

## 1. Identification

<b>Product Information.</b>	908132800
<b>Product Name:</b>	Ramuc Type EP Epoxy - 328 Dawn Blue - Part A
<b>Recommended Use.</b>	Paints
<b>Uses advised against.</b>	Read label instructions and SDS
<b>Supplier.</b>	Modern Recreational Technologies, Inc. 2220 Highway 70 SE., Suite 100 Hickory, NC 28602 800-728-8258
<b>Emergency telephone number.</b>	Chemtrec: +1-800-424-9300 USA Chemtrec: +1 703-527-3887 ex-USA 24 hrs./day, 7 days/week

## 2. Hazards Identification

### GHS Classification in accordance with 29 CFR 1910.1200

Flammable Liquid, category 2  
Germ Cell Mutagenicity, category 2  
Carcinogenicity, category 2  
STOT, repeated exposure, category 2  
Acute Toxicity, Inhalation, category 4  
Skin Irritation, category 2  
Eye Irritation, category 2A  
Skin Sensitizer, category 1

### GHS Pictograms



### Signal Word

Danger

### Unknown Acute Toxicity

21.7% of the mixture consists of ingredient(s) of unknown acute toxicity

### HAZARD STATEMENTS

Highly flammable liquid and vapour.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
Harmful if inhaled.  
Suspected of causing genetic defects.  
Suspected of causing cancer.  
May cause damage to organs through prolonged or repeated exposure.

### Precautionary Statements - Prevention.

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, sparks, open flames, hot surfaces. No smoking.

Keep container tightly closed.  
 Ground/bond container and receiving equipment.  
 Use explosion-proof electrical/ventilating/lighting/equipment.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Do not breathe dust/fume/gas/mist/ vapors/spray.  
 Wash face and hands and any exposed skin thoroughly after handling.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves, protective clothing, eye protection, face protection

**Precautionary Statements - Response.**

If on skin: Wash with plenty of water.  
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 If exposed or concerned: Get medical advice/attention.  
 Call a poison center/doctor if you feel unwell.  
 Specific treatment (If applicable, see label for any additional instructions).  
 If skin irritation or rash occurs: Get medical advice/attention.  
 If eye irritation persists: Get medical advice/attention.  
 Take off contaminated clothing and wash it before reuse.  
 In case of fire: Use CO<sub>2</sub> dry chemical or foam to extinguish.

**Precautionary Statements - Storage.**

Store in a well-ventilated place. Keep cool.  
 Store locked up.

**Precautionary Statements - Disposal.**

Dispose of contents in accordance with local, regional, national, international regulations.

### 3. Composition/Information on Ingredients

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Wt. %</u>
Polymer of epoxy resin and bisphenol A	25036-25-3	25-50
Titanium Dioxide	13463-67-7	10-25
Barium Sulfate	7727-43-7	10-25
XYLENE	1330-20-7	10-25
Methyl isobutyl ketone	108-10-1	2.5-10
Butyl glycidyl ether	2426-08-6	2.5-10
Isopropyl alcohol	67-63-0	2.5-10
Ethyl Benzene	100-41-4	1.0-2.5
1-Butanol	71-36-3	1.0-2.5

The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. First-aid Measures

**Description of first-aid measures.****General advice.**

Move victim to a safe isolated area. When symptoms persist or in all cases of doubt seek medical advice.  
 Call a poison control center or doctor for treatment advice.

**Inhalation.**

Move to fresh air. Apply artificial respiration if victim is not breathing. Call a poison control center or doctor for treatment advice.

**Skin contact.**

Wash off immediately with soap and plenty of water. Remove all contaminated clothes and shoes. Remove and wash contaminated clothing before re-use. Call a poison control center or doctor for treatment advice.

**Eye contact.**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a poison control center or doctor for treatment advice.

**Ingestion.**

Do not induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. If swallowed, call a poison control center or doctor immediately.

**Symptoms.**

See Section 2 and Section 11, Toxicological effects for description of potential symptoms.

**Notes to physician.**

Treat symptomatically.

## 5. Fire-fighting Measures

**Extinguishing media.**

**Suitable extinguishing media.**

Use: Dry powder. Alcohol-resistant foam. Carbon dioxide (CO<sub>2</sub>). Water may be used to cool and prevent the rupture of containers that are exposed to the heat from a fire.

