

GHS COMPLIANT SAFETY DATA SHEET

TO COMPLY WITH OSHA HAZARD COMMUNICATION STANDARD 29 CFR.1910.1200 & THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

SECTION 1: IDENTIFICATION

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|-------------------------|---|
| PRODUCT NAME | Resiflow® S |
| MFR.'S CODE ID/SYNONYMS | Resiflow® S |
| CAS NUMBER | Mixture (see Sections 3 or 8) |
| PRODUCT USE | Acrylic Polymer Solution |
| RESTRICTIONS ON USE | For industrial use only |
| MANUFACTURER/SUPPLIER | Estron Chemical, Inc. |
| ADDRESS | 807 North Main Street, Calvert City, KY 42029 USA |
| GENERAL INFORMATION | (270) 395-4195 |
| EMERGENCY TELEPHONE | CHEMTREC (800) 424-9300 |





SECTION 2: HAZARDS IDENTIFICATION

Signal Word: *Danger*

GHS Classification

| Physical | Health | Environmental |
|--------------------------------|--|--|
| Flammable Liquids – Category 3 | Acute Toxicity (Inhalation) – Category 4 Skin Corrosion/Irritation – Category 2 Eye Damage/Irritation – Category 2A Germ Cell Mutagenicity – Category 1B Carcinogenicity – Category 1B Toxic to Reproduction – Category 2 Specific Target Organ Toxicity, Single Exposure (Respiratory System) – Category 3 Specific Target Organ Toxicity, Repeated Exposure (Central Nervous System) – Category 1 Aspiration Hazard – Category 1 | Hazardous to the Aquatic Environment, Acute Hazard – Category 2 Hazardous to the Aquatic Environment, Chronic Hazard – Category 2 |

GHS Label

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|  |  |  |  |
| Symbols: Flame | Health Hazard | Exclamation Mark | Environment |
| Hazard Statements H226: Flammable liquid and vapour H304: May be fatal if swallowed and enters airways H315: Causes skin irritation H319: Causes serious eye irritation H332: Harmful if inhaled H335: May cause respiratory irritation H336: May cause drowsiness or dizziness H340: May cause genetic defects H350: May cause cancer H361: Suspected of damaging fertility or the unborn child H372: Causes damage to organs (Central Nervous System) through prolonged or repeated exposure H411: Toxic to aquatic life with long lasting effects | | Precautionary Statements <i>Prevention</i> P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking. P233: Keep container tightly closed. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ventilating/light/equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P260: Do not breathe dust/fume/gas/mist/vapours/spray. P264: Wash exposed skin 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. | |

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| | <p><i>Response</i></p> <p>P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>P302+352: IF ON SKIN: Wash with soap and water.</p> <p>P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.</p> <p>P308+313: IF exposed or concerned: Get medical advice/attention.</p> <p>P312: Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P321: Specific treatment (see supplemental first aid instructions on this label)</p> <p>P331: Do NOT induce vomiting.</p> <p>P332+313: If skin irritation occurs: Get medical advice/attention.</p> <p>P337+313: If eye irritation persists, get medical advice/attention.</p> <p>P362+P364: Take off contaminated clothing and wash it before reuse.</p> <p>P370+378: In case of fire: Use foam, dry chemical powder or carbon dioxide to extinguish.</p> <p>P391: Collect spillage.</p> <p><i>Storage</i></p> <p>P403+233+235: Store in a well ventilated place. Keep container tightly closed. Keep cool.</p> <p>P405: Store locked up.</p> <p><i>Disposal</i></p> <p>P501: Dispose of contents/container to an authorized hazardous waste handler.</p> |
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HAZARDS NOT OTHERWISE CLASSIFIED: None identified.

SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

| HAZARDOUS INGREDIENTS | CAS # | % | CLASSIFICATION | H CODES |
|-----------------------------------|--------------|-------------|--|--|
| Light Aromatic Solvent Naphtha | 64742-95-6 | 49.0 – 51.0 | Flammable Liquids – Category 3 Acute Toxicity (Inhalation) – Category 4 Skin Corrosion/Irritation – Category 2 Eye Damage/Irritation – Category 2A Germ Cell Mutagenicity – Category 1B Carcinogenicity – Category 1B Toxic to Reproduction – Category 2 Specific Target Organ Toxicity, Single Exposure (Respiratory System) – Category 3 Specific Target Organ Toxicity, Repeated Exposure (Central Nervous System) – Category 1 Aspiration Hazard – Category 1 Hazardous to the Aquatic Environment, Acute Hazard – Category 2 Hazardous to the Aquatic Environment, Chronic Hazard – Category 2 | H226 H332 H315 H319 H340 H350 H361 H335 H372 H304 H401 H411 |

Component Breakdown of Light Aromatic Solvent Naphtha:

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| Light Aromatic Solvent Naphtha | 64742-95-6 | 26.9 – 51.0 | Flammable Liquids – Category 3 Acute Toxicity (Inhalation) – Category 4 Skin Corrosion/Irritation – Category 2 Eye Damage/Irritation – Category 2A Carcinogenicity – Category 2 Specific Target Organ Toxicity, Single Exposure (Respiratory System) – Category 3 Specific Target Organ Toxicity, Repeated Exposure (Central Nervous System) – Category 2 Aspiration Hazard – Category 1 Hazardous to the Aquatic Environment, Acute Hazard – Category 2 Hazardous to the Aquatic Environment, Chronic Hazard – Category 2 |
| Mixed Trimethylbenzenes | 25551-13-7 | 24.5 – 35.7 | Flammable Liquids – Category 3 Acute Toxicity (Inhalation) – Category 4 Skin Irritation – Category 2 Eye Irritation – Category 2A Specific Target Organ Toxicity, Single Exposure (Respiratory System) – Category 3 Aspiration Hazard – Category 1 Hazardous to the Aquatic Environment, Acute Hazard – Category 2 Hazardous to the Aquatic Environment, Chronic Hazard – Category 2 |
| Cumene | 98-82-8 | 0.0 – 5.1 | Flammable Liquids – Category 3 Specific Target Organ Toxicity, Single Exposure (Respiratory System) – Category 3 Aspiration Hazard – Category 1 Hazardous to the Aquatic Environment, Acute Hazard – Category 2 Hazardous to the Aquatic Environment, Chronic Hazard – Category 2 |
| Mixed Xylenes | 1330-20-7 | 0.0 – 7.2 | Flammable Liquids – Category 3 Acute Toxicity (Dermal, Inhalation) – Category 4 Skin Corrosion/Irritation – Category 2 Eye Damage/Irritation – Category 2A Carcinogenicity – Category 2 Toxic to Reproduction – Category 2 Specific Target Organ Toxicity, Single Exposure (Respiratory System) – Category 3 Specific Target Organ Toxicity, Repeated Exposure (Liver, Kidney, Central Nervous System) – Category 2 Aspiration Hazard – Category 1 Hazardous to the Aquatic Environment, Acute Hazard – Category 2 Hazardous to the Aquatic Environment, Chronic Hazard – Category 2 |
| 3-Ethyltoluene | 620-14-4 | 0.0 – 10.2 | Flammable Liquids – Category 3 Hazardous to the Aquatic Environment, Acute Hazard – Category 2 Hazardous to the Aquatic Environment, Chronic Hazard – Category 2 |
| 2-Ethyltoluene | 611-14-3 | 0.0 – 4.6 | Flammable Liquids – Category 3 Aspiration Hazard – Category 1 |
| 4-Ethyltoluene | 622-96-8 | 0.0 – 4.6 | Flammable Liquids – Category 3 Aspiration Hazard – Category 1 |
| Propylbenzene | 103-65-1 | 0.0 – 3.7 | Flammable Liquids – Category 3 Specific Target Organ Toxicity, Single Exposure (Respiratory System) – Category 3 Aspiration Hazard – Category 1 Hazardous to the Aquatic Environment, Acute Hazard – Category 2 Hazardous to the Aquatic Environment, Chronic Hazard – Category 2 |

(See Section 8 for Exposure Limits)

| NON-HAZARDOUS INGREDIENTS | CAS # | % |
|---------------------------|-------------|-------------|
| Acrylic Polymer | Proprietary | 49.0 – 51.0 |

SECTION 4: FIRST-AID MEASURES

SYMPTOMS OF EXPOSURE

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| ACUTE | Serious eye damage. Skin or respiratory tract irritation. Coughing or sneezing. Drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause genetic defects. |
| DELAYED | Stinging, tearing, redness and swelling of the eyes. Drying, cracking, redness or burning of the skin. Respiratory tract irritation, difficulty breathing. Suspected of damaging fertility or the unborn child. May cause genetic defects. May cause cancer. Damage to Central Nervous System. |

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| INHALATION | Harmful if inhaled. Do not breathe vapours, mists or dusts. Symptoms include possible discomfort; cough, sneezing, drowsiness or dizziness. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| SKIN CONTACT | Causes skin irritation. Take off contaminated clothing. Rinse skin with water/shower. Prolonged or repeated contact may dry the skin. If skin irritation occurs: Get medical advice/attention. |
| EYE CONTACT | Causes serious eye irritation. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists get medical advice/attention. |
| INGESTION | May be fatal if swallowed and enters airways. Do NOT induce vomiting. If ingested, immediately call a POISON CENTER or doctor/physician. Rinse mouth. |
| SPECIFIC TREATMENT | No other specific treatments are known or have been identified. |

