritating (publication, rabbit, in vivo, ECHA dossier).

Eye irritation: Slightly irritating (publication, rabbit, in vivo, ECHA dossier).

Skin Sensitization: No data available.

STOT Repeated exposure: Insufficient data. Liver, lung, thyroid and pituitary pathology was observed in mice that inhaled  $\geq$  250 ppm ethylbenzene for 2 years. (ECHA dossier).

Genotoxicity: Negative (OECD 473, in vitro mammalian chromosome aberration test and OECD 486, in vivo, ECHA dossier).

Carcinogenicity: Insufficient data. According to NTP there was some evidence of carcinogenicity in a test conducted on mice (lung tumors and hepatocellular neoplasms) (NTP study, GLP, ECHA dossier).

Toxicity to reproduction: Negative (OECD 415, rat, ECHA dossier).

ETHYLBENZENE: like the benzene homologues, may exert an effect on the CNS with depression, narcosis, often preceded by dizziness and accompanied by headache. It is irritating to the skin, conjunctivae and respiratory apparatus.

**TOLUENE**

LD50 (Oral). 5580 mg/kg (rat, ECHA dossier).

LD50 (Dermal). 12124 mg/kg (rabbit, ECHA dossier).

LC50 (Inhalation). 28,1 mg/l/4h (rat, ECHA dossier).

**Irritation/Corrosion**

Skin irritation: Irritating (OECD 404, in vivo, rabbit, ECHA dossier).

Eye irritation: Not irritating (OECD 405, in vivo, rabbit, ECHA dossier).

Skin Sensitization: Not sensitising (OECD 406, Magnusson-Kligman, ECHA dossier).

STOT – Repeated/single exposure: Target organ: central nervous system (inhalation exposure, tests on animals, ECHA dossier).

Genotoxicity in vitro: Negative (OECD 471, OECD 476, mutation assay, ECHA dossier).

Genotoxicity in vivo: Negative (Chromosome aberration assay, rat, ECHA dossier).

Carcinogenicity: No data available.

Toxicity to reproduction: Possible adverse effects on fetal development (OECD 416 and EPA OTS 798.4350, rat, ECHA dossier).

TOLUENE: it has a toxic effect on the central and peripheral nervous system (with encephalopathies and polyneuritis). Irritating to the skin, conjunctivae, cornea and respiratory apparatus.

**XYLENE (MIXTURE OF ISOMERS)**

LD50 (Oral). 3523 mg/kg (EU Method B.1, GLP, rat, ECHA dossier).

LD50 (Dermal). 4350 mg/kg Rabbit

LC50 (Inhalation). 6350 ppm (EU Method B.2, rat, ECHA dossier).

Acute toxicity:

Dermal: No data available.

#### Irritation/Corrosion

Skin irritation: Slightly irritating (weight of evidence approach, in vivo, rabbit, ECHA dossier).

Eye irritation: Slightly irritating (weight of evidence approach, in vivo, rabbit, ECHA dossier).

Skin Sensitization: Insufficient data (ECHA dossier).

#### STOT –

Repeated exposure: There was no evidence of treatment-related systemic toxicity or carcinogenicity following gavage administration of mixed xylenes (oral and inhalation exposure, ECHA dossier).

Genotoxicity in vitro: Negative (in vitro mammalian chromosome aberration test, ECHA dossier).

Genotoxicity in vivo: Negative (similar to OECD 478, mixed xylenes, chromosome aberration, ECHA dossier).

Carcinogenicity: Negative (EU Method B.32, rat, ECHA dossier).

Toxicity to reproduction: Negative (EPA OPPTS 870.3800, rat, ECHA dossier).

## SECTION 12. Ecological information.

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or sewers or contaminate soil or vegetation.

### 12.1. Toxicity.

#### TOLUENE

LC50 - for Fish.

5,5 mg/l/96h (Oncorhynchus kisutch, dynamic, freshwater, ECHA dossier).

