

Safety Data Sheet (SDS)

1. Identification

PRODUCT NAME: EMECOLE 322, PART A

SYNONYM:

CHEMICAL FAMILY: Urethane Prepolymers

MANUFACTURER / SUPPLIER: EMECOLE

50 E. Montrose Dr.,
Romeoville, IL 60446
info@emecole.com

EMERGENCY TELEPHONE: Contact InfoTrac 1-800-535-5053

OUTSIDE U.S. and CANADA: Contact InfoTrac 1-353-323-3500

NOTE: InfoTrac emergency number is to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

2. Hazard(s) Identification

Skin Contact: Prolonged or repeated exposure may cause skin irritation and redness. Skin sensitization or allergic reaction (contact dermatitis) may occur in some individuals.

Eye Contact: Following contact irritation will take place

Ingestion: Probable oral toxicity, LD₅₀ (rat), >10g/kg. Irritation of the mouth, pharynx, esophagus and stomach can develop upon ingestion.

Inhalation: No known health information on inhalation of vapors. Vapors and aerosols probably affect respiratory tract. MDI can induce respiratory irritation with asthma-like symptoms. These symptoms may be immediate or delayed up to several hours after exposure. There are reports that long-term exposure may result in decreased lung function.

Precautionary Statements: Do not handle until all safety precautions have been read and understood. Do not breathe vapors. In case of inadequate ventilation wear respiratory protection. Wear protective gloves and eye protection. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Store locked up. Keep away from children. Dispose of contents and container in accordance with applicable local, regional and national regulations.

Signal Word: WARNING



Signal Word: DANGER

Hazard Statement : Chronic: As a result of previous repeated overexposure or a single large dose, certain individuals develop isocyanine sensitization (chemical asthma) or tissue injury in the upper respiratory tract. Animal tests indicate skin contact alone may also lead to allergic respiratory reaction. These effects may be permanent. Any person developing asthmatic reaction or other sensitization should be removed from further exposure.

Other Effects of Overexposure: In a recently completed study, groups of rats were exposed for 6 hours/day, 5 days/week for a lifetime to atmospheres of respirable polymeric MDI aerosol. Tumor incidence, both benign and malignant, and the number of animals with tumors were not different from controls. There were no lung tumors at 1 mg/m³ and no effects at .2 mg/m³. However, at the top level only of 6 mg/m³ there was a significant incidence of a benign tumor of the lung (adenoma) and one malignant tumor (adenocarcinoma). The increased incidence for lung tumors is associated with the prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung that was observed throughout the study.

Carcinogenicity: In order to comply with California Proposition 65, we feel obligated to advise that some of our products may conceivably contain trace contaminants of some of the listed chemicals. While not necessarily added to our products as ingredients, some listed chemicals may be present in the raw materials from suppliers and over which we have no control. Therefore, even though some of the listed substances may not be present, a significant risk as defined by the regulations in order to comply with California law, we feel obligated to make the following statement:

Warning: Our products may contain trace amounts of some chemicals considered by the State of California to be carcinogens or reproductive toxicants.

3. Composition / Information on Ingredients

INGREDIENT	% BY WEIGHT	TLV	PEL	CAS #
Diphenylmethane 4.4' disocyanate, MDI	25-30	.005 ppm.	.02 ppm	101-68-8
Other ingredients not precisely identified are proprietary or non hazardous as defined in 29 CFR 1910.1200.				

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4. First Aid Measures

Eyes: Open lids wide and flush with large quantities of water for at least 15 minutes. Seek medical attention, preferably an eye specialist.

Skin: Wash with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse, discard shoes. Consult a physician if irritation develops.

Ingestion: Drink no more than 2 glasses of water and induce vomiting by administering 2 tablespoons of ipecac syrup or by touching finger to back of victim's throat. Keep victim's head below hips while vomiting. Consult physician

Inhalation: Remove the patient from the contaminated area to fresh air. Administer oxygen or artificial respiration as needed. Call a physician if after effects occur.