SECTION 5: FIRE FIGHTING MEASURES

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| FLAMMABILITY CLASSIFICATION | Combustible Liquid Class II (U.S.) Flammable Liquids – Category 3 (GHS) |
| FLAMMABLE LIMITS | LEL: 1.0 %, by volume of solvent. UEL: 7.0 %, by volume of solvent. |
| HAZARDOUS COMBUSTION PRODUCTS | Carbon Dioxide, Carbon Monoxide. |
| EXTINGUISHING MEDIA | Dry Chemical, Foam, CO ₂ |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | Solvent vapors may travel in the work place. Since even residual amounts can ignite explosively, ensure all ignition sources are removed from the area. Solid streams of water may spread fire. |
| SPECIAL FIRE FIGHTING PROCEDURES | Wear self-contained breathing apparatus and protective suit when fighting fire. Solid streams of water may spread the fire. Do not allow run-off to enter public drainage systems or open water courses. |
| SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS | As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full (Bunker) protective gear. |

SECTION 6: ACCIDENTAL RELEASE MEASURES

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| PERSONAL PRECAUTIONS | Prevent contact with skin, eyes and clothing. Ensure adequate ventilation. |
| PROTECTIVE EQUIPMENT | See Personal Protective Equipment in Section 8. |
| EMERGENCY PROCEDURES | Avoid unnecessary exposure to bystanders, prevent contact with open flames or high heat sources. Isolate the area and eliminate all ignition sources. Ground and bond all containers and handling equipment. Pump with explosion-proof equipment. |
| ENVIRONMENTAL PRECAUTIONS | Obey relevant local, state, provincial and federal laws and regulations. Do not allow the product to enter public drainage systems or open water courses. |
| METHODS AND MATERIALS FOR CLEANING UP | Absorb the product onto vermiculite, floor absorbent or other absorbent materials, such as dry-lime, sand, or soda ash. Sweep or scoop into a suitable container for disposal. Ventilate area and wash spill site after material pickup is complete. |

SECTION 7: HANDLING AND STORAGE

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| PRECAUTIONS FOR SAFE HANDLING | Do not ingest. Prevent contact with the eyes, skin and clothing. Wash thoroughly after handling. Do not breathe vapors. Do not eat, drink or smoke when using this product. Use with adequate ventilation. Ground and bond all containers and handling equipment. Handle in accordance with good industrial hygiene and safety practice. Take precautionary measures against static discharges. Emptied containers may still be hazardous. Do not cut, drill, grind, weld or perform similar actions on or near empty containers. |
| CONDITIONS FOR SAFE STORAGE | Keep container tightly closed and store in a dry, well ventilated area away from extreme heat, open flame or sources of ignition. Store locked up. |

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| INGREDIENTS | CAS # | % | ACGIH TLV | OSHA PEL |
|--------------------------------|-------------------|--------------------|--------------------------|--------------------------|
| Acrylic Polymer | Proprietary | 49.0 – 51.0 | <i>None established</i> | <i>None established</i> |
| Light Aromatic Solvent Naphtha | 64742-95-6 | 49.0 – 51.0 | 25 ppm | 100 ppm |
| <i>Mixed Trimethylbenzenes</i> | <i>25551-13-7</i> | <i>26.9 – 51.0</i> | 25 ppm | 25 ppm |
| <i>Cumene</i> | <i>98-82-8</i> | <i>24.5 – 35.7</i> | 50 ppm | 50 ppm |
| <i>Mixed Xylenes</i> | <i>1330-20-7</i> | <i>0.0 – 5.1</i> | 100 ppm | 100 ppm |
| <i>3-Ethyltoluene</i> | <i>620-14-4</i> | <i>0.0 – 7.2</i> | <i>No data available</i> | <i>No data available</i> |
| <i>2-Ethyltoluene</i> | <i>611-14-3</i> | <i>0.0 – 10.2</i> | <i>No data available</i> | <i>No data available</i> |
| <i>4-Ethyltoluene</i> | <i>622-96-8</i> | <i>0.0 – 4.6</i> | <i>No data available</i> | <i>No data available</i> |
| <i>Propylbenzene</i> | <i>103-65-1</i> | <i>0.0 – 4.6</i> | <i>Not applicable</i> | <i>Not applicable</i> |

APPROPRIATE ENGINEERING CONTROLS Showers, eyewash stations and explosion-proof ventilation systems.

