

### 1. Identification

#### 1.1. Product identifier

**Product Identity** Edemaco  
**Alternate Names** Arterial Co-Injection Chemical

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

**Intended use** See Technical Data Sheet.  
**Application Method** See Technical Data Sheet.

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

**Company Name** The Dodge Company, Inc  
9 Progress Road  
Billerica, MA 01821

#### Emergency

**CHEMTREC (USA)** (800) 424-9300  
**Customer Service: The Dodge Company, Inc** (800) 443-6343, (978) 600-2099

### 2. Hazard(s) identification

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

Flam. Liq. 1;H224	Extremely flammable liquid and vapor.
Acute Tox. 4;H302	Harmful if swallowed.
Acute Tox. 5;H313	May be harmful in contact with skin. (Not adopted by US OSHA)
Acute Tox. 3;H331	Toxic if inhaled.
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. Specific Target Organs: (Not Available)
Aquatic Chronic 2;H411	Toxic to aquatic life with long lasting effects.

#### 2.2. Label elements



**Danger**

H224 Extremely flammable liquid and vapor.  
H302 Harmful if swallowed.  
H313 May be harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H331 Toxic if inhaled.  
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, and other ignition sources - No smoking.  
P233 Keep container tightly closed.  
P235 Keep cool  
P240 Ground, bond container and receiving equipment.  
P241 Use explosion-proof electrical, ventilating, light, equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing dust, fume, gas, mist, vapors, spray.  
P264 Wash thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
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.

### **[Response]:**

P301+312 IF SWALLOWED: Call a POISON CENTER or doctor , physician if you feel unwell.  
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 or physician if you feel unwell.  
P305+351+338 If in eyes: Rinse cautiously 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.  
P310 Immediately call a POISON CENTER, doctor or physician.  
P321 Specific treatment (see information on this label).  
P330 IF SWALLOWED: Rinse mouth.  
P331 Do NOT induce vomiting.  
P333+313 If skin irritation or a rash occurs: Get medical advice or attention.  
P341 If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P342+311 If experiencing respiratory symptoms: Call a Poison Center or doctor

P363 Wash contaminated clothing before reuse.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

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 or container in accordance with local and 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. 2;H330 Acute Tox. 3;H301 STOT SE 3;H335 Skin Corr. 1B;H314 Resp. Sens. 1;H334 Skin Sens. 1A;H317 Aquatic Acute 1;H400 Aquatic Chronic 1;H410	[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 (> 10%)	[1][2]
Sodium citrate CAS Number: 0000068-04-2	1 - 5	Not Classified	[1]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance 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.

### Section 4. First aid measures

#### 4.1. Description of first aid measures

**General**

In all cases of doubt, or when symptoms persist, seek medical attention.  
Never give anything by mouth to an unconscious person.

**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 water for at least 15 minutes, holding the eyelids apart and seek medical attention.

**Skin**

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

**Ingestion** If the person is conscious, have them drink water. Contact a physician immediately. Do not induce vomiting.

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

**Overview** No specific symptom data available.  
Treat symptomatically. See section 2 for further details.

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

**Eyes** Causes serious eye damage.

**Skin** May be harmful in contact with skin. (Not adopted by US OSHA) May cause an allergic skin reaction. Causes severe skin burns and eye damage.

**Ingestion** Harmful if swallowed.

### Section 5. Fire-fighting measures

#### 5.1. Extinguishing media

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

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

Hazardous decomposition: Oxides of carbon and nitrogen.  
Keep away from heat, sparks, open flames, and other ignition sources - No smoking.  
Keep container tightly closed.  
Ground, bond container and receiving equipment.  
Use explosion-proof electrical, ventilating, light, equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Avoid breathing dust, fume, gas, mist, vapors, spray.

#### 5.3. Advice for fire-fighters

Wear self-contained breathing apparatus to protect from decomposition products.

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### Section 6. Accidental release measures

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

Put on appropriate personal protective equipment (see section 8).

#### 6.2. Environmental precautions

Do not allow spills to enter drains or waterways.  
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.

Spread an inert absorbent on the spill and place in a suitable, properly labeled container for recovery or disposal.

Flush area with large quantities of water.

### Section 7. Handling and storage

#### 7.1. Precautions for safe handling

Avoid contact with skin. Avoid contact with eyes. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Launder contaminated clothing before reuse. Avoid environmental contamination.

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

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

Incompatible materials: Strong oxidizing agents, strong acids and alkalis

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

#### 7.3. Specific end use(s)

No data available.

### Section 8. Exposure controls and personal protection

#### 8.1. Control parameters

CAS No.	Ingredient	Exposure	
		Source	Value
0000067-56-1	Methanol	OSHA	TWA 200 ppm (260 mg/m <sup>3</sup> )
		ACGIH	TWA: 200 ppm STEL: 250 ppm
		NIOSH	TWA 200 ppm (260 mg/m <sup>3</sup> ) ST 250 ppm (325 mg/m <sup>3</sup> ) [skin]
0000068-04-2	Sodium citrate	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
0000111-30-8	Glutaraldehyde	OSHA	No Established Limit
		ACGIH	Ceiling: 0.05 ppm
		NIOSH	C 0.2 ppm (0.8 mg/m <sup>3</sup> )

#### 8.2. Exposure controls

<b>Respiratory</b>	If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
<b>Eyes</b>	Wear safety eyewear, e.g. safety spectacles, goggles or visors to protect against the splash of liquids.
<b>Skin</b>	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.
<b>Engineering Controls</b>	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.

