

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 1A20R |
| Registration number | - |
| Synonyms | None. |
| Product code | HumiSeal 1A20R |
| Issue date | 12-03-2015 |
| Version number | 01 |

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 USA | 1-800-424-9300 |
| | OutSide USA | +1 703-741-5970 |

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 Directive 67/548/EEC or 1999/45/EC as amended

Classification R10, T;R23/24/25-39/23/24/25-48/23, Xi;R38, R42/43, N;R51/53

The full text for all R-phrases is displayed in section 16.

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

Physical hazards

| | | |
|-------------------|------------|------------------------------------|
| Flammable liquids | Category 3 | H226 - Flammable liquid and vapor. |
|-------------------|------------|------------------------------------|

Health hazards

| | | |
|----------------------------|------------|------------------------------------|
| Acute toxicity, oral | Category 3 | H301 - Toxic if swallowed. |
| Acute toxicity, dermal | Category 3 | H311 - Toxic in contact with skin. |
| Acute toxicity, inhalation | Category 4 | H332 - Harmful if inhaled. |
| Skin corrosion/irritation | Category 2 | H315 - Causes skin irritation. |

| | | |
|--|------------|---|
| Respiratory sensitization | Category 1 | H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin sensitization | Category 1 | H317 - May cause an allergic skin reaction. |
| Specific target organ toxicity - single exposure | Category 1 | H370 - Causes damage to organs. |
| Specific target organ toxicity - repeated exposure | Category 1 | H372 - Causes damage to organs through prolonged or repeated exposure. |
| Environmental hazards | | |
| Hazardous to the aquatic environment, long-term aquatic hazard | Category 3 | H412 - Harmful to aquatic life with long lasting effects. |

Hazard summary

| | |
|------------------------------|--|
| Physical hazards | Flammable. |
| Health hazards | May cause cancer by inhalation. May cause harm to the unborn child. Also toxic by inhalation, in contact with skin and if swallowed. Irritating to skin. Also toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. May cause sensitization by inhalation and skin contact. Also toxic: danger of serious damage to health by prolonged exposure through inhalation. Occupational exposure to the substance or mixture may cause adverse health effects. |
| Environmental hazards | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| Specific hazards | Prolonged exposure may cause chronic effects. |
| Main symptoms | Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects. |

2.2. Label elements

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

Contains: ETHYLBENZENE, TOLUENE, TOLUENE DIISOCYANATE, Tosyl isocyanate

Hazard pictograms



Signal word

Danger

Hazard statements

| | |
|------|--|
| H226 | Flammable liquid and vapor. |
| H301 | Toxic if swallowed. |
| H311 | Toxic in contact with skin. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H332 | Harmful if inhaled. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H370 | Causes damage to organs. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H412 | Harmful 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. |
| P233 | Keep container tightly closed. |
| P240 | Ground/bond container and receiving equipment. |
| P241 | Use explosion-proof electrical/ventilating/lighting equipment. |
| P242 | Use only non-sparking tools. |
| P243 | Take precautionary measures against static discharge. |
| P260 | Do not breathe mist or vapor. |
| P264 | Wash thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing. |
| P280 | Wear protective gloves/eye protection/face protection. |
| P284 | Wear respiratory protection. |

Response

| | |
|-------------|--|
| P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTER/doctor. |
|-------------|--|

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor.
 P330 Rinse mouth.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.
 P370 + P378 In case of fire: Use appropriate media to extinguish.

Storage

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.