**Extinguishing media which shall not be used for safety reasons.**

Water may be unsuitable for extinguishing fires.

**Special hazards arising from the substance or mixture.**

Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Most vapors are heavier than air. Vapors may spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapors may travel to source of ignition and flash back. Air/vapor mixtures may explode when ignited. Containers may explode when heated.

**Advice for firefighters.**

Evacuate personnel to safe areas.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures.**

**Personal precautions.**

Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas. All equipment used when handling the product must be grounded. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear protective gloves/clothing and eye/face protection. Stop all work that requires a naked flame, stop all vehicles, stop all machines and equipment that may cause sparks or flames. Do not breathe vapors or spray mist. Avoid exceeding of the given occupational exposure limits (see section 8). Thoroughly decontaminate all protective equipment after use.

**Advice for emergency responders.**

Refer to protective measures listed in sections 7 and 8. Use personal protection recommended in Section 8.

**Environmental precautions.**

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological information.

**Methods and materials for containment and cleaning up.**

**Methods for Containment.**

Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. Ground and bond containers when transferring material. Take precautionary measures against static discharges. Use personal protective equipment. Remove all sources of ignition.

**Methods for cleaning up.**

Prevent further leakage or spillage if safe to do so. Keep away from open flames, hot surfaces and sources of ignition. Keep in suitable and closed containers for disposal. All equipment used when handling the product must be grounded. Keep combustibles (wood, paper, oil, etc) away from spilled material. Ventilate the area. Use personal protective equipment as required. Shut off ignition sources; including electrical equipment and flames. Clean contaminated objects and areas thoroughly while observing environmental regulations. Never return spills in original containers for re-use.

**Reference to other sections.**

See section 8 for more information.

**7. Handling and Storage****Conditions for safe storage, including any incompatibilities.****Advice on safe handling.**

Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Keep away from open flames, hot surfaces and sources of ignition. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose container to heat, flame, sparks, static electricity, or other sources of ignition. Wash hands before breaks and immediately after handling the product. All equipment used when handling the product must be grounded. Take precautionary measures against static discharges. Do not breathe vapors or spray mist. Use according to package label instructions. Ground and bond containers when transferring material.

**Hygiene measures.**

Handle in accordance with good industrial hygiene and safety practice for diagnostics. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**Storage Conditions.**

Keep container closed when not in use. Keep in properly labeled containers. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in accordance with local regulations. Keep from freezing. Keep away from food, drink and animal feedingstuffs. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**8. Exposure Controls/Personal Protection****Ingredients with Occupational Exposure Limits**

<u>Chemical Name</u>	<u>ACGIH TLV-TWA</u>	<u>ACGIH-TLV STEL</u>	<u>OSHA PEL-TWA</u>	<u>OSHA PEL-CEILING</u>
Titanium Dioxide	0.2 mg/m <sup>3</sup>	N.E.	15 mg/m <sup>3</sup>	N.E.
Barium Sulfate	5 mg/m <sup>3</sup>	N.E.	15 mg/m <sup>3</sup>	N.E.
XYLENE	20 ppm	N.E.	100 ppm	N.E.
Methyl isobutyl ketone	20 ppm	75 ppm	100 ppm	N.E.
Butyl glycidyl ether	3 ppm	N.E.	50 ppm	N.E.
Isopropyl alcohol	200 ppm	400 ppm	400 ppm	N.E.
Ethyl Benzene	20 ppm	N.E.	100 ppm	N.E.
1-Butanol	20 ppm	N.E.	100 ppm	N.E.

TLV = Threshold Limit Value TWA = Time Weighted Average PEL = Permissible Exposure Limit STEL = Short-Term Exposure Limit N.E. = Not Established

**Engineering Measures.**

Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits.

**Personal protective equipment.****Eye/Face Protection.**

If splashes are likely to occur, wear: Face-shield. Safety glasses with side-shields. Tightly fitting safety goggles.

**Skin and body protection.**

Use: Long sleeved clothing. Protective shoes or boots. Solvent-resistant gloves. Solvent-resistant apron and boots. Wear impervious gloves and/or clothing if needed to prevent contact with the material. Gloves must be inspected prior to use. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove and wash contaminated clothing before re-use.