PERSONAL PROTECTIVE EQUIPMENT

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| EYE/FACE | Chemical splash goggles or face shield. |
| SKIN | Wear resistant gloves (consult you safety equipment supplier) and impervious protective clothing as appropriate to prevent skin contact. |
| RESPIRATORY | An appropriate NIOSH approved respirator where exposure limits are exceeded. |
| HYGIENE MEASURES | Handle in accordance with good industrial hygiene and safety practices. When using, do not eat, drink or smoke. Wash face and hands before breaks and at the end of work. Wash contaminated clothing before re-use. |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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| APPEARANCE | Clear liquid | ODOR | Strong, aromatic |
| ODOR THRESHOLD | No test data available | pH | No test data available |
| MELTING POINT | No test data available | BOILING POINT/RANGE | 148.9 °C @ 760 mmHg |
| FLASH POINT | 41.7 °C, (107.1 °F) | EVAPORATION RATE | 0.375 (BuAc = 1) |
| FLAMMABILITY | Combustible Liquid Class II (U.S.), Flammable Liquids – Category 3 (GHS) | | |
| FLAMMABLE LIMITS | LOWER 1.0 %, <i>by volume of solvent</i> | UPPER 7.0 %, <i>by volume of solvent</i> | |
| VAPOR PRESSURE | 2.5 mmHg @ 20 °C | VAPOR DENSITY | 4.1 (Air = 1) |
| RELATIVE DENSITY | 0.94 – 0.97 @ 20 °C | SOLUBILITY IN H ₂ O | Negligible |
| PARTITION COEFFICIENT (n-octanol/water) | <i>See component information in Section 12.</i> | AUTOIGNITION TEMPERATURE | 462.8 °C (864 °F) |
| DECOMPOSITION TEMPERATURE | > 250 °C (Polymer) | VISCOSITY | 50 – 100 cps |
| % VOLATILE | 49 – 51% | SOFTENING POINT | No test data available |

SECTION 10: STABILITY AND REACTIVITY

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| REACTIVITY | This product does not pose a significant reactivity hazard when stored appropriately (see Section 7). |
| STABILITY | This product is stable when stored appropriately (see Section 7). |
| CONDITIONS TO AVOID | All ignition sources, heat and open flames. |
| INCOMPATIBLE PRODUCTS | Strong oxidizers, acids, alkalis and amines. |
| HAZARDOUS DECOMPOSITION PRODUCTS | Carbon Dioxide, Carbon Monoxide. |
| POSSIBILITY OF HAZARDOUS REACTIONS | Will not occur |

SECTION 11: TOXICOLOGICAL INFORMATION

SYMPTOMS OF EXPOSURE

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| ACUTE | Serious eye damage. Skin or respiratory tract irritation. Coughing or sneezing. Drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause genetic defects. |
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| DELAYED | Stinging, tearing, redness and swelling of the eyes. Drying, cracking, redness or burning of the skin. Respiratory tract irritation, difficulty breathing. Suspected of damaging fertility or the unborn child. May cause genetic defects. May cause cancer. Damage to Central Nervous System. | | |
| ACUTE TOXICITY INHALATION | Harmful if inhaled. Suspected of causing cancer. May cause drowsiness or dizziness. May cause respiratory irritation. May cause damage to organs (Central Nervous System) through prolonged or repeated exposure. | | |
| SKIN | Causes skin irritation. | | |
| EYES | Causes serious eye irritation. | | |
| INGESTION | May be fatal if swallowed and enters airways. Harmful if swallowed. May cause genetic defects. May cause damage to organs (Central Nervous System) through prolonged or repeated exposure. | | |
| INHALATION TOXICITY | LC ₅₀ Rat, 4 h | Solvent Naphtha Polymers | 4.5 mg/l Not established |
| DERMAL TOXICITY | LD ₅₀ Rabbit | Solvent Naphtha Polymers | 3,268 mg/kg Not established |
| SKIN IRRITATION | Draize, Rabbit, 4 hours | Solvent Naphtha | Irritating to skin. May cause skin irritation in susceptible persons. |
| EYE IRRITATION | Draize, Rabbit | Solvent Naphtha | Irritating to eyes. May cause irreversible eye damage. |
| ORAL TOXICITY | LD ₅₀ Rat | Solvent Naphtha Polymers | 2,900 mg/kg Not established |
| SENSITIZATION | Buehler, Guinea Pig | Solvent Naphtha | Did not cause sensitization on laboratory animals. |
| CHRONIC EFFECTS CARCINOGENICITY 64742-95-6 | Solvent components are suspected of causing cancer. Species: rat, (male and female) Application Route: Inhalation Exposure time: 113 wk Dose: 0, 322, 1402, 9869 mg/m3 Frequency of Treatment: 6 h/day, Sd/week Method: OECD Test Guideline 451 Symptoms: weight loss GLP: yes | | |
| | Carcinogenicity - Assessment | Possible human carcinogen | |
| 25551-13-7 | Carcinogenicity - Assessment | Possible human carcinogen | |
| 98-82-8 | | Species: rat, (male and female) Application Route: inhalation (gas) Exposure time: 105 wk Activity duration: 6 h Dose: 0, 250, 500, or 1,000 ppm ppm Frequency of Treatment: 5 days/week LOAEL: 250 ppm | |

