

SECTION 1 – Identification of the Substance/Mixture and of the Company/Undertaking**1.1 Product identifiers**

Product Name: RESISTALL 20B
Product Class: Alkyd Resin
Manufacturer's I.D.: RESISTALL 20B
CAS Number: N/A – Mixture
Index Number: N/A – Mixture

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

Identified Uses: Additive for overprint coatings and conversion varnishes. For industrial use only.
Uses Advised Against: N/A

1.3 Details of the Supplier of the safety data sheet

Company: Kane International Corporation
411 Theodore Fremd Avenue
Rye, NY 10580
Phone: (914) 921-3100

1.4 Emergency telephone number

For Emergencies Involving a Spill, Leak, Fire, Exposure, or Accident
Contact CHEMTREC (800) 424-9300

SECTION 2 – Hazards Identification**2.1 Classification of the Substance or Mixture**

OSHA Hazards: Flammable liquid, target organ effect.

Overexposure targets the following organs: Central nervous system, eyes, gastrointestinal tract, respiratory system and skin.

Classification according to OSHA 29 CFR 1910.1200 and Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flammable liquids (Category 2)

Aspiration toxicity (Category 1)

Carcinogenicity (Category 2)

Eye irritation (Category 2A)

Skin irritation (Category 2)

Specific target organ toxicity - single exposure (Category 3: Central nervous system)

Aquatic chronic toxicity (Category 2)

See Sections 15.3 and 15.4 for additional comments concerning the classification of this product.

2.2 Label Elements

GHS Label Elements, including precautionary statements:

Pictogram



Signal Word Danger

Hazard Statement(s)

H225 Highly flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H351 Suspected of causing cancer.
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statement(s)

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 systems and equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P370 + P378 In case of fire: Use carbon dioxide, dry chemical, foam or water fog for extinction.
P260 Do not breathe mist, vapors, or spray.
P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P315 Get immediate medical advice/attention.
P305 + P351 + P338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P337 + P313 If eye irritation persists get medical advice/attention.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P304 + P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P273 Avoid release to the environment.
P391 Collect spillage.
P501 Dispose of contents / container to an approved waste facility.

Supplemental Hazard Information (EU)

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other Hazards

None

SECTION 3 – Composition / Information on Ingredients

3.1 Substances

Formula: Mixture, proprietary

Molecular Weight: Mixture, proprietary

3.2 Mixtures**Description of the mixture:**

Alkyd, melamine, and urea formaldehyde resins dispersed in a mixture of solvents and other additives

Summary of Information Included:

All hazardous constituents with a concentration of 1% or greater, or 0.1% or greater if the constituent is a PBT/vPvB substance or otherwise required by the OSHA Hazard Communication Standard, are listed in Section 3.2.1 below. Other (non-hazardous) ingredients are listed in Section 3.2.2 for the purpose of accounting for 100% of the mixture. This is the only section of the SDS that lists non-hazardous constituents.

Information listed as “proprietary” is being withheld as a trade secret or confidential business information. Regardless, the properties and effects of all known hazardous ingredients are included as applicable in each section of this Safety Data Sheet.

The classification hazard(s) of each of the hazardous ingredients is provided in Section 3.2.3, along with the reason(s) for listing the chemical as hazardous. Refer to Sections 15.3 and 15.4 for additional information concerning any pending registrations or the justification for the classification.

3.2.1 Hazardous Ingredients

<u>Ingredient</u>	<u>CAS #</u>	<u>EC #</u>	<u>Index #</u>	<u>Wt %</u>	<u>Synonyms</u>
Petroleum Naphtha (light)	68410-97-9	270-093-2	649-332-00-3	11.9%	Hydrotreated light distillates (Low Boiling); VM&P Solvent
Isopropyl Acetate	108-21-4	203-561-1	607-024-00-6	10.4%	2-Propyl acetate
Heptane	142-82-5	205-563-8	601-008-00-2	8.4%	n-Heptane
Ethyl Alcohol	64-17-5	200-578-6	603-002-00-5	5.8%	Ethanol
Urea-formaldehyde resin	Proprietary	N/A	N/A	3.3%	
Xylene (Mixed Isomers)	1330-20-7	215-535-7	601-022-00-9	0.9%	
n-Butyl Alcohol	71-36-3	200-751-6	603-004-00-6	0.8%	Butan-1-ol; n-butanol
n-Propyl Acetate	109-60-4	203-686-1	607-024-00-6	0.3%	Acetic acid, propyl ester
Isopropyl Alcohol	67-63-0	200-661-7	603-117-00-0	0.3%	Propan-2-ol; isopropanol
Ethyl Benzene	100-41-4	202-849-4	601-023-00-4	0.2%	
Methyl Alcohol	67-56-1	200-659-6	603-001-00-X	<0.1%	Methanol
Formaldehyde	50-00-0	200-001-8	605-001-00-5	<0.1%	