**Respiratory protection.**

In case of inadequate ventilation wear respiratory protection. If exposure limits are exceeded or irritation is experienced, respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

**9. Physical and chemical properties.****Information on basic physical and chemical properties.**

Physical state	Liquid
Appearance	No Information
Color	Blue
Odor	Hydrocarbon-like
Odor Threshold	No Information
pH	No Information
Melting/freezing point., °C (°F)	No Information
Flash Point., °C (°F)	12 (53.60)
Boiling point/boiling range., °C (°F)	82 - 3,000 (179.6 - 5432)
Evaporation rate	No Information Available
Explosive properties.	No Information
Vapor pressure.	No Information
Vapor density.	No Information
Specific Gravity. (g/cm <sup>3</sup> )	1.377
Water solubility.	No Information
Partition coefficient.	No Information
Autoignition temperature., °C	No Information
Decomposition Temperature °C.	No Information
Viscosity, kinematic.	> 22 mm <sup>2</sup> /sec
<b>Other information.</b>	
Volatile organic compounds (VOC) content.	350 g/L
Density, lb/gal	11.467

## 10. Stability and Reactivity

### Reactivity.

Stable under normal conditions.

### Chemical stability.

Stable under recommended storage conditions.

### Possibility of hazardous reactions.

None known based on information supplied.

### Conditions to Avoid.

Heat (temperatures above flash point), sparks, ignition points, flames, static electricity. Keep away from heat and sources of ignition. Do not freeze.

### Incompatible Materials.

None known based on information supplied.

### Hazardous Decomposition Products.

Thermal decomposition can lead to release of irritating gases and vapours. Possible formation of carbon oxides, nitrogen oxides, and hazardous organic compounds.

## 11. Toxicological Information

### Information on toxicological effects.

Acute toxicity.

#### Product Information

No Information

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral)	8,426.0 mg/kg
ATEmix (dermal)	8,027.6 mg/kg
ATEmix (inhalation - dust/mist)	5.98 mg/l

#### Component Information.

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>LD50 Oral</u>	<u>LD50 Dermal</u>	<u>LC50 Inhalation</u>
13463-67-7	Titanium Dioxide	>10000 mg/kg Rat	N.I.	5.09 mg/L Rat (Dust)
1330-20-7	XYLENE	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat (Vapor)
108-10-1	Methyl isobutyl ketone	2080	3000	> 2000 ppm ( Rat ) 4 h (Vapor)
2426-08-6	Butyl glycidyl ether	2050 mg/kg Rat	788 mg/kg Rabbit	1030 ppm Rat (Gas/Mist)
67-63-0	Isopropyl alcohol	5840 mg/kg ( Rat )	13,900 mg/kg ( Rabbit )	N.I.
100-41-4	Ethyl Benzene	3500 mg/kg Rat	15400 mg/kg Rabbit	NA (Dust)
71-36-3	1-Butanol	700 mg/kg Rat	3402 mg/kg Rabbit	>8000 ppm Rat (Gas/Mist)

N.I. = No Information

### Skin corrosion/irritation.

SKIN IRRITANT.

### Eye damage/irritation.

No Information

### Respiratory or skin sensitization.

No Information

### Ingestion.

May be harmful if swallowed.

### Germ cell mutagenicity.

No Information

### Carcinogenicity.

No Information

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>IARC</u>	<u>NTP</u>	<u>OSHA</u>
13463-67-7	Titanium Dioxide	IARC Group 2B	-	-
1330-20-7	XYLENE	IARC Group 3	-	-
108-10-1	Methyl isobutyl ketone	IARC Group 2B	-	-
2426-08-6	Butyl glycidyl ether	IARC Group 2B	-	-
100-41-4	Ethyl Benzene	IARC Group 2B	-	-

### Reproductive toxicity.

No Information

### Specific target organ systemic toxicity (single exposure).

No Information

### Specific target organ systemic toxicity (repeated exposure).

May cause damage to organs through prolonged or repeated exposure.

