

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

PRODUCT NAME	Resiflow® L-45D
MFR.'S CODE ID/SYNONYMS	Resiflow® L-45D
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 (Oral, Inhalation) – Category 4 Skin Corrosion/Irritation – Category 2 Eye Damage/Irritation – Category 1 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

GHS Label

 Symbols: Flame	 Corrosion	 Health Hazard	 Exclamation Mark	 Environment
Hazard Statements H226: Flammable liquid and vapour H302: Harmful if swallowed H304: May be fatal if swallowed and enters airways H315: Causes skin irritation H318: Causes serious eye damage H332: Harmful if inhaled H335: May cause respiratory irritation H336: May cause drowsiness or dizziness H351: Suspected of causing cancer H373: May cause 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. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area.		

	<p>P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection.</p> <p><i>Response</i> P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P302+352: IF ON SKIN: Wash with soap and water. P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 advice/attention. P310: Immediately call a POISON CENTER or doctor/physician. P321: Specific treatment (see supplemental first aid instructions on this label) P330: Rinse mouth. P331: Do NOT induce vomiting. P332+313: If skin irritation occurs: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash it before reuse. P370+378: In case of fire: Use foam, dry chemical powder or carbon dioxide to extinguish. P391: Collect spillage.</p> <p><i>Storage</i> P403+233+235: Store in a well ventilated place. Keep container tightly closed. Keep cool. P405: Store locked up.</p> <p><i>Disposal</i> P501: Dispose of contents/container to an authorized hazardous waste handler.</p>
--	---

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	12.0 – 18.0	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	H226 H332 H315 H319 H351 H335 H373 H304 H401 H411
n-Butyl Alcohol	71-36-3	3.0 – 7.0	Flammable Liquids – Category 3 Acute Toxicity (Oral) – Category 4 Skin Corrosion/Irritation – Category 2 Eye Damage/Irritation – Category 1 Specific Target Organ Toxicity, Single Exposure (Respiratory System, Central Nervous System) – Category 3 Aspiration Hazard – Category 1	H226 H302 H315 H318 H335 & H336 H304

Component Breakdown of Light Aromatic Solvent Naphtha:

Light Aromatic Solvent Naphtha	64742-95-6	6.6 – 18.0	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	6.0 – 12.6	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 – 1.8	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 – 1.4	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 – 3.6	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 – 1.6	Flammable Liquids – Category 3 Aspiration Hazard – Category 1
4-Ethyltoluene	622-96-8	0.0 – 1.6	Flammable Liquids – Category 3 Aspiration Hazard – Category 1
Propylbenzene	103-65-1	0.0 – 1.3	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	78.0 – 82.0

SECTION 4: FIRST-AID MEASURES

SYMPTOMS OF EXPOSURE

ACUTE	Serious eye damage. Skin or respiratory tract irritation. Coughing or sneezing. Drowsiness or dizziness.
DELAYED	Stinging, tearing, redness and swelling of the eyes. Drying, cracking, redness or burning of the skin. Respiratory tract irritation, difficulty breathing.

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 damage. Immediately call a POISON CENTER or doctor/physician. 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. Harmful if swallowed. 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

FLAMMABILITY CLASSIFICATION	Flammable Liquid Class IC (U.S.) Flammable Liquids – Category 3 (GHS)
FLAMMABLE LIMITS	LEL: 1.1 %, by volume of solvent. UEL: 7.7 %, 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

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

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	Store in cool, dry, well-ventilated areas. Keep containers tightly closed. Do not store near 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	78.0 – 82.0	<i>None established</i>	<i>None established</i>
n-Butyl Alcohol	71-36-3	3.0 – 7.0	20 ppm	50 ppm
Light Aromatic Solvent Naphtha	64742-95-6	12.0 – 18.0	25 ppm	100 ppm
<i>Mixed Trimethylbenzenes</i>	25551-13-7	6.0 – 12.6	25 ppm	25 ppm
<i>Cumene</i>	98-82-8	0.0 – 1.8	50 ppm	50 ppm
<i>Mixed Xylenes</i>	1330-20-7	0.0 – 1.4	100 ppm	100 ppm
<i>3-Ethyltoluene</i>	620-14-4	0.0 – 3.6	<i>No data available</i>	<i>No data available</i>
<i>2-Ethyltoluene</i>	611-14-3	0.0 – 1.6	<i>No data available</i>	<i>No data available</i>
<i>4-Ethyltoluene</i>	622-96-8	0.0 – 1.6	<i>No data available</i>	<i>No data available</i>
<i>Propylbenzene</i>	103-65-1	0.0 – 1.3	<i>Not applicable</i>	<i>Not applicable</i>