3.2.2 Other (Non-Hazardous) Ingredients

<u>Ingredient</u>	<u>CAS #</u>	<u>EC #</u>	<u>Index #</u>	<u>Wt %</u>	<u>Synonyms</u>
Alkyd Resin	Proprietary	--	--	40.5%	N/A
Melamine Resin	Proprietary	--	--	17.2%	N/A

3.2.3 Classification *

<u>Ingredient</u>	<u>CAS #</u>	<u>Reason Listed</u>	<u>Classification per Regulation (EC) No. 1272/2008 (CLP)</u>
Petroleum Naphtha (light)	68410-97-9	1,2	H225 (2), H304 (1), H315 (2), H336 (3), H411 (2)
Isopropyl Acetate	108-21-4	1,2	H225 (2), H319 (2), H336 (3)
Heptane	142-82-5	1,2	H225 (2), H304 (1), H315 (2), H336 (3), H400 (1), H410 (1)
Ethyl Alcohol	64-17-5	1,2	H225 (2), H319 (2)
Urea-formaldehyde resin	Proprietary	1	H413 (4)
Xylene (Mixed Isomers)	1330-20-7	1,2	H226 (3), H332 (4), H312 (4), H315 (2)
n-Butyl Alcohol	71-36-3	1,2	H226 (3), H302 (4), H315 (2), H318 (1)
n-Propyl Acetate	109-60-4	1,2	H225 (2), H319 (2), H336 (3)
Isopropyl Alcohol	67-63-0	1,2	H225 (2), H319 (2), H336 (3)
Ethyl Benzene	100-41-4	1,2	H225 (2), H351(2), H332 (4), H304 (1), H412 (3)
Methyl Alcohol	67-56-1	1,2	H225 (2), H301 (3), H311 (3), H331 (3), H370 (1), H316 (3), H320 (2B)
Formaldehyde	50-00-0	1,2	H351 (2), H301 (3), H311 (3), H331 (3), H314 (1B), H318 (1), H317 (1B)

- 1 Substance is classified with a health or environmental hazard
- 2 Substance has a workplace exposure limit
- 3 Substance meets the criteria for PBT per Regulation (EC) No. 1907/2006, Annex XIII
- 4 Substance meets the criteria for vPvB per Regulation (EC) No. 1907/2006, Annex XIII

* See Sections 15.3 and 15.4 for a discussion of the classification determination and European Union requirements.

SECTION 4 – First Aid Measures**4.1 Description of first aid measures**

Inhalation Overexposure: Remove to fresh air. If breathing stops, apply artificial respiration and seek immediate medical attention. If breathing is difficult, give oxygen and seek medical attention.

Eye Contact: Flush with large quantities of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.

Skin Contact: Wash affected skin with soap and water for 15 minutes. Get medical attention if symptoms occur. Remove contaminated clothing and shoes. Wash clothing before reuse. Destroy or thoroughly clean shoes before reuse.



Ingestion: DO NOT induce vomiting. Have victim rinse mouth out with water, and then drink sips of water to remove taste from mouth. Never give anything by mouth to an unconscious person. Get medical attention as needed.

If the victim is coughing, choking, has shortness of breath, or difficulty breathing, transport to the nearest medical facility for additional treatment.

If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F, shortness of breath, chest congestion or continued coughing or wheezing.

If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

4.2 Most important symptoms and effects, both acute and delayed

Repeated or prolonged contact can cause skin irritation, redness, and drying. Eye contact can cause moderate to severe irritation, redness, or swelling. Inhalation of mist or vapors causes irritation to eyes, nose, and throat.

4.3 Indication of any immediate medical attention and special treatment needed

No data available. Treat symptomatically.

SECTION 5 – Firefighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media:

Use carbon dioxide or dry chemical for small fires. Use aqueous foam or water for larger fires. For large fires, water should be applied from as far away as possible. Water should be applied in very large quantities as a mist or spray; solid streams of water may be ineffective.

5.2 Special hazards arising from the substance or mixture

Sealed containers may rupture when exposed to fire or excessive heat due to build-up of pressure

5.3 Advice for firefighters

Special Fire Fighting Procedures:

Remove all ignition sources from affected and potentially affected areas. Use water to cool fire-exposed structures and containers.

Special Protective Equipment

Fire fighters should wear self-contained breathing apparatus and complete personal protective equipment operated in a pressure demand or other positive pressure mode.