### Aspiration hazard.

No Information

### Primary Route(s) of Entry

No Information

## 12. Ecological Information

### Toxicity.

69.57% of the mixture consists of ingredient(s) of unknown aquatic toxicity

### Ecotoxicity effects.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
XYLENE 1330-20-7	-	LC50 96 h Pimephales promelas 13.4 mg/L, LC50 96 h Oncorhynchus mykiss 2.661 - 4.093 mg/L, LC50 96 h Oncorhynchus mykiss 13.5 - 17.3 mg/L, LC50 96 h Lepomis macrochirus 13.1 - 16.5 mg/L, LC50 96 h Lepomis macrochirus 19 mg/L, LC50 96 h Lepomis macrochirus 7.711 - 9.591 mg/L, LC50 96 h Pimephales promelas 23.53 - 29.97 mg/L, LC50 96 h Cyprinus carpio 780 mg/L, LC50 96 h Cyprinus carpio >780 mg/L, LC50 96 h Poecilia reticulata 30.26 - 40.	EC50 48 h water flea 3.82 mg/L, LC50 48 h Gammarus lacustris 0.6 mg/L
Methyl isobutyl ketone 108-10-1	EC50 96 h Pseudokirchneriella subcapitata 400 mg/L	LC50 96 h Pimephales promelas 496 - 514 mg/L	EC50 48 h Daphnia magna 170 mg/L
Isopropyl alcohol 67-63-0	EC50 96 h Desmodosmus subspicatus >1000 mg/L, EC50 72 h Desmodosmus subspicatus >1000 mg/L	LC50 96 h Pimephales promelas 9640 mg/L, LC50 96 h Pimephales promelas 11130 mg/L, LC50 96 h Lepomis macrochirus >1400000 µg/L	EC50 48 h Daphnia magna 13299 mg/L
Ethyl Benzene 100-41-4	EC50 72 h Pseudokirchneriella subcapitata 4.6 mg/L, EC50 96 h Pseudokirchneriella subcapitata >438 mg/L, EC50 72 h Pseudokirchneriella subcapitata 2.6 - 11.3 mg/L, EC50 96 h Pseudokirchneriella subcapitata 1.7 - 7.6 mg/L	LC50 96 h Oncorhynchus mykiss 11.0 - 18.0 mg/L, LC50 96 h Oncorhynchus mykiss 4.2 mg/L, LC50 96 h Pimephales promelas 7.55 - 11 mg/L, LC50 96 h Lepomis macrochirus 32 mg/L, LC50 96 h Pimephales promelas 9.1 - 15.6 mg/L, LC50 96 h Poecilia reticulata 9.6 mg/L	EC50 48 h Daphnia magna 1.8 - 2.4 mg/L
1-Butanol 71-36-3	EC50 96 h Desmodosmus subspicatus >500 mg/L, EC50 72 h Desmodosmus subspicatus >500 mg/L	LC50 96 h Pimephales promelas 1730 - 1910 mg/L, LC50 96 h Pimephales promelas 1740 mg/L, LC50 96 h Lepomis macrochirus 100000 - 500000 µg/L, LC50 96 h Pimephales promelas 1910000 µg/L	EC50 48 h Daphnia magna 1983 mg/L, EC50 48 h Daphnia magna 1897 - 2072 mg/L

### Persistence and degradability.

No data are available on the product itself.

### Bioaccumulative potential.

Discharge into the environment must be avoided.

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>log POW</u>
1330-20-7	XYLENE	2.77 - 3.15
108-10-1	Methyl isobutyl ketone	1.9
67-63-0	Isopropyl alcohol	0.05
100-41-4	Ethyl Benzene	3.6
71-36-3	1-Butanol	1

### Mobility in soil.

No information

### Other adverse effects.

No information

## 13. Disposal Considerations

### Waste Disposal Guidance.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport Information

### DOT

Shipping Name: Paint  
 Hazard Class: 3  
 UN/NA Number: 1263  
 Packing Group: II

**Additional Information:** LTD QTY EXCEPTION: This product may be reclassified as "limited quantity" per 49 CFR 173.150 (b)(2) and 49 CFR 172 Special Provision 149 and thus is exempt from labeling requirements when transported within the U.S. by motor vehicle or rail only. This exception applies as long as it is packaged with strong outer packaging and with inner packagings not over 1.0 L (0.3 gallons) net capacity each.