Supplemental label information

72.45% of the mixture consists of component(s) of unknown acute oral toxicity. 73.4% of the mixture consists of component(s) of unknown acute dermal toxicity. 74.43% of the mixture consists of component(s) of unknown acute inhalation toxicity. 72.45% 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 |
|----------------------------|---|-------------------------|------------------------|--------------|-------|
| 1-METHOXY-2-PROPYL ACETATE | 20 - < 30 | 108-65-6 203-603-9 | - | 607-195-00-7 | # |
| Classification: | DSD: R10 | | | | |
| | CLP: Flam. Liq. 3;H226 | | | | |
| XYLENES | 10 - < 20 | Mixture 215-535-7 | - | 601-022-00-9 | # |
| Classification: | DSD: Xn;R20/21/22, Xi;R38, N;R51/53 | | | | C |
| | CLP: - | | | | C |
| ETHYLBENZENE | 3 - < 5 | 100-41-4 202-849-4 | - | 601-023-00-4 | # |
| Classification: | DSD: F;R11, Xn;R20-65-48/20 | | | | |
| | CLP: Flam. Liq. 2;H225, Asp. Tox. 1;H304, Acute Tox. 4;H332, STOT RE 2;H373, Aquatic Chronic 2;H411 | | | | |
| TOLUENE | 1 - < 3 | 108-88-3 203-625-9 | 01-2119471310-51-xxxx | 601-021-00-3 | # |
| Classification: | DSD: F;R11, Repr. Cat. 3;R63, Xn;R65-48/20, Xi;R38, R67 | | | | |
| | CLP: Flam. Liq. 2;H225, Asp. Tox. 1;H304, Skin Irrit. 2;H315, STOT SE 3;H336, Repr. 2;H361d, STOT RE 2;H373, Aquatic Chronic 2;H411 | | | | |
| Tosyl isocyanate | 1 - < 3 | 4083-64-1 223-810-8 | - | 615-012-00-7 | |
| Classification: | DSD: R14, Xi;R36/37/38, R42 | | | | |
| | CLP: Skin Irrit. 2;H315, Eye Irrit. 2;H319, Resp. Sens. 1;H334, STOT SE 3;H335 | | | | |
| TOLUENE DIISOCYANATE | < 1 | 26471-62-5 247-722-4 | - | 615-006-00-4 | |
| Classification: | DSD: Carc. Cat. 3;R40, T+;R26, Xi;R36/37/38, R42/43, R52/53 | | | | C,2 |
| | CLP: Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, Acute Tox. 2;H330, Resp. Sens. 1;H334, STOT SE 3;H335, Carc. 2;H351, Aquatic Chronic 3;H412 | | | | C |

Other components below reportable levels 40 - < 50

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 immediately all contaminated clothing. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. 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. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. 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. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

4.2. Most important symptoms and effects, both acute and delayed Direct contact with eyes may cause temporary irritation. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

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 warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Flammable liquid and vapor.

5.1. Extinguishing media

Suitable extinguishing media Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO₂).

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

5.2. Special hazards arising from the substance or mixture Vapors may form explosive mixtures with air. Vapors 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. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. 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 personal protection, see section 8 of the SDS.

For emergency responders Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS.

- 6.2. Environmental precautions** Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.
- 6.3. Methods and material for containment and cleaning up** 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 product from entering drains. 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. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
- Never return spills to original containers for re-use.
- 6.4. Reference to other sections** For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling** Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. 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. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
- 7.2. Conditions for safe storage, including any incompatibilities** 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. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).
- 7.3. Specific end use(s)** Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

| Components | Type | Value |
|---|------|----------------------------------|
| 1-METHOXY-2-PROPYL ACETATE (CAS 108-65-6) | STEL | 548 mg/m ³ |
| | | 100 ppm |
| | TWA | 274 mg/m ³ 50 ppm |
| ETHYLBENZENE (CAS 100-41-4) | STEL | 552 mg/m ³ |
| | | 125 ppm |
| | TWA | 441 mg/m ³ 100 ppm |
| TOLUENE (CAS 108-88-3) | STEL | 384 mg/m ³ |
| | | 100 ppm |
| | TWA | 191 mg/m ³ 50 ppm |
| TOLUENE DIISOCYANATE (CAS 26471-62-5) | STEL | 0.07 mg/m ³ |
| | | 0.02 mg/m ³ |
| | TWA | 0.02 mg/m ³ |
| XYLENES | STEL | 441 mg/m ³ |
| | | 100 ppm |
| | TWA | 220 mg/m ³ 50 ppm |

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

| Components | Type | Value |
|---|------|-----------------------|
| 1-METHOXY-2-PROPYL ACETATE (CAS 108-65-6) | STEL | 550 mg/m ³ |

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

| Components | Type | Value |
|-----------------------------|------|-----------|
| ETHYLBENZENE (CAS 100-41-4) | | 100 ppm |
| | TWA | 275 mg/m3 |
| | | 50 ppm |
| | STEL | 884 mg/m3 |
| TOLUENE (CAS 108-88-3) | | 200 ppm |
| | TWA | 442 mg/m3 |
| | | 100 ppm |
| | STEL | 384 mg/m3 |
| XYLENES | | 100 ppm |
| | TWA | 192 mg/m3 |
| | | 50 ppm |
| | STEL | 442 mg/m3 |
| | | 100 ppm |
| | TWA | 221 mg/m3 |
| | | 50 ppm |

Biological limit values

UK. EH40 Biological Monitoring Guidance Values (BMGVs)

| Components | Value | Determinant | Specimen | Sampling Time |
|------------|--------------|----------------------|---------------------|---------------|
| XYLENES | 650 mmol/mol | Methyl hippuric acid | Creatinine in urine | * |

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

Exposure guidelines

UK EH40 WEL: Skin designation

| | |
|---|-----------------------------------|
| 1-METHOXY-2-PROPYL ACETATE (CAS 108-65-6) | Can be absorbed through the skin. |
| ETHYLBENZENE (CAS 100-41-4) | Can be absorbed through the skin. |
| TOLUENE (CAS 108-88-3) | Can be absorbed through the skin. |

8.2. Exposure controls

Appropriate engineering controls 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.

Individual protection measures, such as personal protective equipment

General information Wear chemical protective equipment that is specifically recommended by the manufacturer. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

- Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

- Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using do not smoke. Keep away from food and drink. 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. Contaminated work clothing should not be allowed out of the workplace.

Environmental exposure controls Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

| | |
|---|-------------------|
| Physical state | Liquid. |
| Form | Liquid. |
| Color | Clear |
| Odor | Aromatic |
| Odor threshold | Not available. |
| pH | Does not apply. |
| Melting point/freezing point | Not available. |
| Initial boiling point and boiling range | Not available. |
| Flash point | 82.4 °F (28.0 °C) |
| Evaporation rate | > 1 BuAc |
| Flammability (solid, gas) | Not applicable. |

Upper/lower flammability or explosive limits

| | |
|---|--------------------|
| Flammability limit - lower (%) | 1 % |
| Flammability limit - upper (%) | 7 % |
| Vapor pressure | 7.65 hPa estimated |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Negligible |
| Solubility (other) | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | 70 - 100 cP |
| Viscosity temperature | 77 °F (25 °C) |
| Explosive properties | Not explosive. |
| Oxidizing properties | Not oxidizing. |

9.2. Other information

| | |
|----------------------|------------------------|
| Brookfield viscosity | 70 - 130 cP |
| Density | 1.02 g/cm ³ |
| Miscible (water) | Negligible |
| Percent volatile | 46 - 52 % v/v |
| Specific gravity | 1.02 |
| VOC (Weight %) | 511 g/l |

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

| | |
|---------------------|--|
| General information | Occupational exposure to the substance or mixture may cause adverse effects. |
|---------------------|--|

Information on likely routes of exposure

| | |
|---------------------|---|
| Inhalation | Harmful if inhaled. May cause damage to organs by inhalation. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin contact | Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction. |
| Eye contact | Direct contact with eyes may cause temporary irritation. |
| Ingestion | Toxic if swallowed. |

Symptoms Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

11.1. Information on toxicological effects

Acute toxicity Toxic in contact with skin. Toxic if swallowed. Harmful if inhaled. May cause an allergic skin reaction.

| Components | Species | Test Results |
|---------------------------------------|------------|---|
| ETHYLBENZENE (CAS 100-41-4) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | 17800 mg/kg |
| Oral | | |
| LD50 | Rat | 3500 mg/kg |
| TOLUENE (CAS 108-88-3) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | 12124 mg/kg 14.1 ml/kg |
| Inhalation | | |
| LC50 | Mouse | 5320 ppm, 8 Hours 400 ppm, 24 Hours |
| | Rat | 26700 ppm, 1 Hours 12200 ppm, 2 Hours 8000 ppm, 4 Hours |
| Oral | | |
| LD50 | Rat | 2.6 g/kg |
| TOLUENE DIISOCYANATE (CAS 26471-62-5) | | |
| Acute | | |
| Inhalation | | |
| LC50 | Guinea pig | 90.4 mg/l, 4 Hours |
| | Mouse | 69.1 mg/l, 4 Hours |
| | Rabbit | 0.0783 mg/l, 4 Hours |
| | Rat | 0.3489 mg/l, 4 Hours 0.057 mg/l, 1 Hours |
| Oral | | |
| LD50 | Mouse | 1950 mg/kg |
| | Rat | 3060 mg/kg |

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

| | |
|--|---|
| Skin corrosion/irritation | Causes skin irritation. |
| Serious eye damage/eye irritation | Direct contact with eyes may cause temporary irritation. |
| Respiratory sensitization | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin sensitization | May cause an allergic skin reaction. |
| Germ cell mutagenicity | Due to partial or complete lack of data the classification is not possible. |
| Carcinogenicity | Risk of cancer cannot be excluded with prolonged exposure. |

IARC Monographs. Overall Evaluation of Carcinogenicity

| | |
|---------------------------------------|---|
| TOLUENE (CAS 108-88-3) | 3 Not classifiable as to carcinogenicity to humans. |
| TOLUENE DIISOCYANATE (CAS 26471-62-5) | 2B Possibly carcinogenic to humans. |

| | |
|---|---|
| Reproductive toxicity | Due to partial or complete lack of data the classification is not possible. |
| Specific target organ toxicity - single exposure | Causes damage to organs. |
| Specific target organ toxicity - repeated exposure | Causes damage to organs through prolonged or repeated exposure. |
| Aspiration hazard | Due to partial or complete lack of data the classification is not possible. |
| Mixture versus substance information | No information available. |
| Other information | Not available. |

SECTION 12: Ecological information

12.1. Toxicity Harmful to aquatic life with long lasting effects.

| Components | Species | Test Results |
|-----------------------------|---------|---|
| ETHYLBENZENE (CAS 100-41-4) | | |
| Aquatic | | |
| Crustacea | EC50 | Water flea (Daphnia magna) 1.37 - 4.4 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (Pimephales promelas) 7.5 - 11 mg/l, 96 hours |
| TOLUENE (CAS 108-88-3) | | |
| Aquatic | | |
| Crustacea | EC50 | Water flea (Daphnia magna) 5.46 - 9.83 mg/l, 48 hours |
| Fish | LC50 | Coho salmon, silver salmon (Oncorhynchus kisutch) 8.11 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

Partition coefficient n-octanol/water (log Kow)

| | |
|--------------|------------|
| ETHYLBENZENE | 3.15 |
| TOLUENE | 2.73 |
| XYLENES | 3.12 - 3.2 |

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not available.

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). |
| Contaminated packaging | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |
| EU waste code | The Waste code should be assigned in discussion between the user, the producer and the waste disposal company. |
| Disposal methods/information | 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. |
| Special precautions | Dispose in accordance with all applicable regulations. |

SECTION 14: Transport information

ADR

| | |
|--------------------------------------|--------|
| 14.1. UN number | UN1263 |
| 14.2. UN proper shipping name | PAINT |

14.3. Transport hazard class(es)

Class 3
Subsidiary risk -
Label(s) 3
Hazard No. (ADR) 30
Tunnel restriction code D/E

14.4. Packing group III

14.5. Environmental hazards No.

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number UN1263

14.2. UN proper shipping name PAINT

14.3. Transport hazard class(es)

Class 3
Subsidiary risk -
Label(s) 3

14.4. Packing group III

14.5. Environmental hazards No.

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number UN1263

14.2. UN proper shipping name PAINT

14.3. Transport hazard class(es)

Class 3
Subsidiary risk -
Label(s) 3

14.4. Packing group III

14.5. Environmental hazards No.

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

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 III

14.5. Environmental hazards No.

ERG Code 3L

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed.

Cargo aircraft only Allowed.

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 III

14.5. Environmental hazards

Marine pollutant No.

EmS F-E, S-E

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

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

Not established.

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, as amended
Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II, as amended
Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended
Not listed.

Regulation (EC) No. 689/2008 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.

Authorizations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
Not listed.

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use 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
ETHYLBENZENE (CAS 100-41-4)
TOLUENE (CAS 108-88-3)
TOLUENE DIISOCYANATE (CAS 26471-62-5)

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.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended
TOLUENE (CAS 108-88-3)
TOLUENE DIISOCYANATE (CAS 26471-62-5)

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances
1-METHOXY-2-PROPYL ACETATE (CAS 108-65-6)
ETHYLBENZENE (CAS 100-41-4)
TOLUENE (CAS 108-88-3)
TOLUENE DIISOCYANATE (CAS 26471-62-5)
Tosyl isocyanate (CAS 4083-64-1)

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended

1-METHOXY-2-PROPYL ACETATE (CAS 108-65-6)
ETHYLBENZENE (CAS 100-41-4)
TOLUENE (CAS 108-88-3)
TOLUENE DIISOCYANATE (CAS 26471-62-5)
Tosyl isocyanate (CAS 4083-64-1)

Directive 94/33/EC on the protection of young people at work, as amended

ETHYLBENZENE (CAS 100-41-4)
TOLUENE (CAS 108-88-3)
TOLUENE DIISOCYANATE (CAS 26471-62-5)
Tosyl isocyanate (CAS 4083-64-1)

Other regulations 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. Pregnant women should not work with the product, if there is the least risk of exposure.

National regulations Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations Not available.

References Not available.

Information on evaluation method leading to the classification of mixture The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R10 Flammable.
R11 Highly flammable.
R14 Reacts violently with water.
R20 Harmful by inhalation.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R23/24/25 Also toxic by inhalation, in contact with skin and if swallowed.
R26 Very toxic by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R38 Irritating to skin.
R39/23/24/25 Also toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R40 Limited evidence of a carcinogenic effect.
R42 May cause sensitization by inhalation.
R42/43 May cause sensitization by inhalation and skin contact.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R48/23 Also toxic: danger of serious damage to health by prolonged exposure through inhalation.
R49 May cause cancer by inhalation.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R61 May cause harm to the unborn child.
R63 Possible risk of harm to the unborn child.
R65 Harmful: may cause lung damage if swallowed.
R67 Vapors may cause drowsiness and dizziness.
H225 Highly flammable liquid and vapor.
H226 Flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Revision information

None.

Training information

Follow training instructions when handling this material.

Disclaimer

62000 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.