SECTION 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing to prevent unnecessary skin contact and to avoid overexposure to vapors. Use non-sparking tools and equipment.

6.2 Environmental precautions

Prevent runoff from entering drains, sewers, streams or other waterways.

6.3 Methods and material for containment and cleaning up

Ventilate the spill area. Dike spill area, soak up with a non-combustible absorbent material, and place in a closed container.

Notification and reporting

Spills or releases to the environment may be reportable. See Section 15 for United States federal reporting requirements. For all other locations, consult appropriate regulations to determine possible reporting requirements prior to using this product.

SECTION 7 – Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapors and mists. Use in cool, well-ventilated area. Minimize the amount of vapor present by keeping containers closed when not in use and handling in an enclosed system where possible. Ground containers or take other measures to prevent the build-up of a static charge.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool location. Keep away from excessive heat and open flames.

7.3 Specific end uses

Thermoset OPV

SECTION 8 – Exposure controls / personal protection**8.1 Control parameters**

Hazardous Ingredients			Workplace Control Parameters ¹			
<u>Ingredient</u>	<u>CAS #</u>	<u>Wt %</u>	<u>OSHA PEL</u>	<u>OSHA STEL</u>	<u>ACGIH TWA</u>	<u>ACGIH STEL</u>
Petroleum Naphtha (light)	68410-97-9	11.9%	500 ppm	N/A	200 ppm	N/A
Isopropyl Acetate	108-21-4	10.4%	250 ppm	N/A	100 ppm	200 ppm
Heptane	142-82-5	8.4%	400 ppm	500 ppm	400 ppm	500 ppm
Ethyl Alcohol	64-17-5	5.8%	1,000 ppm	N/A	1,000 ppm	N/A
Xylene (Mixed Isomers)	1330-20-7	0.9%	100 ppm	N/A	100 ppm	150 ppm
n-Butyl Alcohol	71-36-3	0.8%	100 ppm	N/A	20 ppm	N/A
n-Propyl Acetate	109-60-4	0.3%	200 ppm	N/A	200 ppm	250 ppm
Isopropyl Alcohol	67-63-0	0.3%	400 ppm	N/A	200 ppm	400 ppm
Ethyl Benzene	100-41-4	0.2%	100 ppm	N/A	20 ppm	125 ppm
Methyl Alcohol	67-56-1	<0.1%	200 ppm	N/A	250 ppm (skin)	N/A
Formaldehyde	50-00-0	<0.1%	0.75 ppm	2 ppm	0.3 ppm C	N/A

¹ Workplace control parameters may vary. Please consult the listing for the country where this product will be used to determine the relevant exposure limits.

"N/A" = Information is Not Available

"C" = Ceiling limit value

8.2 Exposure Controls**Appropriate engineering controls**

Use local exhaust if necessary to maintain concentrations well below exposure limits. Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the work day.

Personal protective equipment

Eye Protection: Chemical splash goggles. Wear a full face shield if splashing is possible to prevent unnecessary eye contact.

Skin (Hand) Protection: For operations where contact can occur, wear impervious gloves to avoid unnecessary skin contact. Review published literature and glove manufacturer data to determine suitable gloves. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for anticipated use conditions.

Skin (Body) Protection: Wear impervious clothing as necessary to prevent unnecessary skin contact.

Respiratory Protection: Use a properly fitted organic vapor or self-contained breathing apparatus appropriate to the manner in which the product is handled where excessive vapor, mists or aerosols are present. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Other Protective Equipment: For operations where contact can occur, a safety shower and eye wash facility should be available.

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

Physical State: Liquid

Form: Liquid

Color: Colorless, clear

Odor: Characteristic solvent odor

Odor Threshold: Not determined

pH: No data available



Melting Point: No data available

Boiling Range: 78.3-150°C (172.9-302°F)

Flash Point: -4.0°C (24.8°F) CC

Autoignition Temperature: No data available

Decomposition Temperature: No data available

Lower Explosion Limit (LEL): 1.0% (estimated)

Upper Explosion Limit (LEL): 19% (estimated)

Vapor Pressure at 20 °C: 34.91 mm Hg (estimated)

Vapor Density: Heavier than air

Density (Specific Gravity): 8.40 ± 0.15 lbs/gallon (1.007 g/mL)

Solubility in Water: Ethyl Alcohol and Isopropyl Alcohol are soluble in water. Isopropyl acetate and n-Propyl Acetate are moderately soluble in water. The resins and remaining solvents are insoluble in water.