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

PERSONAL PROTECTIVE EQUIPMENT

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

APPEARANCE	Clear to hazy liquid	ODOR	Strong, aromatic
ODOR THRESHOLD	No test data available	pH	No test data available
MELTING POINT	No test data available	BOILING POINT/RANGE	116 - 179 °C @ 760 mmHg
FLASH POINT	35 °C (95 °F), closed cup	EVAPORATION RATE	No test data available
FLAMMABILITY	Flammable Liquid Class IC (U.S.),	Flammable Liquids – Category 3 (GHS)	
FLAMMABLE LIMITS	LOWER 1.1 %, <i>by volume of solvent</i>	UPPER 7.7 %, <i>by volume of solvent</i>	
VAPOR PRESSURE	2.6 mmHg @ 20 °C	VAPOR DENSITY	No test data available
RELATIVE DENSITY	0.98 – 1.02 @ 20 °C	SOLUBILITY IN H ₂ O	Solvent – Partly soluble Polymer – Negligible
PARTITION COEFFICIENT (n-octanol/water)	<i>See component information in Section 12.</i>	AUTOIGNITION TEMPERATURE	343 °C (649 °F)
DECOMPOSITION TEMPERATURE	> 250 °C (Polymer)	VISCOSITY	No test data available
% VOLATILE	18 – 22%	SOFTENING POINT	No test data available

SECTION 10: STABILITY AND REACTIVITY

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

ACUTE Serious eye damage. Skin or respiratory tract irritation. Coughing or sneezing. Drowsiness or dizziness.

DELAYED Stinging, tearing, redness and swelling of the eyes. Drying, cracking, redness or burning of the skin. Respiratory tract irritation, difficulty breathing.

ACUTE TOXICITY

INHALATION Harmful if inhaled. Suspected of causing cancer. May cause drowsiness or dizziness. May cause genetic defects. May cause damage to organs (Liver, Kidney, Central Nervous System) through prolonged or repeated exposure.

SKIN Causes skin irritation.

EYES Causes serious eye damage.

INGESTION May be fatal if swallowed and enters airways. Harmful if swallowed. May cause genetic defects. May cause damage to organs (Liver, Kidney, Central Nervous System) through prolonged or repeated exposure.

INHALATION TOXICITY	LC ₅₀ Rat, 4 h	Solvent Naphtha n-Butyl Alcohol Polymers	4.5 mg/l 8000 ppm Not established
DERMAL TOXICITY	LD ₅₀ Rabbit	Solvent Naphtha n-Butyl Alcohol Polymers	3,268 mg/kg 3,400 mg/kg Not established
SKIN IRRITATION	Draize, Rabbit, 4 hours	Solvent Naphtha n-Butyl Alcohol	Irritating to skin. May cause skin irritation in susceptible persons. Irritating to skin. May cause skin irritation in susceptible persons.
EYE IRRITATION	Draize, Rabbit	Solvent Naphtha n-Butyl Alcohol	Irritating to eyes. May cause irreversible eye damage. Severely irritating to the eyes. Risk of serious damage to the eyes.
ORAL TOXICITY	LD ₅₀ Rat	Solvent Naphtha n-Butyl Alcohol Polymers	2,900 mg/kg 790 mg/kg Not established
SENSITIZATION	Buehler, Guinea Pig	Solvents	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, 5d/week
Method: OECD Test Guideline 451
Symptoms: weight loss
GLP: yes

Species: mouse, (male)
Application Route: Dermal
Exposure time: 102 wk
Dose: 0.05 ml neat
Frequency of Treatment: 3 days/week
Method: OECD Test Guideline 451
GLP: No data available

	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 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
71-36-3	Genotoxicity in vitro	Test Type: Chromosome aberration test in vitro Test species: Chinese hamster lung fibroblasts Metabolic activation: Without metabolic activation Result: negative

		<p>Test Type: Mammalian cell gene mutation assay Test species: Chinese hamster lung fibroblasts Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: yes Test Type: DNA damage and/or repair Metabolic activation: with and without metabolic activation Result: negative</p>
	Genotoxicity in vivo	<p>Test species: mouse (male and female) Cell type: Bone marrow Application Route: Oral Exposure time: 1 day Dose: 0, 500, 1000, 2000 mg/kg bw Method: OECD Test Guideline 474 Result: negative GLP: yes</p>
25551-13-7	Genotoxicity in vitro	<p>Test Type: Ames test Test species: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative</p>
		<p>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.</p>
		<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>
	Genotoxicity in vivo	<p>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</p>
	Germ cell mutagenicity-Assessment	<p>Animal testing did not show any mutagenic effects.</p>
REPRODUCTIVE TOXICITY		
		<p>Solvent components displayed some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments..</p>
64742-95-6	Reproductive toxicity - Assessment	<p>Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.</p>
71-36-3	Reproductive toxicity - Assessment	<p>No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.</p>
	Effects on fertility	<p>Test Type: Fertility/early embryonic development Species: rat, male and female Application Route: vapour Dose: 0, 3000, 6000 ppm General Toxicity - Parent: NOAEC: 6000 ppm General Toxicity Fl: NOAEC: 6000 ppm Result: No reproductive effects.</p>

		<p>Test Type: Fertility/early embryonic development Species: rat, female Application Route: oral Dose: O, 300, 1000, 5000 mg/kg bw General Toxicity - Parent: NOAEL: 5000 mg/kg bw Result: No reproductive effects.</p>
	Effects on foetal development	<p>Species: rat, female Application Route: oral Dose: O, 316, 1454, 5654 mg/kg bw Duration of Single Treatment: 20 d Frequency of Treatment: 7 days/week General Toxicity Maternal: NOAEL: 1454 mg/kg bw Teratogenicity: NOAEL: 5654 mg/kg bw Developmental Toxicity: NOAEL: 1454 mg/kg bw Symptoms: No malformations were observed, weight loss. GLP: yes</p> <p>Species: rat, female Application Route: vapour Dose: O, 3500, 6000, 8000 ppm Duration of Single Treatment: 20 d Frequency of Treatment: 7 hr/day General Toxicity Maternal: NOAEC: 3500 ppm Teratogenicity: NOAEC: 8000 ppm Developmental Toxicity: NOAEC: 3500 ppm Symptoms: No malformations were observed, weight loss.</p>
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	<p>Test Type: Two-generation study Species: rat, male and female Application Route: vapour Dose: O, 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.</p>
	Effects on foetal development	<p>Species: rat Application Route: vapour Dose: O, 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.</p>
	Reproductive toxicity - Assessment	<p>Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.</p>
98-82-8	Effects on fertility	<p>Species: rat, male and female Application Route: inhalation (vapour) Dose: O, 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</p>

	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
	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: o, 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: O, 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.
71-36-3	Inhalation	Respiratory System, Central Nervous System	May cause respiratory irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. 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		Liver, Kidney, 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
- 71-36-3 Species: rat, male and female
NOAEL: 125 mg/kg
LOEAL: 500 mg/kg
Application Route: Oral
Exposure time: 6 or 13 weeks
Number of exposures: 7 days/week
Dose: 0, 30, 125, 500 mg/kg bw
GLP: yes
Symptoms: Central nervous system depression.
- 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.
- 71-36-3 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	71-36-3	1,376 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	71-36-3	1,328 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>Pseudokirchneriella subcapitata</i> , 96 h	71-36-3	225 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
PERSISTENCE 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
	Inoculum, <i>unknown</i> , 19 d	71-36-3	98%, 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
	Bioaccumulation	71-36-3	BCF = 3.16
	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: Resin solution, *flammable (mixed xylenes)*.

Classification: 3

UN#: 1866

Packing Group: III

Hazard Label: Flammable liquid

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

ICAO / IATA

Proper Shipping Name: Resin solution, *flammable (mixed xylenes)*.

Classification: 3

UN#: 1866

Packing Group: III

Hazard Label: Flammable liquid

All other transport:

Proper Shipping Name: Resin solution, *flammable (mixed xylenes)*.

Classification: 3

UN#: 1866

Packing Group: III

Hazard Label: Flammable liquid, Marine Pollutant

IMDGProper Shipping Name: Resin solution, *flammable (mixed xylenes)*.

Classification: 3

UN#: 1866

Packing Group: III

EmS#: F-E, S-E

Environmental Hazard: Marine Pollutant

Hazard Label: Flammable liquid, Marine Pollutant

ADR/RIDProper Shipping Name: Resin solution, *flammable (mixed xylenes)*.

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
ECN	Taiwan Chemical Substances 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	
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 #	%
n-Butyl Alcohol	71-36-3	3.0 – 7.0
Mixed Xylenes	1330-20-7	0.0 – 1.4
Mixed Trimethylbenzenes	25551-13-7	6.0 – 12.6
Cumene	98-82-8	0.0 – 1.8

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.
n-Butyl Alcohol (71-36-3): 5000 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.

Component	CAS #	Amount
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 April 27, 2016, *replaces January 11, 2016 version.*

REASON FOR REVISION Removed Experimental designation. Revised Restrictions on Use in Section 1. Revised the Updated the Hazards in Sections 2, 3, 4, 11, 12 and 15 to reflect the latest supplier information. Added H Codes and segregated Hazardous and Non-Hazardous components in Section 3. Revised solvent naphtha breakdown based on the latest supplier information in Section 3 and 8.

SDS PREPARED BY Glen Pearson SDS APPROVED BY Fred Allen