5. Fire Fighting Measures

Flash Point: > 230 °F (SETAFLASH CC)

Auto Ignition Temperature: N/D

Limits of Flammability: LEL – N/D UEL – N/D

Fire Degradation Products: Toxic fumes are released in fire situations. Acrid smoke/fumes

Extinguishing Media: Carbon dioxide, dry chemicals, foam and water fog.

Special Fire & Unusual Hazards: Self-contained respirator equipment and full protective clothing are required when smoke and fumes are generated. If water is used, use very large quantities. A very vigorous reaction may take place between water and the hot product. Water contamination will produce gas (carbon dioxide). Do not reseal contaminated containers as pressure buildup may rupture them.

Explosion Hazards: Do not reseal contaminated containers as pressure buildup may rupture them.

6. Accidental Release Measures

Spill: Wear skin, eye and respiratory protection during cleanup. All operations should be performed by personnel familiar with the hazards of the chemicals used. Soak up material with absorbent and shovel into waste container. Cover, but do not seal waste container and remove from work area. Make decontamination solution of .5% liquid detergent and 5% ammonium hydroxide or 7% sodium carbonate in water. Treat spill area with decontamination solution, using about 10 parts for each part of spilled material and allow to react for 10 minutes. Carbon dioxide will form, leaving insoluble polymer material. Wash residue into sewer, observing local regulation of discharging insoluble polymer materials.

Disposal: Any disposal practice must be in compliance with all federal, state and local laws and regulations. Personal must be properly protected from inhalation of Isocyanate vapors and trained to handle decontamination operation. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance is the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.

7. Handling and Storage

Storage: Store in tightly sealed containers. Store in a cool, dry, well ventilated area away from heat and open flame. Protect from moisture. Do not allow freezing.

Handling: Avoid contact with skin, eyes, and clothing. Do not take internally. Use personal protective equipment when transferring material to or from drums, totes or other containers. Safety glasses and gloves are the minimum protection. Additional precautions must be used when splash hazards are present.

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8. Exposure Controls / Personal Protection

Respiratory Protection: Avoid breathing vapors. Use adequate ventilation. If material is sprayed or heated and airborne concentrations exceed or are expected to exceed the TLV, use MSHA/NIOSH approved respirator with full face piece or an air supplied hood.

Ventilation: Good mechanical ventilation and local exhaust.

Protective Gloves: Rubber or polyethylene.

Eye Protection: Chemical splash goggles or safety glasses.

Protective Clothing: Wear impervious clothing and gloves. Materials may include butyl rubber or neoprene rubber. Wash contaminated clothing before reuse.

Protective Equipment: Disposable containers and paper on work area. Use of barrier cream recommended. Use appropriate equipment to prevent eye or skin contact.

9. Physical and Chemical Properties

VP: N/D @ 20C

VD: N/D

SP GR: 1.32 (water = 1)

% Volatile: Negligible

Boiling Point: > 400 °F

Flash Point: > 230 °F (SETAFLASH CC)

Color: White paste

Odor: Mild

Solubility: Minimal

Evaporation Rate: <1 (butyl acetate = 1)

Explosive Limits: LEL – N/D UEL – N/D

10. Stability and Reactivity

Stability: This product must be mixed with another component or water (moisture) to react. Excessive heat, fumes, and foam generation can occur if improperly handled. Not sensitive to mechanical impact..

Reactivity: Incompatibility Materials to Avoid: Strong acids, strong bases. Amines, mercaptans, polyols, water and metal compounds may initiate possible hazardous reactions.

Hazardous Decomposition Products: Carbon monoxide and dioxide, nitrogen oxides, ammonia. Trace amounts of hydrogen cyanide.

Hazardous Polymerization: May occur if product is not handled per instruction.

11. Toxicological Information

Toxicological Data: Diphenylmethane 4.4' disocyanate, MDI

Oral LD(50): (rat) > 10 g/kg

Primary Routes of Entry: skin contact **Routes of Entry:** Inhalation, skin contact, eyecontact, iingestion.