Partition Coefficient (n-octanol / water): No data available

Dynamic Viscosity: 150 mPa s (cps) @ 20 °C / 75 mPa s (cps) @ 40 °C

Kinematic Viscosity: 17.8 mm² / s @ 20 °C / 8.9 mm² / s @ 40 °C (calculated)

Explosive Properties: No data available

Oxidizing Properties: No data available

Other Information

Evaporation Rate: Slower than Butyl Acetate

Percent Volatile by Weight: 39.0%

VOC: 392.81 g/l

9.2 Other safety information

No data available

SECTION 10 – Stability and reactivity

10.1 Reactivity: None known

10.2 Chemical stability: Stable

10.3 Possibility of hazardous reactions: Hazardous polymerization will not occur

10.4 Conditions to avoid: Excessive heat, sparks, or open flame.

10.5 Incompatible materials: Strong oxidizing agents.

10.6 Hazardous decomposition products: Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11 – Toxicological information

11.1 Information on toxicological effects

This product has not been tested for acute or chronic toxicological effects. The toxicological information presented below is for the product components:

ACUTE TOXICITY:

Petroleum Naphtha (light), CAS# 68410-97-9

LD₅₀ (Oral, Rat)
5,170 mg/kg

LC₅₀ (Inhalation, Rat)
> 5.2 mg/l

LD₅₀ (Skin, Rabbit)
> 2,000 mg/kg

Isopropyl Acetate, CAS# 108-21-4

LD₅₀ (Oral, Rat)
6,750 mg/kg

LC₅₀ (Inhalation, Rat)
50.6 mg/l

LD₅₀ (Skin, Rabbit)
> 20 ml/kg

Heptane, CAS# 142-82-5

LD₅₀ (Oral, Rat)
> 5,000 mg/kg

LC₅₀ (Inhalation, Mouse)
> 29.29 mg/L (4 hrs)

LD₅₀ (Skin, Rabbit)
> 2,000 mg/kg

Ethyl Alcohol, CAS# 64-17-5

LD₅₀ (Oral, Rat)
7,060 mg/kg

LC₅₀ (Inhalation, Rat)
20 mg/L (8 hrs)

Irritation (Skin, Rabbit)
24 hrs – No irritation

Xylene (Mixed Isomers), CAS# 1330-20-7

LD ₅₀ (Oral, Rat) 4,300 mg/kg	LC ₅₀ (Inhalation, Rat) 5,000 ppm (4 hr)	LD ₅₀ (Skin, Rabbit) >1,700 mg/kg
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n-Butyl Alcohol, 71-36-3

LD ₅₀ (Oral, Rat) 790 mg/kg	LC ₅₀ (Inhalation, Rat) 8,000 ppm (4-hr)	LD ₅₀ (Skin, Rabbit) 3,400 mg/kg
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n-Propyl Acetate, CAS# 109-60-4

LD ₅₀ (Oral, Rat) 8,700 – 9,370 mg/kg	LC ₅₀ (Inhalation, Rat) 32.0 mg/L (8 hrs)	LD ₅₀ (Skin, Rabbit) > 17,800 mg/kg
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Isopropyl Alcohol, CAS# 67-63-0

LD ₅₀ (Oral, Rat) 5,045 mg/kg	LC ₅₀ (Inhalation, Rat) 16.0 mg/L (8 hrs)	LD ₅₀ (Skin, Rabbit) 12,800 mg/kg
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Ethyl Benzene, CAS# 100-41-4

LD ₅₀ (Oral, Rat) 3,500 mg/kg		LD ₅₀ (Skin, Rabbit) 17,800 µL/kg
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Methyl Alcohol, CAS# 67-56-1

LD ₅₀ (Oral, Rat) > 5,600 mg/kg	LC ₅₀ (Inhalation, Rat) 83.78 mg/L (4 hrs)	LD ₅₀ (Skin, Rabbit) 15,800 mg/kg
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Formaldehyde, CAS# 50-00-0

LD ₅₀ (Oral, Rat) 100 mg/kg	LC ₅₀ (Inhalation, Mouse) 0.31-0.59 mg/L (4 hrs)	LD ₅₀ (Skin, Rabbit) 270 mg/kg
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Irritation of the nose and throat has been observed in people exposed to formaldehyde vapor levels in excess of 1 ppm. Normal breathing may be seriously impaired at levels above 10 ppm and serious lung damage can occur at levels exceeding 50 ppm. Formaldehyde has been reported to cause pulmonary hypersensitivity in some individuals who were exposed to concentrations known to cause irritation; however, no pulmonary sensitization has been demonstrated in laboratory animal studies. Formaldehyde solutions can cause severe eye and moderate skin irritation. Repeated skin exposure to solutions of 2% or more formaldehyde has caused allergic skin reactions. Formaldehyde was found to be weakly mutagenic in a number of in vitro genotoxicity tests and positive in certain in vivo screening tests for mutagenicity. Formaldehyde did not cause birth defects in rats inhaling concentrations up to 10 ppm. However, a study using higher levels did show a slight but statistically significant reduction in male fetal body weight. Lifetime inhalation of formaldehyde vapor at concentrations above 5 ppm for 6 hours per day, caused nasal tumors in laboratory animals. The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen based on epidemiological evidence linking formaldehyde exposure to the occurrence of nasopharyngeal cancer, a rare type of cancer. IARC also found limited evidence of cancer of the nasal cavity and paranasal sinuses and insufficient evidence for an association between formaldehyde and leukemia. Inhalation caused liver and kidney damage in laboratory animal tests.