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| | | Method: OECD Test Guideline 451 Result: Animal carcinogen with unknown relevance to humans Symptoms: Renal tubule adenoma and carcinoma GLP: yes Species: mouse, (male and female) Application Route: inhalation (gas) Exposure time: 105 wk Activity duration: 6 h Dose: 0, 125 (f), 250, 500, 1000 (m) ppm Frequency of Treatment: 5 days/week LOAEL: 125 ppm |
| | | Method: OECD Test Guideline 451 Result: Animal carcinogen with unknown relevance to humans Symptoms: increased incidences of alveolar/bronchiolar neoplasms GLP: yes |
| 1330-20-7 | Carcinogenicity - Assessment | Suspected human carcinogens Species: mouse, (male and female) Application Route: Oral Exposure time: 103 wk Dose: 0, 500 or 1000 mg/kg Frequency of Treatment: 5 days/week Method: Directive 67 /548/EEC, Annex V, B.32. Result: did not display carcinogenic properties GLP: No data available |
| | Carcinogenicity - Assessment | Animal testing did not show any carcinogenic effects. |
| MUTAGENIC EFFECTS | | |
| 64742-95-6 | Genotoxicity in vitro | Solvent components caused some positive result(s) from in vivo heritable germ cell mutagenicity tests in mammals. Test Type: Ames test Test species: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: positive GLP: No data available |
| | Genotoxicity in vivo | Test Type: In vivo micronucleus test Test species: rat (male and female) Application Route: Inhalation Exposure time: 6 h/day, Sd/wk, for 4 weeks Dose: 0,2000, 10000,20000 mg/m3 Result: positive GLP: yes |
| | Germ cell mutagenicity-Assessment | Positive result(s) from in vivo heritable germ cell mutagenicity tests in mammals |
| 25551-13-7 | Genotoxicity in vitro | Test Type: Ames test Test species: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Mammalian cell gene mutation assay Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Remarks: Information given is based on data obtained from similar substances. |

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| | | <p>Test Type: Sister chromatid exchange assay in mammalian cells Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479 Result: negative Remarks: Information given is based on data obtained from similar substances.</p> |
| | Genotoxicity in vivo | <p>Test Type: In vivo micronucleus test Test species: mouse (male and female) Cell type: Bone marrow Application Route: Intraperitoneal Dose: 0, 2000, 3280,4000 mg/kg Method: DECO Test Guideline 474 Result: negative</p> |
| | Germ cell mutagenicity-Assessment | <p>Tests on bacterial or mammalian cell cultures did not show mutagenic effects.</p> |
| 98-82-8 | Genotoxicity in vitro | <p>Test Type: Mammalian cell gene mutation assay Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Method: DECO Test Guideline 476 Result: negative GLP: yes Test Type: Ames test Test species: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: DECO Test Guideline 471 Result: negative GLP: yes</p> |
| | | <p>Test Type: Chromosome aberration test in vitro Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Method: DECO Test Guideline 473 Result: negative GLP: yes</p> |
| | Genotoxicity in vivo | <p>Test Type: In vivo micronucleus test Test species: mouse (male and female) Application Route: inhalation (gas) Method: DECO Test Guideline 474 Result: negative GLP: yes</p> |
| | | <p>Test Type: In vivo micronucleus test Test species: rat (male) Application Route: Intra peritoneal Method: OECD Test Guideline 474 Result: Ambiguous GLP: yes</p> |
| | Germ cell mutagenicity-Assessment | <p>Tests on bacterial or mammalian cell cultures did not show mutagenic effects.</p> |
| 1330-20-7 | Genotoxicity in vitro | <p>Test Type: Chromosome aberration test in vitro Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Method: Mutagenicity (in vitro mammalian cytogenetic test) Result: negative</p> |
| | | <p>Test Type: Sister chromatid exchange assay in mammalian cells Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Result: negative</p> |

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| | Genotoxicity in vivo | Test Type: Dominant lethal assay Test species: mouse Application Route: Subcutaneous Exposure time: 8 wk Dose: 1.0 ml/kg Method: OECD Test Guideline 478 Result: negative GLP: no |
| | Germ cell mutagenicity-Assessment | Animal testing did not show any mutagenic effects. |
| REPRODUCTIVE TOXICITY | | Solvent components displayed some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.. |
| 64742-95-6 | Reproductive toxicity - Assessment | Fertility classification not possible from current data. Embryotoxicity classification not possible from current data. |
| 25551-13-7 | Reproductive toxicity - Assessment | Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments. |
| 25551-13-7 | Effects on fertility | Test Type: Two-generation study Species: rat, male and female Application Route: vapour Dose: 0, 100, 500, 1500 ppm General Toxicity - Parent: NOAEC: 500 ppm General Toxicity Fl: NOAEC: 500 ppm Symptoms: Reduced maternal body weight gain. Method: OECD Test Guideline 416 Remarks: Information given is based on data obtained from similar substances. |
| | Effects on foetal development | Species: rat Application Route: vapour Dose: 0, 100, 300, 600, 900 ppm Duration of Single Treatment: 15 d Frequency of Treatment: 6 hr/day General Toxicity Maternal: NOAEC: 300 ppm Teratogenicity: 900 ppm Developmental Toxicity: NOAEC: 300 ppm Symptoms: weight loss Method: OECD Test Guideline 414 Result: No teratogenic effects. |
| | Reproductive toxicity - Assessment | Fertility classification not possible from current data. Embryotoxicity classification not possible from current data. |
| 98-82-8 | Effects on fertility | Species: rat, male and female Application Route: inhalation (vapour) Dose: 0, 100, 500, and 1200 ppm Duration of Single Treatment: 6 h Frequency of Treatment: 5 days/week General Toxicity - Parent: NOAEL: > 1,200 ppm Method: OECD Test Guideline 413 GLP: yes |
| | Effects on foetal development | Species: rat Application Route: inhalation (vapour) Dose: 100, 500 and 1200 ppm Duration of Single Treatment: 10 d Frequency of Treatment: 6 hr/day General Toxicity Maternal: NOAEL: 100 ppm Developmental Toxicity: NOAEL: > 1,200 ppm Method: OECD Test Guideline 414 Result: No teratogenic effects. GLP: yes |