### IMDG

Proper Shipping Name: Paint  
 Hazard Class: 3  
 UN Number: UN1263  
 Packing Group: II

### IATA

Proper Shipping Name: UN1263, Paint  
 Hazard Class: 3  
 Packing Group: II

## 15. Regulatory Information

### International Inventories:

TSCA	Complies
DSL	-
DSL/NDSL	-
EINECS/ELINCS	-
ENCS	-
IECSC	-
KECI	-
PICCS	-
AIIC	-
NZIoC	-

### TCSI

TSCA	United States Toxic Substances Control Act Section 8(b) Inventory.
DSL	Canadian Domestic Substances List.
DSL/NDSL	Canadian Domestic Substances List/Canadian Non-Domestic Substances List
EINECS/ELINCS	European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances.
ENCS	Japan Existing and New Chemical Substances.
IECSC	China Inventory of Existing Chemical Substances.
KECL	Korean Existing and Evaluated Chemical Substances.
PICCS	Philippines Inventory of Chemicals and Chemical Substances.
AIIC	Australian Inventory of Chemical Substances.
NZIoC	New Zealand Inventory of Chemicals.
TCSI	Taiwan Chemical Substance Inventory



**U.S. Federal Regulations:****SARA SECTION 313:**

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372: .

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Weight Percent</u>
Barium Sulfate	7727-43-7	10-25
XYLENE	1330-20-7	10-25
Methyl isobutyl ketone	108-10-1	2.5-10
Isopropyl alcohol	67-63-0	2.5-10
Ethyl Benzene	100-41-4	1.0-2.5
1-Butanol	71-36-3	1.0-2.5

**TOXIC SUBSTANCES CONTROL ACT 12(b):**

This product does not contain any chemicals that are subject to the reporting requirements of TSCA 12(b).

**ADDITIONAL INFORMATION**

Additional Information - Sxn 15: No Information

**CALIFORNIA PROPOSITION 65 CARCINOGENS****WARNING**

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

<u>Chemical Name</u>	<u>CAS-No.</u>
Titanium Dioxide	13463-67-7
Methyl isobutyl ketone	108-10-1
Butyl glycidyl ether	2426-08-6
Ethyl Benzene	100-41-4
Crystalline silica (Quartz) (Respirable)	14808-60-7
Benzene, (1-methylethyl)-	98-82-8
Benzene	71-43-2

**CALIFORNIA PROPOSITION 65 REPRODUCTIVE TOXINS****WARNING**

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

<u>Chemical Name</u>	<u>CAS-No.</u>
Methyl isobutyl ketone	108-10-1
Toluene	108-88-3
Benzene	71-43-2

**NOTICE**

Constituents of this product may include crystalline silica which, if inhalable, may cause silicosis, a form of progressive pulmonary fibrosis. Inhalable crystalline silica is listed by IARC as a group I carcinogen (lung) based on sufficient evidence in occupationally exposed humans and sufficient evidence in animals. Crystalline silica is also listed by the NTP as a known human carcinogen. Constituents may also contain asbestiform or non-asbestiform tremolite or other silicates as impurities, and above de minimis exposure to these impurities in inhalable form may be carcinogenic or cause other serious lung problems.

**16. Other Information**

**Revision Date:** 8/8/2023 **Supersedes Date:** 12/13/2021

**Reason for revision:** Substance and/or Product Properties Changed in Section(s):

01 - Product Information  
 02 - Hazards Identification  
 03 - Composition/Information on Ingredients  
 08 - Exposure Controls/Personal Protection  
 09 - Physical & Chemical Information  
 12 - Ecological Information  
 15 - Regulatory Information  
 Revision Statement(s) Changed

**Datasheet produced by:** Regulatory Department

**HMIS Ratings:**

<b>Health:</b>	2*	<b>Flammability:</b>	4	<b>Physical Hazard:</b>	0	<b>Personal Protection:</b>	X
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**NFPA Ratings:**

<b>Health:</b>	2	<b>Flammability:</b>	4	<b>Instability:</b>	0	<b>Physical &amp; Chemical:</b>	---
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Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined, N.I. - No Information

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.