EFFECTS OF OVEREXPOSURE

Vapors: Mist or vapors causes irritation to eyes, nose, and throat. Excessive exposure may result in headache, dizziness, nausea, drowsiness and slurred speech.

Skin Contact: Solvent components degrease the skin. Repeated or prolonged contact can cause minor to moderate skin irritation, drying, and cracking.

Eye Contact: Eye contact can cause moderate to severe irritation, including tearing, burning sensation, redness, or swelling

Ingestion: The oral toxicity of this product is expected to be low. However, the product contains petroleum distillates and heptane which can affect the respiratory system. Aspiration of small amounts of these liquids directly into the lung, or into the lung during vomiting if ingested, can cause chemical pneumonia, pulmonary damage, and death. Petroleum distillates with low viscosity, such as gasoline, kerosene, and mineral seal oil, possess the greatest potential for aspiration. The viscosity of this product indicates that aspiration is possible if ingested.

Medical Conditions Prone To Aggravation By Exposure: Respiratory tract irritation, dermatitis, nausea, and vomiting.

Primary Routes of Entry: Inhalation, Skin Contact, Absorption through the skin.

Carcinogenicity: NTP (Known): Yes¹; **NTP (Anticipated):** No; **IARC Category:** 1¹, 2², 3³; **OSHA:** Yes¹

¹ This product contains trace amounts of Formaldehyde (<805 ppm) which is listed as a known carcinogen.

² This product contains Ethyl Benzene (~0.2%) which is listed in IARC Category 2B. Category 2B indicates that the material is possibly carcinogenic to humans.

³ This product contains Petroleum Solvents (~8.3% Petroleum Naphtha), Isopropyl Alcohol (~0.2%), and Xylene (~0.9%) which are listed in IARC Category 3. Category 3 is used most commonly for agents, mixtures and exposure circumstances for which the evidence of carcinogenicity is inadequate in humans and inadequate or limited in experimental animals. Exceptionally, agents (mixtures) for which the evidence of carcinogenicity is inadequate in humans but sufficient in experimental animals may be placed in this category when there is strong evidence that the mechanism of carcinogenicity in experimental animals does not operate in

humans. Agents, mixtures and exposure circumstances that do not fall into any other group are also placed in this category.

SECTION 12 – Ecological information

12.1 Toxicity

No information is available concerning ecological data for this product. The information presented below is for the product components.

Petroleum Naphtha (light), CAS# 68410-97-9

Test type: LC ₅₀ (Fish)	Test type: EC ₅₀ (Invertebrates)	Test type: EC ₅₀ (Algae)
Time: 96 hr	Time: 48 hr	Time: 72 hr
Species: Not available	Species: Not available	Species: Not available
Value: 1 – 10 mg/l	Value: 1 – 10 mg/l	Value: 1 – 10 mg/l

Isopropyl Acetate, CAS# 108-21-4

Test type: LC ₅₀ (Fish)	Test type: EC ₅₀ (Invertebrates)	Test type: EC ₅₀ (Algae)
Time: 48 hr	Time: 48 hr	Time: 96 hr
Species: Golden orfe	Species: Daphnid	Species: Not available
Value: 265 – 360 mg/l	Value: 1,260 mg/l	Value: 370 mg/l

Heptane, CAS# 142-82-5

Test type: LC ₅₀ (Fish)	Test type: EC ₅₀ (Invertebrates)	Test type: EL ₅₀ (Algae)
Time: 96 hr	Time: 48 hr	Time: 72 hr
Species: Tilapia mosambica	Species: Mysidopsis bahia	Species: Pseudokirchneriella subcapita
Value: 375 mg/l	Value: 0.1 mg/l	Value: 4.338 mg/l

Ethyl Alcohol, CAS# 64-17-5

Test type: LC ₅₀ (Fish)	Test type: EC ₅₀ (Invertebrates)	Test type: EC ₅₀ (Algae)
No data available	No data available	No data available