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| | Reproductive toxicity - Assessment | Fertility classification not possible from current data. Animal testing did not show any effects on foetal development. |
| 1330-20-7 | Effects on fertility | Test Type: Two-generation study Species: rat, male and female Application Route: Inhalation Dose: 0, 25, 100 and 500 ppm Duration of Single Treatment: 6 h Frequency of Treatment: 7 days/week General Toxicity - Parent: NOAEC: > 500 ppm General Toxicity Fl: NOAEC: > 500 ppm Early Embryonic Development: NOAEC: > 500 ppm Result: No reproductive effects. |
| | Effects on foetal development | Species: rat Application Route: Inhalation Dose: 0, 100, 500, 1000 or 2000 ppm Duration of Single Treatment: 14 d Frequency of Treatment: 6 hr/day General Toxicity Maternal: NOAEC: 500 ppm Teratogenicity: NOAEC: > 2,000 Developmental Toxicity: NOAEC: 100 ppm Result: No teratogenic effects., Developmental toxicity occurred at maternal toxicity dose levels |
| | Reproductive toxicity - Assessment | Animal testing did not show any effects on fertility. Damage to fetus not classifiable |

TARGET ORGAN EFFECTS

Central Nervous System, Respiratory System (Inhalation)

Single Exposure

| CAS | EXPOSURE ROUTES | TARGET ORGANS | ASSESSMENT |
|------------|-----------------|------------------------|---|
| 64742-95-6 | Inhalation | Central Nervous System | May cause drowsiness or dizziness. The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. |
| 25551-13-7 | Inhalation | Respiratory System | May cause respiratory irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. |
| 98-82-8 | Inhalation | Respiratory System | May cause respiratory irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. |
| 1330-20-7 | Inhalation | Respiratory System | May cause respiratory irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. |

Repeated Exposure

| CAS | EXPOSURE ROUTES | TARGET ORGANS | ASSESSMENT |
|-----------|-----------------|------------------------|--|
| 1330-20-7 | | Central Nervous System | May cause damage to organs through prolonged or repeated exposure. The substance is classified as specific target organ toxicant, repeated exposure, category 2. |

REPEATED DOSE TOXICITY

- 64742-95-6 Species: rat, male and female
NOAEL: 10.03 mg/I
Application Route: Inhalation
Test atmosphere: vapour
Exposure time: 4 weeks
Number of exposures: 6h/day, 5 d/week
Dose: 0, 0.336, 1.464, 10.032 mg/I
GLP: yes
Target Organs: Kidney, Blood, Adrenal gland
Remarks: Subchronic toxicity
- 25551-13-7 Species: rat, male and female
NOAEL: 600 mg/kg
Application Route: Oral
Exposure time: 90 d
Number of exposures: daily, Sd/week
Dose: 0, 50, 200, 600 mg/kg
Method: OECD Test Guideline 408
Test substance: Information given is based on data obtained from similar substances.
GLP: yes
Target Organs: Liver, Kidney
- Species: rat, male and female
NOAEL: 250
Application Route: inhalation (vapour)
Exposure time: 90 d
Number of exposures: 6/h, 5 d/wk
Dose: 0, 25, 100, 250 ppm
Method: OECD Test Guideline 413
- 98-82-8 Species: rat, male and female
NOAEL: 125
LOAEL: 250
Application Route: Inhalation
Test atmosphere: vapour
Exposure time: 14 wk
Number of exposures: 6 h/d, 5 d/wk
Dose: 62.5, 125, 250, 500, and 1000
Method: DECO Test Guideline 413
GLP: yes
Symptoms: Increased kidney and liver weights
- Species: rat, male
NOAEL: > 535.8 mg/kg
Application Route: Oral
Exposure time: 28 d
Number of exposures: daily
Dose: 22.8, 224.8, and 535.8 mg/kg/d
- 1330-20-7 Species: rat, male and female
NOAEL: 250 mg/kg
Application Route: Oral
Exposure time: 103 wk
Number of exposures: 5 d/wk
Dose: 0, 250 or 500 mg/kg
Revision Date: 10/08/2014
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

25155-15-1 Species: rat
 NOAEL: > 535.8 mg/kg
 Application Route: Oral
 Exposure time: 28 d
 Dose: 22.8, 224.8, and 535.8 mg/kg/d
 Test substance: Cumene (isopropyl benzene)

Species: rat
 NOAEL: 125
 LOAEL: 250
 Application Route: inhalation (vapour)
 Exposure time: 90 d
 Dose: 62.5, 125, 250, 500, 1000 ppm
 Method: DECO Test Guideline 413
 Test substance: Cumene (isopropyl benzene)
 GLP: yes

ASPIRATION TOXICITY

64742-95-6 The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

25551-13-7 May be fatal if swallowed and enters airways.