## Section 9. Physical and chemical properties

<b>Appearance</b>	Liquid
<b>Odor</b>	No data available.
<b>Odor threshold</b>	Not determined
<b>pH</b>	7.4 - 7.6
<b>Melting point / freezing point</b>	Not Measured
<b>Initial boiling point and boiling range</b>	179 - 183F (82 - 84C)
<b>Flash Point</b>	88 - 92F (31-33C)
<b>Evaporation rate (Ether = 1)</b>	< 1 (n-Butyl 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>Relative Density</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</b>	Not Measured
<b>Decomposition temperature</b>	Not Measured
<b>Viscosity (cSt)</b>	Not Measured
<b>VOC Content</b>	85%

### 9.2. Other information

No other relevant information.

## Section 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.

### 10.4. Conditions to avoid

Avoid prolonged exposure to heat and/or light.

### 10.5. Incompatible materials

Strong oxidizing agents, strong acids and alkalis

### 10.6. Hazardous decomposition products

Oxides of carbon and nitrogen.

## Section 11. Toxicological information

### Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Glutaraldehyde - (111-30-8)	246.00, Rat - Category: 3	>2,000.00, Rabbit - Category: 5	---	0.48, Rat - Category: 2	---
Methanol - (67-56-1)	2,769.00, Rat - Category: 5	17,100.00, Rabbit - Category: NA	---	---	64,000.00, Rat - Category: NA
Sodium citrate - (68-04-2)	---	---	---	---	---

### Carcinogen Data

CAS No.	Ingredient	Source	Value
0000067-56-1	Methanol	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
		ACGIH	No Established Limit
0000068-04-2	Sodium citrate	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
		ACGIH	No Established Limit
0000111-30-8	Glutaraldehyde	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
		ACGIH	A4

Classification	Category	Hazard Description
Acute toxicity (oral)	4	Harmful if swallowed.
Acute toxicity (dermal)	5	May be harmful in contact with skin. (Not adopted by US OSHA)
Acute toxicity (inhalation)	3	Toxic if inhaled.
Skin corrosion/irritation	1B	Causes severe skin burns and eye damage.
Serious eye damage/irritation	1	Causes serious eye damage.

Respiratory sensitization	1	May cause allergy or asthma symptoms of breathing difficulties if inhaled.
Skin sensitization	1	May cause an allergic skin reaction.
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	1	Causes damage to organs.
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

## Section 12. Ecological information

### 12.1. Toxicity

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)	10.00, Oncorhynchus mykiss	29.73, Daphnia magna	1.20 (72 hr), Desmodesmus subspicatus
Methanol - (67-56-1)	15,400.00, Lepomis macrochirus	18,260.00, Daphnia magna	22,000.00 (96 hr), Pseudokirchneriella subcapitata
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.

## Section 13. Disposal considerations

### 13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.



### Section 14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
<b>14.1. UN number</b>	UN1993	UN1993	UN1993
<b>14.2. UN proper shipping name</b>	UN1993, Flammable liquids, n.o.s., (Methanol ), 3, III	Flammable liquids, n.o.s., (Methanol )	Flammable liquids, n.o.s., (Methanol )
<b>14.3. Transport hazard class(es)</b>	<b>DOT Hazard Class: 3</b>	<b>IMDG: 3</b> <b>Sub Class: Not Applicable</b>	<b>Air Class: Not Applicable</b>
<b>14.4. Packing group</b>	III	III	III
<b>14.5. Environmental hazards</b>			
<b>IMDG</b>	Marine Pollutant: Yes; ( Glutaraldehyde )		
<b>14.6. Special precautions for user</b>	Not Applicable		

### Section 15. Regulatory information

<b>Regulatory Overview</b>	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
<b>Toxic Substance Control Act ( TSCA )</b>	All components of this material are either listed or exempt from listing on the TSCA Inventory.
<b>US EPA Tier II Hazards</b>	<p style="text-align: right;"><b>Fire: Yes</b></p> <p style="text-align: right;"><b>Sudden Release of Pressure: No</b></p> <p style="text-align: right;"><b>Reactive: No</b></p> <p style="text-align: right;"><b>Immediate (Acute): Yes</b></p> <p style="text-align: right;"><b>Delayed (Chronic): No</b></p>

**EPCRA 302 Extremely Hazardous:**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**EPCRA 313 Toxic Chemicals:**

Methanol

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

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

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

Methanol

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

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

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

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 Label Warning:**



WARNING: This product can expose you to chemicals including [Methanol], which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### Section 16. Other information

**SDS Revision Date**      **06/19/2019**

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.

H330 Fatal if inhaled.

H331 Toxic if inhaled.

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

H335 May cause respiratory irritation.

H370 Causes damage to organs.

H371 May cause damage to organs.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

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