

# Safety Data Sheet

## Edemaco

SDS Revision Date:

01/25/2014



### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

<b>Product Identity</b>	Edemaco
<b>Alternate Names</b>	Arterial Co-Injection Chemical

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

<b>Intended use</b>	Arterial Co-Injection Chemical
<b>Application Method</b>	See Technical Data Sheet.

#### 1.3. Details of the supplier of the safety data sheet

<b>Company Name</b>	The Dodge Company, Inc 9 Progress Road Billerica, MA 01821
<b>Emergency</b>	
<b>CHEMTREC (USA)</b>	(800) 424-9300
<b>Customer Service</b>	
<b>The Dodge Company, Inc</b>	(800) 443-6343, (978) 600-2099

### 2. Hazard identification of the product

#### 2.1. Classification of the substance or mixture

Flam. Liq. 1;H224	Extremely flammable liquid and vapor.
Acute Tox. 4;H302	Harmful if swallowed.
Skin Corr. 1B;H314	Causes severe skin burns and eye damage.
Eye Dam. 1;H318	Causes serious eye damage.
Skin Sens. 1;H317	May cause an allergic skin reaction.
Resp. Sens. 1;H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT SE 1;H370	Causes damage to organs.
Aquatic Chronic 2;H411	Toxic to aquatic life with long lasting effects.

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### 2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



### Danger

H224 Extremely flammable liquid and vapor.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.

H370 Causes damage to organs.

H411 Toxic to aquatic life with long lasting effects.

#### [Prevention]:

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P241 Use explosion-proof electrical / ventilating / light / equipment.

P260 Do not breathe mist / vapors / spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

P285 In case of inadequate ventilation wear respiratory protection.

#### [Response]:

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P307+311 IF exposed: Call a POISON CENTER or doctor / physician.

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P310 Immediately call a POISON CENTER or doctor / physician.

P321 Specific treatment (see information on this label).

P333+313 If skin irritation or a rash occurs: Get medical advice / attention.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P341 If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342 If experiencing respiratory symptoms:

P363 Wash contaminated clothing before reuse.

P370+378 In case of fire: Use alcohol resistant foam, CO<sub>2</sub>, powder, water spray for extinction. Do not use water jet.

P391 Collect spillage.

### [Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

### [Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

## 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Glutaraldehyde CAS Number: 0000111-30-8	10 - 25	Acute Tox. 3;H331 Acute Tox. 3;H301 Skin Corr. 1B;H314 Resp. Sens. 1;H334 Skin Sens. 1;H317 Aquatic Acute 1;H400	[1][2]
Methanol CAS Number: 0000067-56-1	10 - 25	Flam. Liq. 2;H225 Acute Tox. 3;H331 Acute Tox. 3;H311 Acute Tox. 3;H301 STOT SE 1;H370	[1][2]
Sodium citrate CAS Number: 0000068-04-2	1.0 - 10		[1]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

\*The full texts of the phrases are shown in Section 16.

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### 4. First aid measures

#### 4.1. Description of first aid measures

##### General

Move victim to fresh air.  
Call 911 or emergency medical service.  
Give artificial respiration if victim is not breathing.  
Administer oxygen if breathing is difficult.  
Remove and isolate contaminated clothing and shoes.  
In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.  
Wash skin with soap and water.  
In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.  
Keep victim warm and quiet.  
Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

##### Inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

##### Eyes

Irrigate copiously with clean fresh water for at least 15 minutes, holding the eyelids apart and seek medical attention.

##### Skin

Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. Shower and wash with soap and water. Keep victim warm and quiet.

##### Ingestion

**If chemical is swallowed, Call Physician Or Poison Control Center For Most Current Information. Ingestion is life threatening.**

Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow.

Victims Of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS with victim to health professional.

#### 4.2. Most important symptoms and effects, both acute and delayed

##### Overview

Acute: Severe irritation of the tissue that had contact with the product (skin, eyes, mucous membranes). Drowsiness, fatigue, confusion may be experienced after inhalation or ingestion of the material.