25551-13-7 No aspiration toxicity classification

98-82-8 May be fatal if swallowed and enters airways.

1330-20-7 May be fatal if swallowed and enters airways

SECTION 12: ECOLOGICAL INFORMATION

| | | | |
|-------------------------------|--|------------|--|
| ECOTOXICITY | Toxic to aquatic life with long lasting effects. | | |
| TOXICITY TO FISH | LC ₅₀ <i>Oncorhynchus mykiss</i> , 96 h | 64742-95-6 | 10 mg/l |
| | LC ₅₀ <i>Pimephales promelas</i> , 96 h | 25551-13-7 | 7.72 mg/l |
| | LC ₅₀ <i>Oncorhynchus mykiss</i> , 96 h | 98-82-8 | 2.7 mg/l |
| | LC ₅₀ <i>Oncorhynchus mykiss</i> , 96 h | 1330-20-7 | 2.6 mg/l |
| | Polymers | | Not established |
| TOXICITY TO DAPHNIA | EC ₅₀ <i>Daphnia magna</i> , 48 h | 64742-95-6 | 4.5 mg/l |
| | EC ₅₀ <i>Daphnia magna</i> , 48 h | 25551-13-7 | 3.6 mg/l |
| | EC ₅₀ <i>Daphnia magna</i> , 48 h | 98-82-8 | 1.4 mg/l |
| | EC ₅₀ <i>Daphnia magna</i> , 24 h | 1330-20-7 | 1 mg/l |
| | Polymers | | Not established |
| TOXICITY TO ALGAE | EC ₅₀ <i>Pseudokirchneriella subcapitata</i> , 72 h | 64742-95-6 | 3.1 mg/l |
| | EC ₅₀ <i>Desmodesmus subspicatus</i> , 72 h | 98-82-8 | 2.01 mg/l |
| | EC ₅₀ <i>Pseudokirchneriella subcapitata</i> , 73 h | 1330-20-7 | 4.36 mg/l |
| | Polymers | | Not established |
| PERSISTANCE AND DEGRADABILITY | Inoculum, activated sludge, 28 d | 64742-95-6 | 77.05%, 49.2 mg/l, Readily biodegradable |
| | Inoculum, activated sludge, 28 d | 25551-13-7 | 4 - 18%, 3.0 mg/l |
| | Inoculum, sewage, 20 d | 98-82-8 | 70%, Readily biodegradable |
| | Inoculum, activated sludge, 20 d | 1330-20-7 | 72%, Readily biodegradable |
| | Polymers | | Not established |
| BIOACCUMULATIVE POTENTIAL | Partition coefficient | 64742-95-6 | log P _{ow} = 3.42 (25 °C) |
| | Bioaccumulation | 25551-13-7 | BCF = 23 - 342 |
| | Partition coefficient | 98-82-8 | log P _{ow} = 3.55 (23 °C) |
| | Partition coefficient | 1330-20-7 | log P _{ow} = 2.77 - 3.15 |
| | Polymers | | Not established |
| MOBILITY IN SOIL | No data available | | |
| OTHER ADVERSE EFFECTS | None known | | |

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

Dispose of in accordance with local, state and federal regulations. Destroy by incineration with off-gas scrubber. Do not discharge effluent containing this product into lakes, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of the National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact you State Water Board or Regional Office of the Environmental Protection Agency.

US EPA WASTE NUMBER & DESCRIPTION No information available

SECTION 14: TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

U.S. DOT

For ground transportation ONLY:

Proper Shipping Name: Combustible liquid, n.o.s. (*solvent naphtha*)

Classification: Comb liq

UN#: NA1993

Packing Group: III

Hazard Label: Combustible liquid

Note: Not a Marine Pollutant, by D.O.T. standards

ICAO / IATA

Proper Shipping Name: Resin solution, *flammable (solvent naphtha)*.

Classification: 3

UN#: 1866

Packing Group: III

Hazard Label: Flammable liquid

All other transport:

Proper Shipping Name: Resin solution, *flammable (solvent naphtha)*.

Classification: 3

UN#: 1866

Packing Group: III

Hazard Label: Flammable Liquid, Marine Pollutant

IMDG

Proper Shipping Name: Resin solution, *flammable (solvent naphtha)*.