EC50 - for Crustacea.

3,78 mg/l/48h (Daphnia magna, semi-static, freshwater, ECHA dossier).

EC50 - for Algae / Aquatic Plants.

134 mg/l/72h (ECHA dossier).

### 12.2. Persistence and degradability.

#### ETHYLBENZENE

Rapidly biodegradable.

#### TOLUENE

Rapidly biodegradable.

### 12.3. Bioaccumulative potential.

Information not available.

### 12.4. Mobility in soil.

Information not available.

### 12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

### 12.6. Other adverse effects.

Information not available.

## SECTION 13. Disposal considerations.

**C700025 - UNIVERSAL TRAY ADHESIVE 10 ml****13.1. Waste treatment methods.**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Avoid littering. Do not contaminate soil, sewers and waterways.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information.**

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

**Road and rail transport:**

ADR/RID Class:	3	UN:	1133
Packing Group:	II		
Label:	3		
Nr. Kemler:	33		
Limited Quantity:	5 L		
Tunnel restriction code:	(D/E)		
Proper Shipping Name:	ADHESIVES		
Special Provision:	640C		

**Carriage by sea (shipping):**

IMO Class:	3	UN:	1133
Packing Group:	II		
Label:	3		
EMS:	F-E, S-D		
Marine Pollutant:	NO		
Proper Shipping Name:	ADHESIVES		

**Transport by air:**

IATA:	3	UN:	1133
Packing Group:	II		
Label:	3		
Cargo:			
Packaging instructions:	355	Maximum quantity:	60 L
Pass.:			
Packaging instructions:	Y341	Maximum quantity:	0,5 L
Special Instructions:	A3		
Proper Shipping Name:	ADHESIVES		

**SECTION 15. Regulatory information.****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.**

Seveso category. 7b

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.  
Point. 3 - 40

Contained substance.

Point. 48 TOLUENE

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisation (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

**15.2. Chemical safety assessment.**

No chemical safety assessment has been processed for the mixture and the substances it contains.

**SECTION 16. Other information.**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 2 Flammable liquid, category 2

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<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>Repr. 2</b>	Reproductive toxicity, category 2
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Asp. Tox. 1</b>	Aspiration hazard, category 1
<b>STOT RE 2</b>	Specific target organ toxicity - repeated exposure, category 2
<b>Eye Irrit. 2A</b>	Eye irritation, category 2A
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>H225</b>	Highly flammable liquid and vapour.
<b>H226</b>	Flammable liquid and vapour.
<b>H361d</b>	Suspected of damaging the unborn child.
<b>H312</b>	Harmful in contact with skin.
<b>H332</b>	Harmful if inhaled.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H336</b>	May cause drowsiness or dizziness.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

<b>R10</b>	FLAMMABLE.
<b>R11</b>	HIGHLY FLAMMABLE.
<b>R20</b>	HARMFUL BY INHALATION.
<b>R20/21</b>	HARMFUL BY INHALATION AND IN CONTACT WITH SKIN.
<b>R36/37/38</b>	IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
<b>R38</b>	IRRITATING TO SKIN.
<b>R48/20</b>	HARMFUL: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE THROUGH INHALATION.
<b>Repr. Cat. 3</b>	Reproductive toxicity, development, category 3.
<b>R63</b>	POSSIBLE RISK OF HARM TO THE UNBORN CHILD.
<b>R65</b>	HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.
<b>R67</b>	VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.

## LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level



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- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation.

**GENERAL BIBLIOGRAPHY**

1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament
8. The Merck Index. - 10th Edition
9. Handling Chemical Safety
10. Niosh - Registry of Toxic Effects of Chemical Substances
11. INRS - Fiche Toxicologique (toxicological sheet)
12. Patty - Industrial Hygiene and Toxicology
13. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
14. ECHA website

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**Changes to previous review:**

The following sections were modified:

02 / 08 / 09 / 15 / 16.