Urea-formaldehyde resin

Test type: LC ₅₀ (Fish)	Test type: LC ₅₀ (Invertebrates)	Test type: LC ₅₀ (Algae)
No data available	No data available	No data available

Xylene (Mixed Isomers), CAS# 1330-20-7

Test type: LC ₅₀ (Fish)	Test type: EC ₅₀ (Daphnia)	Test type: LC ₅₀ (Algae)
Time: 96 hr	Time: 48 hr	No data available
Species: Oncorhynchus mykiss	Species: Daphnia magna	
Value: 3.3 – 8.2 mg/l	Value: 2.93 mg/l	

n-Butyl Alcohol, 71-36-3

Test type: LC ₅₀ (Fish)	Test type: EC ₅₀ (Water Flea)	Test type: EC ₅₀ (Algae)
Time: 96 hr	Species: Daphnia magna	No data available
Species: Pimephales promelas	Time: 48 hr	
Value: 1,840 mg/l	Value: 1,983 mg/l	

n-Propyl Acetate, CAS# 109-60-4

Test type: LC ₅₀ (Fish)	Test type: EC ₅₀ (Invertebrates)	Test type: EC ₅₀ (Algae)
Time: 96 hr	Time: 24 hr	Time: 72 hr
Species: Fathead minnow	Species: Water flea	Species: Pseudokirchneriella subcapitata
Value: 60 mg/l	Value: 91.5 mg/l	Value: 672 mg/l

Isopropyl Alcohol, CAS# 67-63-0

Test type: LC ₅₀ (Fish)	Test type: EC ₅₀ (Invertebrates)	Test type: EC ₅₀ (Algae)
Time: 96 hr	Time: 24 hr	Time: 72 hr
Species: Fathead minnow	Species: Daphnia magna	Species: Green algae
Value: 9,640 mg/l	Value: 5,102 mg/l	Value: > 2,000 mg/l

Ethyl Benzene, CAS# 100-41-4

Test type: LC ₅₀ (Fish)	Test type: EC ₅₀ (Invertebrates)	Test type: EC ₅₀ (Algae)
Time: 96 hr	Time: 48 hr	Time: 72 hr
Species: Oncorhynchus mykiss	Species: Daphnia magna	Species: Pseudokirchneriella subcapitata
Value: 4.2 mg/l	Value: 1.8 – 2.4 mg/l	Value: 1.7 – 7.6 mg/l

Methyl Alcohol, CAS# 67-56-1

Test type: LC ₅₀ (Fish)	Test type: LC ₅₀ (Invertebrates)	Test type: LC ₅₀ (Algae)
Time: 96 hr	No data available	No data available
Species: Lepomis macrochirus		
Value: > 13,500 mg/l		

Formaldehyde, CAS# 50-00-0Test type: LC₅₀ (Fish)

Time: 96 hr

Species: Oncorhynchus mykiss

Value: 100 - 136 mg/l

Test type: EC₅₀ (Invertebrates)

Time: 48 hr

Species: Daphnia magna

Value: 11.3 - 18 mg/l

Test type: LC₅₀ (Algae)

No data available

- 12.2 Information on toxicological effects:** No data available
- 12.3 Bioaccumulative potential:** No data available
- 12.4 Mobility in soil:** No data available
- 12.5 Results of PBT and vPvB assessment:** No data available
- 12.6 Other adverse effects:** No data available.

SECTION 13 – Disposal considerations**13.1 Waste treatment methods**

Incinerate in an approved incinerator or dispose of according to applicable local, state / provincial, and federal regulations

General information

Dispose of according to all applicable local, regional and national laws or regulations. Use appropriately licensed disposal services to manage this flammable liquid. Do not reuse empty containers.

Empty containers:

Empty containers which have not been cleaned possess residual product and should be handled in the same way as full containers of this product. Recipients of these containers must be warned of the possible hazard(s) that may be caused by product residues.

RCRA (United States) INFORMATION:

Since this product is not sold as waste, we have not tested it as a waste. Based on our knowledge of the product, its raw materials and processes employed during its manufacture, we believe that this product could be considered to be a RCRA ignitable waste, D001. We recommend that you carry out your own tests and evaluations prior to discarding any materials and that any waste is disposed of in accordance with all applicable federal, state or provincial, and local regulations

European Waste Codes:

Since this product is not sold as waste, we have not tested it as a waste. We recommend that you carry out your own tests and evaluations prior to discarding any materials and that any waste is disposed of in accordance with all applicable national, state or provincial, and local regulations

SECTION 14 – Transportation information (*not meant to be all inclusive*)

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult the appropriate regulation(s) for information specific to the shipment to be made.