Exposure: MDI contains reactive isocyanate groups. Use with adequate ventilation to keep airborne isocyanate level below TLV or 0.005 ppm TWA (ACGIH) and PEL 0.02 ppm ceiling (OSHA). These control limits do not apply to previously sensitized individuals or to individuals with existing respiratory disease, such as bronchitis, emphysema or asthma. Respiratory protection may be needed where material is heated, sprayed or used in confined space, or if TLV is exceeded. Never try to detect MDI vapor by odor. Persons with known respiratory or allergic problems must not be exposed to this product. **Other Effects of Overexposure:** In a recently completed study, groups of rats were exposed for 6 hours/day, 5 days/week for a lifetime to atmospheres of respirable polymeric MDI aerosol. Tumor incidence, both benign and malignant, and the number of animals with tumors were not different from controls. There were no lung tumors at 1 mg/m³ and no effects at .2 mg/m³. However, at the top level only of 6 mg/m³ there was a significant incidence of a benign tumor of the lung (adenoma) and one malignant tumor (adenocarcinoma). The increased incidence for lung tumors is associated with the prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung that was observed throughout the study.

Carcinogenic Categories:

NTP: Not classified as a carcinogen

IARC: Not classified as a carcinogen

OSHA: Not classified as a carcinogen

12. Ecological Information

Comments: No information on this product as a whole.

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13. Disposal Considerations

Disposal: Any disposal practice must be in compliance with all federal, state and local laws and regulations. Personal must be properly protected from inhalation of Isocyanate vapors and trained to handle decontamination operation. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance is the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.

Refer to RCRA 4 CFR 261 and/or any other appropriate federal, state or local requirements for proper classification information.

Container Disposal: Drums/containers should be decontaminated and either passed to an approved drum recycler or destroyed.

RCRA/EPA Waste Information: The generation of waste should be avoided or minimized whenever possible. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways.

14. Transport Information

DOT (Domestic surface): Shipping name; Diphenylmethane 4,4' diisocyanate mixture. Not regulated (Class 55)

IMO (Ocean): Not restricted. **RQ (Reportable quantity)** = 7000 lbs

ICAO (AIR): Not restricted.

15. Regulatory Information

OSHA Status: This product is hazardous under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.

TSCA Status: All ingredients are on the TSCA inventory

CERCLA Reportable Quantity: 4,4, Diphenylmethane Diisocyanate = RQ of 5,000 lbs - RQ for spill is 7000 lbs. - Any spill or release above the RQ must be reported to the National Responce Center (800-424-8802)

SARA Title III :

Section 311/312 Hazard Categories: Acute, Chronic Sensitizing substance

Section 313 Toxic Chemicals: Diisocyanate Compounds

RCRA Status: MDI is not a hazardous waste. Under RCRA, it is the responsibility of the product user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste (40 CFR 261.20-24)

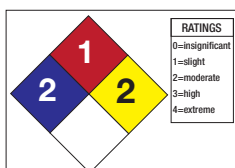
16. Other Information

Other precautions: Avoid breathing vapors, use with good ventilation. Wash hands thoroughly with soap and water after every use.

All statements, technical information and recommendations contained herein are based upon available scientific test or data which we believe to be reliable since we cannot anticipate all conditions under which this information and our products or the products of other manufacturers in combination with our products may be used. Emecole makes no warranties, express or implied, and assumes no responsibility in connection with any use of this information.

Personal Protection: C

NFPA Ratings:



HMIS Ratings:



Safety Data Sheet (SDS)

1. Identification

PRODUCT NAME: EMECOLE 322, PART B
SYNONYM:
CHEMICAL FAMILY: Amine Blend
MANUFACTURER / SUPPLIER: EMECOLE
 50 E. Montrose Dr.,
 Romeoville, IL 60446
 info@emecole.com
EMERGENCY TELEPHONE: Contact InfoTrac 1-800-535-5053
OUTSIDE U.S. and CANADA: Contact InfoTrac 1-353-323-3500

NOTE: InfoTrac emergency number is to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

2. Hazard(s) Identification

Signal Word: WARNING



Inhalation: Due to low vapor pressure of this product, fumes will be minimal below 90 °F. At higher temperatures, fumes will be irritating.