Chronic: Methanol is eliminated slowly from the body. Therefore repeated exposures may build up to toxic levels in body tissues. Animal studies shows long term exposures to Methanol damages the CNS, kidneys or liver, skin disorders, and birth defects.

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Symptoms of Over Exposure by Route of Exposure: Methanol may be harmful if swallowed, inhaled, or injected into skin. Methanol can cause skin and eye irritation or damage. Methanol can be very irritating to mucous membranes and the respiratory tract.

Inhalation: Inhalation of Methanol vapors may lead to irritation of the nose and throat. Symptoms of overexposure may include dizziness, coughing, headache, dyspnea, lachrymation, nausea and vomiting. Exposure to high concentrations of this material vapor may cause unconsciousness or death.

Primary Routes of Entry: Inhalation, skin contact, eyes, ingestion.

Target Organs: CNS, eyes, circulatory and respiratory systems.

Contact With Skin or Eyes: Methanol is an eye and skin irritant. Splashes in the eye may cause eye irritation, redness, tearing, and temporary corneal damage or blindness.

Skin Absorption: Methanol is absorbed through the skin and may result in effects similar to inhalation exposure.

Ingestion: Ingestion of one to four ounces of Methanol can cause irreversible damage to the nervous system, blindness, or death. It cannot be made non-poisonous. Aspiration of the material into the lungs can cause chemical pneumonitis.

Injection: Injection of Methanol can lead to redness and irritation of the surrounding tissue. See section 2 for further details.

### Inhalation

Causes damage to organs. May cause allergy or asthma symptoms of breathing difficulties if inhaled.

### Eyes

Causes serious eye damage.

### Skin

May cause an allergic skin reaction. Causes severe skin burns and eye damage.

### Ingestion

Harmful if swallowed.

## 5. Fire-fighting measures

### 5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO<sup>2</sup>, powder, water spray.  
Do not use; water jet.

### 5.2. Special hazards arising from the substance or mixture

Carbon Monoxide and Carbon Dioxide

Keep away from heat / sparks / open flames / hot surfaces - No smoking.

Use explosion-proof electrical / ventilating / light / equipment.

Do not breathe mist / vapors / spray.

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### 5.3. Advice for fire-fighters

Wear positive pressure self-contained breathing apparatus (SCBA).  
Structural firefighters' protective clothing will only provide limited protection.  
HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.  
Vapors may form explosive mixtures with air.  
Vapors may travel to source of ignition and flash back.  
Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).  
Vapor explosion hazard indoors, outdoors or in sewers.  
Those substances designated with a **(P)** may polymerize explosively when heated or involved in a fire.  
Runoff to sewer may create fire or explosion hazard.  
Containers may explode when heated.  
Many liquids are lighter than water.  
Substance may be transported hot.  
For UN3166, if Lithium ion batteries are involved, also consult GUIDE 147.  
If molten aluminum is involved, refer to GUIDE 169.  
Inhalation or contact with material may irritate or burn skin and eyes.  
Fire may produce irritating, corrosive and/or toxic gases.  
Vapors may cause dizziness or suffocation.  
Runoff from fire control or dilution water may cause pollution.

ERG Guide No. 128

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Large Spill:** Water spray may reduce vapor; but may not prevent ignition in closed spaces.  
Water spray may reduce vapor; but may not prevent ignition in closed spaces.

### 6.2. Environmental precautions

Do not allow spills to enter drains or watercourses.  
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

### 6.3. Methods and material for containment and cleaning up

Vapor is heavier than air and may flow along surface to distant ignition source and flashback.  
CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.  
As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions.  
Keep unauthorized personnel away.  
Stay upwind.  
Keep out of low areas.  
Ventilate closed spaces before entering.

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## 7. Handling and storage

### 7.1. Precautions for safe handling

Store in accordance with the National Fire Protection Association's publication NFPA 30, Flammable and Combustible Liquids Code. 29 CFR 1910.106 applies to the handling, storage, and use of flammable and combustible liquids.

