

## SAFETY DATA SHEET

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

#### 1.1. Product identifier

Trade name or designation of the mixture	HumiSeal 1B51NSLU
Registration number	-
Synonyms	None.
Product code	HumiSeal Europe 1B51NSLU
Issue date	03-May-2018
Version number	02
Revision date	21-December-2018
Supersedes date	03-May-2018

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

Identified uses	Protective Coating for Printed Circuit Board
Uses advised against	None known.

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

##### Supplier

Company name	HUMISEAL EUROPE LTD.		
Address	505 Eskdale Road Winnersh Wokingham Berkshire RG41 5TU UK		
Division	A CHASE CORPORATION COMPANY		
Telephone	General Assistance	44 (0) 118 944 2333	
e-mail	europetechsupport@chasecorp.com		
Contact person	Not available.		

1.4. Emergency telephone number	Chemtrec U.K.	+(44) 870 820 0418
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### SECTION 2: Hazards identification

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

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Regulation (EC) No 1272/2008 as amended

##### Physical hazards

Flammable liquids	Category 2	H225 - Highly flammable liquid and vapour.
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##### Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.
Aspiration hazard	Category 1	H304 - May be fatal if swallowed and enters airways.

##### Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 2	H411 - Toxic to aquatic life with long lasting effects.
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**Hazard summary** May be ignited by heat, sparks or flames. Causes skin irritation. May cause drowsiness and dizziness. Dangerous for the environment if discharged into watercourses.

## 2.2. Label elements

### Label according to Regulation (EC) No. 1272/2008 as amended

**Contains:** METHYL CYCLOHEXANE

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

#### Precautionary statements

##### Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing mist/vapor.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

##### Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE/doctor.
P331	Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTRE/doctor if you feel unwell.
P321	Specific treatment (see this label).
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use appropriate media to extinguish.
P391	Collect spillage.

##### Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

##### Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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#### Supplemental label information

99.6 % of the mixture consists of component(s) of unknown acute oral toxicity. 99.6 % of the mixture consists of component(s) of unknown acute inhalation toxicity. 99.6 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 20 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. 20 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

## 2.3. Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

## General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
METHYL CYCLOHEXANE	70 - < 80	108-87-2 203-624-3	01-2119556887-18-XXXX	601-018-00-7	
<b>Classification:</b>	Flam. Liq. 2;H225, Asp. Tox. 1;H304, Skin Irrit. 2;H315, STOT SE 3;H336, Aquatic Chronic 2;H411				
Other components below reportable levels	20 - < 30				

### List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

**Composition comments** The full text for all R- and H-phrases is displayed in section 16.

## SECTION 4: First aid measures

**General information** Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

### 4.1. Description of first aid measures

**Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell.

**Skin contact** Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

**Ingestion** Rinse mouth. Get medical attention if symptoms occur.

**4.2. Most important symptoms and effects, both acute and delayed** May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes and mucous membranes. Irritation of nose and throat. Skin irritation. May cause redness and pain.

**4.3. Indication of any immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

## SECTION 5: Firefighting measures

**General fire hazards** Highly flammable liquid and vapour.

### 5.1. Extinguishing media

**Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

**5.2. Special hazards arising from the substance or mixture** Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Special fire fighting procedures** In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

## SECTION 6: Accidental release measures

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

**For non-emergency personnel** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

**For emergency responders** Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up.

<b>6.2. Environmental precautions</b>	Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.
<b>6.3. Methods and material for containment and cleaning up</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil etc) away from spilled material. This product is miscible in water.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.  Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use.
<b>6.4. Reference to other sections</b>	Not available.

## SECTION 7: Handling and storage

<b>7.1. Precautions for safe handling</b>	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains.
<b>7.2. Conditions for safe storage, including any incompatibilities</b>	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Refrigeration recommended. Keep in an area equipped with sprinklers.
<b>7.3. Specific end use(s)</b>	Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Recommended monitoring procedures</b>	Follow standard monitoring procedures.
<b>Derived no effect levels (DNELs)</b>	Not available.
<b>Predicted no effect concentrations (PNECs)</b>	Not available.

### 8.2. Exposure controls

<b>Appropriate engineering controls</b>	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.
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### Individual protection measures, such as personal protective equipment

<b>General information</b>	Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Eye wash fountain and emergency showers are recommended.
<b>Eye/face protection</b>	Chemical respirator with organic vapour cartridge and full facepiece.
<b>Skin protection</b>	
- Hand protection	Wear appropriate chemical resistant gloves.
- Other	Wear appropriate chemical resistant clothing.
<b>Respiratory protection</b>	Chemical respirator with organic vapour cartridge and full facepiece.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>Hygiene measures</b>	When using do not smoke. 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.

**Environmental exposure controls**

Contain spills and prevent releases and observe national regulations on emissions. Environmental manager must be informed of all major releases.

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

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Colour</b>	Not available.
<b>Odour</b>	Not available.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Does not apply.
<b>Melting point/freezing point</b>	-126.6 °C (-195.88 °F) estimated
<b>Initial boiling point and boiling range</b>	100.9 °C (213.62 °F) estimated
<b>Flash point</b>	4.0 °C (39.2 °F)
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	1.2 % estimated
<b>Flammability limit - upper (%)</b>	6.7 % estimated
<b>Vapour pressure</b>	61.33 hPa estimated
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Negligible
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	250 °C (482 °F) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	155 - 215
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.
<b>9.2. Other information</b>	
<b>Brookfield viscosity</b>	155 - 215 cP
<b>Density</b>	0.81 g/cm <sup>3</sup>
<b>Miscible (water)</b>	Negligible
<b>Percent volatile</b>	79.6 % estimated
<b>Specific gravity</b>	0.81
<b>VOC</b>	632 g/l

**SECTION 10: Stability and reactivity**

<b>10.1. Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>10.2. Chemical stability</b>	Material is stable under normal conditions.
<b>10.3. Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>10.4. Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>10.5. Incompatible materials</b>	Strong oxidising agents.
<b>10.6. Hazardous decomposition products</b>	No hazardous decomposition products are known.

**SECTION 11: Toxicological information**

<b>General information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
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## Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

**Symptoms** May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. May cause redness and pain.

## 11.1. Information on toxicological effects

<b>Acute toxicity</b>	Narcotic effects.
<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Skin sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Germ cell mutagenicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Carcinogenicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Reproductive toxicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - single exposure</b>	May cause drowsiness and dizziness.
<b>Specific target organ toxicity - repeated exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Aspiration hazard</b>	Due to partial or complete lack of data the classification is not possible.
<b>Mixture versus substance information</b>	No information available.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

**12.1. Toxicity** Toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

<b>Product</b>	<b>Species</b>	<b>Test Results</b>
HumiSeal 1B51NSLU		
<b>Aquatic</b>		
Fish	LC50	Fish 68.2915 mg/l, 96 hours estimated
<b>Components</b>	<b>Species</b>	<b>Test Results</b>
METHYL CYCLOHEXANE (CAS 108-87-2)		
<b>Aquatic</b>		
Fish	LC50	Striped bass (Morone saxatilis) 5.8 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**12.2. Persistence and degradability** No data is available on the degradability of this product.

**12.3. Bioaccumulative potential** Not available.

**Partition coefficient n-octanol/water (log Kow)**  
METHYL CYCLOHEXANE 3.61

**Bioconcentration factor (BCF)** Not available.

**12.4. Mobility in soil** No data available.

**12.5. Results of PBT and vPvB assessment** Not a PBT or vPvB substance or mixture.

**12.6. Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Residual waste** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
<b>EU waste code</b>	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Disposal methods/information</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Special precautions</b>	Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

### ADR

<b>14.1. UN number</b>	UN1263
<b>14.2. UN proper shipping name</b>	Paint
<b>14.3. Transport hazard class(es)</b>	
Class	3
Subsidiary risk	-
Label(s)	3
Hazard No. (ADR)	33
Tunnel restriction code	D/E
<b>14.4. Packing group</b>	II
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Not available.

### RID

<b>14.1. UN number</b>	UN1263
<b>14.2. UN proper shipping name</b>	Paint
<b>14.3. Transport hazard class(es)</b>	
Class	3
Subsidiary risk	-
Label(s)	3
<b>14.4. Packing group</b>	II
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Not available.

### ADN

<b>14.1. UN number</b>	UN1263
<b>14.2. UN proper shipping name</b>	Paint
<b>14.3. Transport hazard class(es)</b>	
Class	3
Subsidiary risk	-
Label(s)	3
<b>14.4. Packing group</b>	II
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Not available.

### IATA

<b>14.1. UN number</b>	UN1263
<b>14.2. UN proper shipping name</b>	PAINT
<b>14.3. Transport hazard class(es)</b>	
Class	3
Subsidiary risk	-
<b>14.4. Packing group</b>	II
<b>14.5. Environmental hazards</b>	No.
<b>ERG Code</b>	3H
<b>14.6. Special precautions for user</b>	Not available.

#### Other information

<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

## IMDG

14.1. UN number	UN1263
14.2. UN proper shipping name	PAINT
14.3. Transport hazard class(es)	
Class	3
Subsidiary risk	-
14.4. Packing group	II
14.5. Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-D
14.6. Special precautions for user	Not available.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.

ADN; ADR; IATA; IMDG; RID



## SECTION 15: Regulatory information

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

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**

Not listed.

**Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

Not listed.

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

#### Authorisations

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

#### Restrictions on use

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

METHYL CYCLOHEXANE (CAS 108-87-2)

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.**

Not listed.

#### Other EU regulations

**Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended**

METHYL CYCLOHEXANE (CAS 108-87-2)



<b>Other regulations</b>	The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.
<b>National regulations</b>	Follow national regulation for work with chemical agents.
<b>15.2. Chemical safety assessment</b>	No Chemical Safety Assessment has been carried out.
<b>SECTION 16: Other information</b>	
<b>List of abbreviations</b>	Not available.
<b>References</b>	Not available.
<b>Information on evaluation method leading to the classification of mixture</b>	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
<b>Full text of any H-statements not written out in full under Sections 2 to 15</b>	H225 Highly flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects.
<b>Revision information</b>	SECTION 2: Hazards identification: Prevention SECTION 2: Hazards identification: Response SECTION 2: Hazards identification: Supplemental label information Physical & Chemical Properties: Multiple Properties
<b>Training information</b>	Follow training instructions when handling this material.
<b>Disclaimer</b>	Humiseal cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.