Skin Contact: Exposure may cause moderate irritation. (see below)

Eye Contact: Can cause severe burns, irritation, redness, tearing or blurred vision.

Ingestion: Slightly toxic. CAS 5285-60-9 Oral LD(50): (rat) 1.4 g/kg

Precautionary Statements: Do not handle until all safety precautions have been read and understood. Do not breathe vapors. In case of inadequate ventilation wear respiratory protection. Wear protective gloves and eye protection. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Store locked up. Keep away from children. Dispose of contents and container in accordance with applicable local, regional and national regulations.

Signal Word: DANGER



Hazard Statements:

Overexposure may cause burns to skin and eyes.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Acute: Prolonged or repeated exposure may cause severe burns to skin. Can cause skin allergic reaction. Draize skin score from 24 hr contact, 2.8.

Chronic: Unknown

Carcinogenicity: In order to comply with California Proposition 65, we feel obligated to advise that some of our products may conceivably contain trace contaminants of some of the listed chemicals. While not necessarily added to our products as ingredients, some listed chemicals may be present in the raw materials from suppliers and over which we have no control. Therefore, even though some of the listed substances may not be present, a significant risk as defined by the regulations in order to comply with California law, we feel obligated to make the following statement:

Warning: Our products may contain trace amounts of some chemicals considered by the State of California to be carcinogens or reproductive toxicants.

3. Composition / Information on Ingredients

INGREDIENT	% BY WEIGHT	TLV	STEL	PEL	CAS #
N,N-Dialkyldiphenyl methane	< 50	N/E	N/E	N/E	5285-60-9
Treated fumed silica	< 9	N/E	N/E	N/E	67762-90-7
Quartz (fine fraction)	< 0.5	N/E	N/E	N/E	14808-60-7
Alkyl phthalates (c6-c13)	< 50	N/E	N/E	N/E	None
Carbon black	< 0.1	N/E	N/E	N/E	1333-86-4
Chlorite-group minerals	< 0.1	N/E	N/E	N/E	1318-59-8

(N/E = Established)

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4. First Aid Measures

Eyes: Open lids wide and flush with water and/or 1% boric acid for at least 30 minutes. Seek immediate medical attention.

Skin: Apply generous amounts of waterless hand cleaner to affected area. Rub briskly and remove with paper towel or rag. Repeat process. Then wash skin with mild soap and rinse with water for at least 15 minutes. Wash contaminated clothing and destroy leather goods. Seek medical attention if irritation persists.

Ingestion: Do Not Induce vomiting. Get immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquids into lungs. Do not give anything by mouth to an unconscious person.

Inhalation: Remove the patient from the contaminated area to fresh air. Administer oxygen or artificial respiration as needed. Seek immediate medical attention.

5. Fire Fighting Measures

Flash Point: > 200 °F (PMCC)

Flammable Limits: Unknown

Extinguishing Media: Carbon dioxide, foam, dry chemical and water fog

Unusual Fire and Unusual Hazards: Self-contained respirator equipment and full protective clothing are required when smoke and fumes are generated. Fire may produce irritating and poisonous fumes such as carbon monoxide and nitrous oxides. Electrical grounding is not recommended.

6. Accidental Release Measures

Spill or Leaks: Absorb with dry chemical absorbent, earth, sand or any other inert material. Wear proper personal protective equipment. Place in a chemical waste container for proper disposal. Flush contaminated areas with water and diluted acetic acid

Disposal: Any disposal practice must be in compliance with all federal, state and local laws and regulations. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance is the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.

7. Handling and Storage

Storage: Store in tightly sealed containers. Store in a cool, dry, well ventilated area away from heat and open flame. Protect from moisture. Do not allow to freeze.

Handling: Avoid contact with skin, eyes, and clothing. Do not take internally. Use personal protective equipment when transferring material to or from drums, totes or other containers. Safety glasses and gloves are the minimum protection. Additional precautions must be used when splash hazards are present.