Classification: 3

UN#: 1866

Packing Group: III

EmS#: F-E, S-E

Environmental Hazard: Marine Pollutant

Hazard Label: Flammable liquid, Marine Pollutant

ADR/RID

Proper Shipping Name: Resin solution, *flammable (solvent naphtha)*.

Classification: 3

UN#: 1866

\Packing Group: III

Environmental Hazard: Marine Pollutant

Hazard Label: Flammable liquid, Marine Pollutant

SECTION 15: REGULATORY INFORMATION

The components in this product are either listed or exempt from listing due to polymer exemption criteria for the following chemical listing inventories as indicated by an "X":

| | | |
|--------|--|----------|
| AICS | Australian Inventory of Chemical Substances | X |
| DSL | Canadian Domestic Substances List | X |
| ECL | Korean Existing Chemicals List | X |
| ELINCS | European List of Notified Chemical Substances | |
| ENCS | Japanese Existing and New Chemical Substances | X |
| IECSC | Inventory of Existing Chemical Substances in China | X |
| ISRAEL | Proposed Israel Hazardous Substances List | |
| NDSL | Canadian Non-Domestic Substances List | |
| NZIoC | New Zealand Inventory of Chemicals | X |
| PICCS | Philippines Inventory of Chemicals and Chemical Substances | X |
| SWISS | Giftelist 1 and Inventory of Notified New Substances | |
| TCSI | Taiwan Chemical Substances List | X |
| TSCA | US Toxic Substances Control Act | X |

INTERNATIONAL REGULATIONS

EU REGULATION (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorization, *Substances of Very High Concern*: This product does not contain any SVHC listed substances.

EINECS All of the components of this product are included on the European Inventory of Existing Commercial Chemical Substances.

C.D. 96/82/EC Council Directive 96/82/EC, Annex I not mentioned by name. With regard to possibly appropriate decomposition products see Chapter 10.

CANADA WHMIS Class B-3: Flammable/Combustible
 Class D-2B: Other toxic effects (Toxic)
 All known major components of this material are listed on the Canadian Environmental Protection Act (CEPA) DSL or are exempt.

FEDERAL REGULATIONS

SARA 313 This product does contain chemicals which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355), see below.

| INGREDIENTS | CAS # | % |
|-------------------------|------------|-------------|
| Mixed Xylenes | 1330-20-7 | 0.0 – 7.2 |
| Mixed Trimethylbenzenes | 25551-13-7 | 24.5 – 35.7 |
| Cumene | 98-82-8 | 0.0 – 5.1 |

SARA Section 311/312 (40 CFR 370) Hazard Categories

| | |
|-----------------------|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire Hazard | Yes |
| Pressure Hazard | No |
| Reactivity Hazard | No |

CERCLA This product, as supplied, contains substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional or state level pertaining to releases of this product.

Mixed Xylenes (1330-20-7): 100 lb RQ.

Cumene (98-82-8): 5000 lb RQ

Benzene (71-43-2): 10 lb RQ

CLEAN WATER ACT The following Hazardous Substances are listed under the U.S. Clean Water Act, Section 311, Table 116.4A: Mixed Xylenes, Toluene, Benzene.
 The following Hazardous Substances are listed under the U.S. Clean Water Act, Section 311, Table 117.3: Mixed Xylenes, Toluene, Benzene.
 This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CLEAN AIR ACT This product contains substances (Mixed Xylenes, Cumene) regulated as hazardous air pollutants (HAPS under Section 112 of the Clean Air Act Amendments of 1990).

OTHER FEDERAL None known

U.S. STATE REGULATIONS

RIGHT TO KNOW The Listing requirements of the Right to Know (RTK) legislation varies by state. All information for NJ, PA, MA and other states can be derived from the listing of hazardous and non-hazardous components in Sections 2 and 15 of this Safety Data Sheet.

CALIFORNIA PROP 65 **CALIFORNIA PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):**
 WARNING! This product contains a chemical(s) known to the State of California to cause cancer.

| <u>Component</u> | <u>CAS #</u> | <u>Amount</u> |
|------------------|--------------|---------------|
| Cumene | 98-82-8 | 0.0 – 1.8 % |
| Benzene | 71-43-2 | < 0.02 % |

CALIFORNIA PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

WARNING! This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

| Component | CAS # | Amount |
|------------------|--------------|---------------|
| Toluene | 108-88-3 | < 0.02 % |
| Benzene | 71-43-2 | < 0.02 % |

SECTION 16: OTHER INFORMATION

| | |
|---------------------|--|
| DISCLAIMER | This product is intended for industrial use only and should be used in accordance with the manufacturer's recommendations. Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. This SDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
| DATE OF REVISION | October 12, 2017, <i>replaces September 19, 2017 version.</i> |
| REASON FOR REVISION | Revised Restrictions the Hazards associated with Light Aromatic Solvent Naphtha in Sections 2, 3, 4 and 11 based on the latest supplier information. Revised the Storage conditions in Section 7. |
| SDS PREPARED BY | Glen Pearson |
| SDS APPROVED BY | Robert Auerbach |