See section 2 for further details. - [Prevention]:

### 7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: This substance is not compatible with strong oxidizing agents, acetyl bromide, alkylaluminum solutions, beryllium hydride, boron trichloride, with carbon tetrachloride and metals, chloroform and sodium or sodium hydroxide, cyanuric chloride, dichloromethane and air, diethylzinc, hydrogen and raney nickel catalyst.

See section 2 for further details. - [Storage]:

### 7.3. Specific end use(s)

No data available.

## 8. Exposure controls and personal protection

### 8.1. Control parameters

#### Exposure

CAS No.	Ingestion	Source	Value
0000067-56-1	Methanol	OSHA	TWA 200 ppm (260 mg/m3)
		ACGIH	TWA: 200 ppm STEL: 250 ppm Skin
		NIOSH	TWA 200 ppm (260 mg/m3) ST 250 ppm (325 mg/m3) [skin]
		Supplier	No Established Limit
0000068-04-2	Sodium citrate	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

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0000111-30-8	Glutaraldehyde	OSHA	No Established Limit
		ACGIH	Ceiling: 0.05 ppmS
		NIOSH	C 0.2 ppm (0.8 mg/m3)
		Supplier	No Established Limit

### Carcinogen Data

CAS No.	Ingestion	Source	Value
0000067-56-1	Methanol	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000068-04-2	Sodium citrate	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000111-30-8	Glutaraldehyde	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

## 8.2. Exposure controls

### Respiratory

Not necessary where area is properly ventilated.

### Eyes

Wear safety eyewear, e.g. safety spectacles, goggles or visors to protect against the splash of liquids.

### Skin

Overalls which cover the body, arms and legs should be worn. Skin should not be exposed. All parts of the body should be washed after contact. Wear PVC or rubber gloves.

### Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

### Other Work Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:



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### 9. Physical and chemical properties

<b>Appearance</b>	Liquid
<b>Odor</b>	
<b>Odor threshold</b>	Not Measured
<b>pH</b>	7.4 - 7.6
<b>Melting point / freezing point (°C)</b>	Not Measured
<b>Initial boiling point and boiling range (°C)</b>	179 - 183F (82 - 84C)
<b>Flash Point</b>	88 - 92F (31-33C)
<b>Evaporation rate (Ether = 1)</b>	Less than 1 (Bu Acetate=1)
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> Water Solution <b>Upper Explosive Limit:</b> Water Solution
<b>Vapor pressure (Pa)</b>	Unknown
<b>Vapor Density</b>	Greater than 1 (Air = 1)
<b>Specific Gravity</b>	1.045 - 1.055
<b>Solubility in Water</b>	Not Measured
<b>Partition coefficient n-octanol/water (Log Kow)</b>	Not Measured
<b>Auto-ignition temperature (°C)</b>	Not Measured
<b>Decomposition temperature</b>	Not Measured
<b>Viscosity (cSt)</b>	Not Measured
<b>VOC %</b>	85%

#### 9.2. Other information

No other relevant information.

### 10. Stability and reactivity

#### 10.1. Reactivity

Hazardous Polymerization will not occur.

#### 10.2. Chemical stability

Stable under normal circumstances.

#### 10.3. Possibility of hazardous reactions

No data available.

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### 10.4. Conditions to avoid

Extreme heat may cause product to decompose, producing acrid smoke and irritating fumes.

### 10.5. Incompatible materials

This substance is not compatible with strong oxidizing agents, acetyl bromide, alkylaluminum solutions, beryllium hydride, boron trichloride, with carbon tetrachloride and metals, chloroform and sodium or sodium hydroxide, cyanuric chloride, dichloromethane and air, diethylzinc, hydrogen and raney nickel catalyst.

### 10.6. Hazardous decomposition products

Carbon Monoxide and Carbon Dioxide

## 11. Toxicological information

### Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Glutaraldehyde - (111-30-8)	No data available	No data available	No data available	No data available	No data available
Methanol - (67-56-1)	143.00, Human - Category: 3	15,800.00, Rabbit - Category: NA	128.00, Rat - Category: NA	No data available	64,000.00, Rat - Category: NA
Sodium citrate - (68-04-2)	No data available	No data available	No data available	No data available	No data available

Item	Category	Hazard
Acute Toxicity (mouth)	4	Harmful if swallowed.
Acute Toxicity (skin)	---	Not Applicable
Acute Toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	1B	Causes severe skin burns and eye damage.
Eye damage/irritation	1	Causes serious eye damage.
Sensitization (respiratory)	1	May cause allergy or asthma symptoms of breathing difficulties if inhaled.
Sensitization (skin)	1	May cause an allergic skin reaction.
Germ toxicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive Toxicity	---	Not Applicable

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Specific target organ systemic toxicity (single exposure)	1	Causes damage to organs.
Specific target organ systemic Toxicity (repeated exposure)	---	Not Applicable
Aspiration hazard	---	Not Applicable

## 12. Ecological information

### 12.1. Toxicity

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and GHS and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for details

Toxic to aquatic life with long lasting effects.

### Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Glutaraldehyde - (111-30-8)	Not Available	Not Available	Not Available
Methanol - (67-56-1)	100.00, Pimephales promelas	10,000.00, Daphnia magna	16.912 (96 hr), Ulva pertusa
Sodium citrate - (68-04-2)	Not Available	Not Available	Not Available

### 12.2. Persistence and degradability

There is no data available on the preparation itself.

### 12.3. Bioaccumulative potential

Not Measured

### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

### 12.6. Other adverse effects

No data available.

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## 13. Disposal considerations

### 13.1. Waste treatment methods

Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act.

Using information provided in this data sheet advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply.

## 14. Transport information

- 14.1. UN number UN1993  
14.2. UN proper shipping name Flammable liquids, n.o.s., (Methanol )  
14.3. Transport hazard class(es)

### DOT (Domestic Surface Transportation)

DOT Proper Shipping Name	Flammable liquids, n.o.s., (Methanol )
DOT Hazard Class	3
DOT Label	3
UN / NA Number	UN1993
DOT Packing Group	III
CERCLA/DOT RQ	4047 gal. / 33715 lbs.

### IMO / IMDG (Ocean Transportation)

IMDG Proper Shipping Name	Flammable liquids, n.o.s., (Methanol )
IMDG Hazard Class	3
IMDG Sub Class	Not Applicable
IMDG Packing Group	III

- 14.4. Packing group III  
14.5. Environmental hazards  
IMDG Marine Pollutant: Yes ( Glutaraldehyde )

### 14.6. Special precautions for user

Not Applicable

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not Applicable

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## 15. Regulatory information

**Regulatory Overview** The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

**WHMIS Classification** D2A E

**US EPA Tier II Hazards**

**Fire:** Yes

**Sudden Release of Pressure:** No

**Reactive:** No

**Immediate (Acute):** Yes

**Delayed (Chronic):** No

**EPCRA 311/312 Chemicals and RQs (lbs) (>0.1%) :**

Methanol ( 5,000.00)

**EPCRA 302 Extremely Hazardous (>.1%) :**

(No Product Ingredients Listed)

**EPCRA 313 Toxic Chemicals (>.1%) :**

Methanol

**Proposition 65 - Carcinogens (>0.0%):**

(No Product Ingredients Listed)

**Proposition 65 - Developmental Toxins (>0.0%):**

(No Product Ingredients Listed)

**Proposition 65 - Female Repro Toxins (>0.0%):**

(No Product Ingredients Listed)

**Proposition 65 - Male Repro Toxins (>0.0%):**

(No Product Ingredients Listed)

**N.J. RTK Substances (>1%) :**

Glutaraldehyde

Methanol

**Penn RTK Substances (>1%) :**

Glutaraldehyde

Methanol

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## 16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H225 Highly flammable liquid and vapor.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H331 Toxic if inhaled.

H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.

H370 Causes damage to organs.

H400 Very toxic to aquatic life.

**This is the first revision of this SDS format, changes from previous revision not applicable.**

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