

SAFETY DATA SHEET

HL171C/NC

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Compilation date: 03/04/2012

Revision date: 02/08/2016

Revision No: 1a

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: HL171C/NC

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

1.3. Details of the supplier of the safety data sheet

Company name: Robnor Resins Ltd
 31 Athena Avenue
 Elgin Industrial Estate
 Swindon
 Wiltshire
 SN2 8EJ
 United Kingdom

Tel: +44(0) 1793 823741

Fax: +44(0) 1793 827033

Email: eusds@robnor.co.uk

1.4. Emergency telephone number

Emergency tel: +44(0) 1793 823741
 (office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Acute Tox. 4: H332; Skin Irrit. 2: H315; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Sens. 1: H317; Carc. 2: H351; STOT RE 2: H373; STOT SE 3: H335

Most important adverse effects: Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer [inhalation]. May cause damage to organs [respiratory system] through prolonged or repeated exposure [inhalation (dust/mist)]. May cause respiratory irritation.

2.2. Label elements

Label elements:

Hazard statements: H332: Harmful if inhaled.
 H315: Causes skin irritation.
 H319: Causes serious eye irritation.
 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317: May cause an allergic skin reaction.
 H351: Suspected of causing cancer [inhalation].
 H373: May cause damage to organs [respiratory system] through prolonged or repeated exposure [inhalation (dust/mist)].
 H335: May cause respiratory irritation.

Hazard pictograms: GHS07: Exclamation mark
 GHS08: Health hazard

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Signal words: Danger

Precautionary statements: P201: Obtain special instructions before use.
P260: Do not breathe mist.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P302+352: IF ON SKIN: Wash with plenty of water/soap and water.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+313: IF exposed or concerned: Get medical attention.

2.3. Other hazards

Other hazards: Danger of serious damage to health by prolonged exposure.

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

DIPHENYLMETHANEDIISOCYANATE (ISOMERS & HOMOLOGUES)

| EINECS | CAS | PBT / WEL | CLP Classification | Percent |
|-----------|-----------|-----------|--|---------|
| 618-498-9 | 9016-87-9 | - | Carc. 2: H351; Acute Tox. 4: H332; Skin Irrit. 2: H315; STOT RE 2: H373; Eye Irrit. 2: H319; STOT SE 3: H335; Resp. Sens. 1: H334; Skin Sens. 1: H317; -: EUH204 | 50-70% |

4,4'-METHYLENEDIPHENYL DIISOCYANATE - REACH registered number(s): 01-2119457014-47-XXXX

| | | | | |
|-----------|----------|---|---|--------|
| 202-966-0 | 101-68-8 | - | Carc. 2: H351; STOT RE 2: H373; Acute Tox. 4: H332; Skin Irrit. 2: H315; Eye Irrit. 2: H319; STOT SE 3: H335; Resp. Sens. 1: H334; Skin Sens. 1: H317 | 30-50% |
|-----------|----------|---|---|--------|

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water. If irritation occurs or persists, seek medical attention. Transfer to hospital if necessary.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Do not induce vomiting. Wash out mouth with water. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

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

Skin contact: There may be irritation and redness at the site of contact. May cause sensitisation in susceptible individuals.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

Inhalation: Potential potent asthmagen. Exposure may cause coughing or wheezing. There may be irritation of the throat with a feeling of tightness in the chest.

[cont...]

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

Immediate / special treatment: Show this safety data sheet to the doctor in attendance. Eye bathing equipment should be available on the premises.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Mark out the contaminated area with signs and prevent access to unauthorised personnel.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Clean-up should be dealt with only by qualified personnel familiar with the specific substance.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Avoid the formation or spread of mists in the air. Ensure there is exhaust ventilation of the area.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Section 8: Exposure controls/personal protection

8.1. Control parameters

[cont...]

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Hazardous ingredients:

DIPHENYLMETHANEDIISOCYANATE (ISOMERS & HOMOLOGUES)

Workplace exposure limits:

Respirable dust

| State | 8 hour TWA | 15 min. STEL | 8 hour TWA | 15 min. STEL |
|-------|------------------------|------------------------|------------|--------------|
| UK | 0.02 mg/m ³ | 0.07 mg/m ³ | - | - |

4,4'-METHYLENEDIPHENYL DIISOCYANATE

| | | | | |
|----|------------------------|------------------------|---|---|
| UK | 0.02 mg/m ³ | 0.07 mg/m ³ | - | - |
|----|------------------------|------------------------|---|---|

DNEL/PNEC Values

Hazardous ingredients:

4,4'-METHYLENEDIPHENYL DIISOCYANATE

| Type | Exposure | Value | Population | Effect |
|------|------------------------------------|-----------------------|------------|--------|
| DNEL | Inhalation | 50 ug/m ³ | Workers | Local |
| DNEL | Inhalation | 100 ug/m ³ | Workers | Local |
| PNEC | Fresh water | 1 mg/L | - | - |
| PNEC | Marine water | 100 ug/L | - | - |
| PNEC | Microorganisms in sewage treatment | 1 mg/L | - | - |
| PNEC | Soil (agricultural) | 1 mg/kg | - | - |

8.2. Exposure controls

Engineering measures: Ensure there is exhaust ventilation of the area.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Impermeable gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Impermeable protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Brown

Odour: Characteristic odour

Solubility in water: Reacts with water.

Viscosity: Non-viscous

Flash point°C: 230

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

[cont...]

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10.4. Conditions to avoid

Conditions to avoid: Heat. Moist air. Humidity.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids. Strong bases. Water. Alcohols. Amines.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

DIPHENYLMETHANEDIISOCYANATE (ISOMERS & HOMOLOGUES)

| | | | | |
|-----------|-----|---------|--------|-------|
| DERMAL | RBT | LD50 | >9400 | mg/kg |
| DUST/MIST | RAT | 4H LC50 | 0.31 | mg/l |
| ORAL | RAT | LD50 | >10000 | mg/kg |

4,4'-METHYLENEDIPHENYL DIISOCYANATE

| | | | | |
|-----------|-----|---------|-------|-------|
| DUST/MIST | RAT | 4H LC50 | 0.368 | mg/l |
| ORL | RAT | LD50 | 9200 | mg/kg |

Relevant hazards for product:

| Hazard | Route | Basis |
|--------------------------------|---------|-----------------------|
| Acute toxicity (ac. tox. 4) | INH | Hazardous: calculated |
| Skin corrosion/irritation | DRM | Hazardous: calculated |
| Serious eye damage/irritation | OPT | Hazardous: calculated |
| Respiratory/skin sensitisation | INH DRM | Hazardous: calculated |
| Carcinogenicity | -- | Hazardous: calculated |
| STOT-single exposure | INH | Hazardous: calculated |
| STOT-repeated exposure | - | Hazardous: calculated |

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact. May cause sensitisation in susceptible individuals.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

Inhalation: Potential potent asthmagen. Exposure may cause coughing or wheezing. There may be irritation of the throat with a feeling of tightness in the chest.

Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

DIPHENYLMETHANEDIISOCYANATE (ISOMERS & HOMOLOGUES)

| | | | |
|-------------------------------|----------|-------|------|
| Daphnia magna | 48H EC50 | >1640 | mg/l |
| ZEBRAFISH (Brachydanio rerio) | 96H LC50 | >1000 | mg/l |

[cont...]

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4,4'-METHYLENEDIPHENYL DIISOCYANATE

| | | | |
|-------------------------------|-----------|-------|------|
| Scenedesmus Subspicatus | 72H ErC50 | >1640 | mg/l |
| ZEBRAFISH (Brachydanio rerio) | 96H ErC50 | >1000 | mg/l |

12.2. Persistence and degradability

Persistence and degradability: Not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Reacts with water.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Waste code number: 08 05 01

Disposal of packaging: Arrange for collection by specialised disposal company.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: EUH204: Contains isocyanates. May produce an allergic reaction.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

[cont...]

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H335: May cause respiratory irritation.

H351: Suspected of causing cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H373: May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

SAFETY DATA SHEET

RL171C/BK

Page: 1

Compilation date: 03/04/2012

Revision date: 02/08/2016

Revision No: 2a

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: RL171C/BK

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

1.3. Details of the supplier of the safety data sheet

Company name: Robnor Resins Ltd
 31 Athena Avenue
 Elgin Industrial Estate
 Swindon
 Wiltshire
 SN2 8EJ
 United Kingdom

Tel: +44(0) 1793 823741

Fax: +44(0) 1793 827033

Email: eusds@robnor.co.uk

1.4. Emergency telephone number

Emergency tel: +44(0) 1793 823741
 (office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: This product has no classification under CLP.

2.2. Label elements

Label elements: This product has no label elements.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

LIMESTONE

| EINECS | CAS | PBT / WEL | CLP Classification | Percent |
|-----------|-----------|--|--------------------|---------|
| 215-279-3 | 1317-65-3 | Substance with a Community workplace exposure limit. | - | 30-50% |

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ALUMINIUM HYDROXIDE

| | | | | |
|-----------|------------|--|---|--------|
| 244-492-7 | 21645-51-2 | Substance with a Community workplace exposure limit. | - | 10-30% |
|-----------|------------|--|---|--------|

KAOLIN

| | | | | |
|-----------|-----------|--|---|-------|
| 310-194-1 | 1332-58-7 | Substance with a Community workplace exposure limit. | - | 1-10% |
|-----------|-----------|--|---|-------|

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: Wash out mouth with water. Consult a doctor.

Inhalation: Consult a doctor.

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

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

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

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Mark out the contaminated area with signs and prevent access to unauthorised personnel.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

[cont...]

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Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Not applicable.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

LIMESTONE

Workplace exposure limits:

Respirable dust

| State | 8 hour TWA | 15 min. STEL | 8 hour TWA | 15 min. STEL |
|-------|----------------------|---------------------|------------|--------------|
| UK | 10 mg/m ³ | 4 mg/m ³ | - | - |

ALUMINIUM HYDROXIDE

| | | | | |
|----|---------------------|----------------------|---|---|
| UK | 4 mg/m ³ | 10 mg/m ³ | - | - |
|----|---------------------|----------------------|---|---|

KAOLIN

| | | | | |
|----|---------------------|---|---|---|
| UK | 2 mg/m ³ | - | - | - |
|----|---------------------|---|---|---|

DNEL/PNEC Values

Hazardous ingredients:

LIMESTONE

| Type | Exposure | Value | Population | Effect |
|------|------------|----------------------|------------|----------|
| DNEL | Inhalation | 10 mg/m ³ | Workers | Systemic |

ALUMINIUM HYDROXIDE

| Type | Exposure | Value | Population | Effect |
|------|------------|-------------------------|------------|----------|
| DNEL | Inhalation | 10.76 mg/m ³ | Workers | Systemic |
| DNEL | Inhalation | 3.59 mg/m ³ | Workers | Local |

8.2. Exposure controls

Engineering measures: Not applicable.

Respiratory protection: Respiratory protection not required.

Hand protection: Protective gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Black

Viscosity: Highly viscous

Relative density: 1.72

[cont...]

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9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

LIMESTONE

| | | | | |
|-----------|-----|---------|-------|-------|
| DERMAL | RAT | LD50 | >2000 | mg/kg |
| DUST/MIST | RAT | 4H LC50 | >3 | mg/l |
| ORAL | RAT | LD50 | >2000 | mg/kg |

ALUMINIUM HYDROXIDE

| | | | | |
|------|-----|------|-------|-------|
| ORAL | RAT | LD50 | >2000 | mg/kg |
|------|-----|------|-------|-------|

KAOLIN

| | | | | |
|--------|-----|------|-------|-------|
| DERMAL | RAT | LD50 | >5000 | mg/kg |
| ORAL | RAT | LD50 | >5000 | mg/kg |

Toxicity values: No data available.

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

Section 12: Ecological information

12.1. Toxicity

[cont...]

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Hazardous ingredients:

LIMESTONE

| | | | |
|--|-----------|------|------|
| Daphnia magna | 48H EC50 | >100 | mg/l |
| RAINBOW TROUT (<i>Oncorhynchus mykiss</i>) | 96H LC50 | >100 | mg/l |
| Scenedesmus Subspicatus | 72H ErC50 | >14 | mg/l |

ALUMINIUM HYDROXIDE

| | | | |
|---|-----------|------|------|
| Daphnia magna | 48H EC50 | >100 | mg/l |
| FISH | 96H LC50 | >100 | mg/l |
| GREEN ALGA (<i>Selenastrum capricornutum</i>) | 72H ErC50 | >100 | mg/l |

12.2. Persistence and degradability

Persistence and degradability: No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: Non-volatile.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Disposal of packaging: Arrange for collection by specialised disposal company.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

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[cont...]

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