US Department of Transportation (DOT)

DOT Shipping Name: Resin solution

DOT Hazard Class: 3

DOT UN/NA Number: UN1866

DOT Label(s): Flammable Liquid

Packing Group: II

Transport Canada Transportation of Dangerous Goods (TDG)

Shipping Name and Description: Resin solution, flammable

UN Number: UN1866

Class: 3

Packing Group: II

IATA

Shipping Name and Description: Resin Solution

UN Number: UN1866

Class: 3

Packing Group: II

Subrisk: N/A

Inhalation Packing Group I: No



Additional Shipping Name Requirements

This product contains constituents which are hazardous substances. If the shipment includes greater than or equal to 1,401 gallons in a single container, the proper shipping name would be "Resin Solution (contains Xylene)". Refer to Section 15, CERCLA Information, for additional details on other hazardous substance constituents.

The product contains greater than 10% of heptane which is listed as a marine pollutant. Bulk shipments should use the proper shipping name "Resin Solution (contains Heptane and Xylene)". Non-bulk shipments to be made via water should use the proper shipping name "Resin Solution (contains Heptane)" and should also be marked as a marine pollutant.

SECTION 15 – Regulatory information (not meant to be all inclusive)**15.1 UNITED STATES**

TSCA [Toxic Substances Control Act]: This product complies with all TSCA inventory requirements.

SARA Section 313: *This product contains the following chemical(s) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Response Act of 1986 and of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material.*

<u>Component</u>	<u>CAS#</u>	<u>Wt %</u>
Xylene (Mixed Isomers)	1330-20-7	0.9%
n-Butyl Alcohol	71-36-3	0.8%
Ethyl Benzene	100-41-4	0.2%
Methyl Alcohol	67-56-1	<0.1%
Formaldehyde	50-00-0	<0.1%

SARA Section 311 and 312:

SARA Section 311 and 312 hazard classification(s) for this product are listed below.

Immediate (acute) health hazard

Delayed (chronic) health hazard

Fire hazard

SARA Section 302 and 304:

This product contains the following Extremely Hazardous Substances (EHS) subject to the emergency planning and release reporting requirements of Sections 302 and 304 of the Emergency Planning and Community Response Act of 1986 and of 40 CFR 355:

No listed chemicals

CERCLA Information: Releases to air, land, or water which exceed the reportable quantity must be reported to the National Response Center (800-424-8802).

This product contains the following chemical(s) subject to CERCLA reporting requirements:

<u>Component</u>	<u>CAS#</u>	<u>RQ</u>	<u>Wt %</u>
Xylene (Mixed Isomers)	1330-20-7	100	0.9%
n-Butyl Alcohol	71-36-3	5,000	0.8%
Ethyl Benzene	100-41-4	1,000	0.2%

Because this product is a mixture, the total amount released would need to exceed 11,111 pounds (1,322 gallons) before a reportable quantity of 100 pounds of Xylene was released. The total amount released would need to exceed 500,000 pounds (59,523 gallons) before a reportable quantity of 1,000 pounds of Ethyl Benzene was released. The total amount released would need to exceed 625,000 pounds (74,404 gallons) before a reportable quantity of 5,000 pounds of n-Butyl Alcohol was released.

CALIFORNIA PROP - 65

This product contains the following ingredient(s) known to the state of California to cause cancer, birth defects or other reproductive harm:

<u>Component</u>	<u>CAS#</u>	<u>Amount</u>
Ethyl Benzene	100-41-4	0.2%
Methanol	67-56-1	<910 ppm
Formaldehyde	50-00-0	<805 ppm

Additional Right-To-Know Composition Information

This product contains the following ingredients which appear on other hazardous substance or ingredient disclosure lists.

<u>Component</u>	<u>CAS#</u>	<u>Wt %</u>	<u>Lists</u>
Petroleum Naphtha (light)	68410-97-9	11.9%	CN, MA1, NJ1, NJ2 (F3), PA1, PA2 (E)
Isopropyl Acetate	108-21-4	10.4%	CN, MA1, NJ1, NJ2 (F3) PA1
Heptane	142-82-5	8.4%	CN, MA1, NJ1, NJ2 (F3), PA1, PA2 (E)
Ethyl Alcohol	64-17-5	5.8%	CN, MA1, MA2, NJ1, NJ2 (CA, MU, TE, F3), PA1
Xylene (Mixed Isomers)	1330-20-7	0.9%	CN, MA1, NJ1, NJ2 (F3), PA1, PA2 (E)
n-Butyl Alcohol	71-36-3	0.8%	CN, MA1, NJ1, NJ2 (CA,F3), PA1, PA2 (E)
n-Propyl Acetate	109-60-4	0.3%	CN, MA1, NJ1, NJ2(F3),PA1
Isopropyl Alcohol	67-63-0	0.3%	CN, MA1, MA2 (F9), PA1, PA2 (E)
Ethyl Benzene	100-41-4	0.2%	CN, MA1, MA2, NJ1, NJ2(F3), PA1, PA2 (E)
Methyl Alcohol	67-56-1	<0.1%	CN, MA1, MA2, NJ1, NJ2(F3), PA1, PA2 (E)
Formaldehyde	50-00-0	<0.1%	CN, MA1, MA2 (EC), NJ1, NJ2(CA,CO,MU,F4), PA1, PA2 (ES)

CN=Canadian Ingredient Disclosure List **MA1**=Massachusetts Hazardous Substances List **MA2**=Massachusetts Extraordinary Hazardous Substances List **NJ1**=New Jersey Workplace Hazardous Substances List **NJ2**=New Jersey Special Health Hazards List (NJ2 Category) **NL**=Not listed, Concentration Based Disclosure **PA1**=Pennsylvania Hazardous Substances List **PA2**=Pennsylvania Special Hazardous Substances List

15.2 CANADA

WHMIS: This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Domestic Substances List (DSL) Status: All components of this product are included on the Canadian DSL or NDSL lists.

15.3 EUROPEAN UNION

This safety datasheet has been prepared according to the requirements of Regulation (EC) No. 1907/2006 and 1272/2008. All solvent ingredients are listed on the REACH registry and the resin ingredients are pre-registered as per the requirements for polymers.

This product is a mixture of solvents and resins. Although it has not been tested as a mixture, the physical, acute, and chronic hazards are believed to be those of the solvent constituents, unless described otherwise in the procedure used to derive the classification. The published information for these constituents has been included in Section 3, Section 11, and Section 12. The resin is currently being evaluated in accordance with the established timelines and applicable data will be included when available.

15.4 EVALUATION OF HAZARDS**Procedure used to derive the classification:**

The known data for the for the hazardous constituents listed in Section 3 was evaluated to classify the mixture in accordance with the methods in 29 CFR 1910.1200, Appendices A and B and CLP Annex I, Part 3 and Part 4.

Based on the application of the bridging principles in Appendix A to 29 CFR 1910.1200 A.10.3.3.1 and Annex 1 of CLP1272/2008 section 3.10.3.3.1.1, the product was classified as "Aspiration Toxicity, Category 1" because it contains greater than 10% of a substance classified in Category 1 and the kinematic viscosity of the product at 40 °C is less than 20.5 mm²/s.

The product was not classified as a Carcinogen 1B or Mutagen 1B because the Petroleum Naphtha solvent used does not contain benzene. The product was classified as "suspected of causing cancer" because Ethyl Benzene (CAS 100-41-4) is listed as a carcinogen in category 2B by IARC.

Based on the application of the bridging principles in Appendix A to 29 CFR 1910.1200 A.3.4.3 and Annex 1 of CLP1272/2008 section 3.3.3.2, the product was not classified as causing serious eye damage category 1 because it contains less than 1% of category 1 constituents. The product was classified as causing serious eye irritation category 2A because it contains greater than 10% of a weighted combination of (10 x category 1 constituents) + category 2 constituents.

Based on the application of the bridging principles in Appendix A to 29 CFR 1910.1200 A.2.4 and Annex 1 of CLP1272/2008 section 3.2.3.2, the product was classified as "Skin Irritation, Category 2" because it contains greater than 10% of Category 2 constituents.

Based on the application of the bridging principles in Appendix A to 29 CFR 1910.1200 A.8.3.4.5 and Annex 1 of CLP1272/2008 section 3.8.3.4.5, the product was classified as causing specific target organ toxicity single exposure (category 3) because it contains greater than 20% of category 3 constituents.

Based on the application of the bridging principles in Annex 1 of CLP1272/2008 section 4.1.3.4 and Table 4.1.2, the product was not classified as an acute environmental hazard because it contains less than 25% of acute category 1 constituents. The product was classified as a chronic (long term) environmental hazard category 2 because it contains greater than 25% of a

weighted combination of (M x 10 x Chronic Category 1) + (Chronic Category 2) constituents.

SECTION 16 – Other information

Additional Hazard Classifications:

HMIS CLASSIFICATION

Health hazard	3
Flammability	3
Physical hazard	0
Protective equipment	G

NFPA RATING

Health hazard	2
Fire	3
Reactivity hazard	0

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Disclaimer:

To the best of our knowledge the information contained herein is accurate. However no liability is assumed for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein we cannot guarantee that these are the only hazards that exist.