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8. Exposure Controls / Personal Protection

Respiratory Protection: Avoid breathing vapors. Use adequate ventilation. aWear respirator protection wherever airborne concentrations exceed TLV ceilings or TWA. Confined rooms are areas where concern for TLV's is especially important. Regulation CFR 29 1910.134 for recommended respiratory protection.

Ventilation: Ventilation is recommended. Air movement must be designed to insure turnover at all locations in the work area to avoid build up of heavy vapors.

Protective Gloves: Rubber or impervious gloves recommended.

Eye Protection: Safety glasses or chemical splash goggles if splashing is anticipated.

Protective Clothing: Wear impervious clothing and gloves. Materials may include butyl rubber, nitrile rubber, neoprene and Saranex coated Tyvek.

9. Physical and Chemical Properties

VP @ 20C: < .1 mm Hg

VD: Not determined (air = 1)

Color: Black

Odor: Ammoniacal

Solubility In Water: Negligible

Evaporation Rate: N/D

SP GR: 1.0

% Volatile: Negligible

Boiling Point: >300 °F

Appearance: Paste

Flash Point: > 200 °F (PMCC)

N/D = not determined

10. Stability and Reactivity

Stability: Stable. This product must be missed with another component to react. Not sensitive to mechanical impact

Reactivity: Incompatibility Materials to Avoid: Strong oxidizing agents, acids, epoxy resins, isocyanates, and organic peroxides may result in violent reaction.

Hazardous Decomposition Products: Carbon monoxide and dioxide, nitrogen oxides, aldehydes and various hydrocarbons from incomplete combustion.

Hazardous Polymerization: Will not occur unless product is mixed with epoxy resins, isocyanates or urethane prepolymers

11. Toxicological Information

Toxicological Data: N,N-Dialkyldiphenyl methane - Glyceryl-polyoxypropylenetriamine

Ingestion: Slightly toxic by ingestion. CAS 5285-60-9 ORAL LD50 1380 mg/kg Species: Rat

Dermal: CAS 5285-60-9 LD50 3090 mg/kg Species: Rabbit

Routes of Entry: Dermal, inhalation.

Skin: Prolonged or repeated exposure to skin may cause a severe burn. May result in an allergic reaction. Skin sensitizer. Draize skin score for 24 hour contact, 2.8.

Eyes: Contact can cause severe burns, or blurred vision.

Chronic: None known.

12. Ecological Information

Comments: No information.

Safety Data Sheet (SDS)

13. Disposal Considerations

Disposal: Any disposal practice must be in compliance with all federal, state and local laws and regulations. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance is the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.

Refer to RCRA 4 CFR 261 and/or any other appropriate federal, state or local requirements for proper classification information.

Container Disposal: Drums/containers should be decontaminated and either passed to an approved drum recycler or destroyed.

RCRA/EPA Waste Information: The generation of waste should be avoided or minimized whenever possible. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways.

14. Transport Information

DOT (Domestic surface): Shipping name; Compound resin. Not regulated (Class 55)

IMO (Ocean): Not restricted.

ICAO (AIR): Not restricted.

15. Regulatory Information

TSCA Status: Included on inventory (all ingredients are in compliance)

SARA Title: III (40 CFR 370)

Section 311/312 Hazard Categories: Acute

Section 313 Toxic Chemicals: NA (313 reportable ingredients: None)

WHMIS: Toxic material, corrosive material

Carcinogenic Categories:

NTP: Not classified as a carcinogen **IARC:** Not classified as a carcinogen **OSHA:** Not classified as a carcinogen

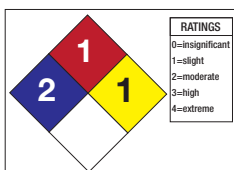
RCRA Status: Under RCRA, it is the responsibility of the product user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste (40 CFR 261.20-24)

16. Other Information

All statements, technical information and recommendations contained herein are based upon available scientific test or data which we believe to be reliable since we cannot anticipate all conditions under which this information and our products or the products of other manufacturers in combination with our products may be used. Emecole makes no warranties, express or implied, and assumes no responsibility in connection with any use of this information.

Personal Protection: C

NFPA Ratings:



HMIS Ratings:

