

Safety Data Sheet

Dodge Anatomical Fixative

SDS Revision Date:

05/18/2017



1. Identification

1.1. Product identifier

Product Identity Anatomical Fixative
Alternate Names Anatomical Arterial 30 Index

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

Intended use Arterial Embalming chemical.
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

Combustible Liquid;H227	Combustible Liquid.
Acute Tox. 4;H302	Harmful if swallowed.
Acute Tox. 3;H311	Toxic in contact with skin.
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 of breathing difficulties if inhaled.
Muta. 2;H341	Suspected of causing genetic defects.
Carc. 1B;H350	May cause cancer.
STOT SE 2;H371	May cause damage to organs. Specific Target Organs: (Not Available)
Aquatic Chronic 3;H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements

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Danger

- H227 Combustible liquid.
- H302 Harmful if swallowed.
- H311 Toxic 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.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer.
- H371 May cause damage to organs.
- H412 Harmful to aquatic life with long lasting effects.

[Prevention]:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.
- P235 Keep cool.
- P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
- P262 Do not get in eyes, on skin, or on clothing.
- 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 / 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.

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P308+313 IF exposed or concerned: Get medical advice / attention.
 P309+311 IF exposed or you feel unwell Call a POISON CENTER or doctor / 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 / attention.
 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 extinguishing media listed in section 5 of SDS for extinction.

[Storage]:

P403+235 Store in a well ventilated place. Keep cool.
 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
Formaldehyde CAS Number: 0000050-00-0	50 - 75	Carc. 1B;H350 Muta. 2;H341 Acute Tox. 3;H301 Acute Tox. 3;H311 Acute Tox. 3;H331 Skin Corr. 1B;H314 Skin Sens. 1;H317 >0.2 %	[1][2]
MPG Cosolvent CAS Number: Proprietary	1 - 5	Not Classified	[1]
Methanol CAS Number: 0000067-56-1	1 - 5	Flam. Liq. 2;H225 Acute Tox. 3;H331 Acute Tox. 3;H311 Acute Tox. 3;H301 STOT SE 1;H370 (> 10%) STOT SE 2;H371 (3% ~ 10%)	[1][2][3]
1,5-Pentanediol CAS Number: 0000111-30-8	1 - 5	Acute Tox. 2;H330 Acute Tox. 3;H301 STOT SE 3;H335 Skin Corr. 1B;H314	[1][2]

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		Resp. Sens. 1;H334 Skin Sens. 1A;H317 Aquatic Acute 1;H400 Aquatic Chronic 1;H410	
Borates, tetra, sodium salts, decahydrate CAS Number: 0001303-96-4	1 - 5	Repr. 1B;H360FD (@> 8.5%) Acute Tox. 4;H332	[1][2]
Edetic acid (EDTA) CAS Number: 0000060-00-4	1 - 5	Eye Irrit. 2;H319	[1]
Bioban-S CAS Number: 0000137-40-6	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 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.

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. Reproductive or genetic defect hazard. See section 2 for further details.
Inhalation	Toxic if inhaled. May cause damage to organs. May cause allergy or asthma symptoms of breathing difficulties if inhaled.
Eyes	Causes serious eye damage.
Skin	Toxic in contact with skin. May cause an allergic skin reaction. Causes severe skin burns and eye damage.
Ingestion	Harmful if swallowed.

5. Fire-fighting measures

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5.1. Extinguishing media

Dry chemical, foam, carbon dioxide and water fog.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: May form formaldehyde gas, carbon oxides, hydrogen, formic acid and various hydrocarbons. Incomplete combustion may also produce irritating smoke and toxic and/or irritating gases or fumes.

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

Keep cool.

Avoid breathing dust / fume / gas / mist / vapors / spray.

Do not get in eyes, on skin, or on clothing.

5.3. Advice for fire-fighters

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

ERG Guide No. ----

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep container closed when not in use. Avoid contact with eyes, skin, or clothing.

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.

Neutralize residual product in the spill area using sodium carbonate or sodium bicarbonate.

DO NOT USE COMBUSTIBLE MATERIALS.

7. Handling and storage

7.1. Precautions for safe handling

Handle containers carefully to prevent damage and spillage.

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

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Store in a cool dry area, away from heat, sparks and open flame. Keep containers sealed when not in use. Store out of direct sunlight.

Incompatible materials: Avoid contact with strong oxidizers, strong alkalies, strong mineral acids, phenol and urea. 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

CAS No.	Ingredient	Exposure	
		Source	Value
0000050-00-0	Formaldehyde	OSHA	TWA 0.75 ppm STEL 2 ppm
		ACGIH	STEL: 0.3 ppm Ceiling: 1 ppm S, A2, 1
		NIOSH	Ca TWA 0.016 ppm C 0.1 ppm [15-minute]
		Supplier	No Established Limit
0000060-00-4	Edetic acid (EDTA)	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0000067-56-1	Methanol	OSHA	TWA 200 ppm (260 mg/m ³)
		ACGIH	TWA: 200 ppm STEL: 250 ppm Skin
		NIOSH	TWA 200 ppm (260 mg/m ³) ST 250 ppm (325 mg/m ³) [skin]
		Supplier	No Established Limit
0000111-30-8	1,5-Pentanedial	OSHA	No Established Limit
		ACGIH	Ceiling: 0.05 ppm S
		NIOSH	C 0.2 ppm (0.8 mg/m ³)
		Supplier	No Established Limit
0000137-40-6	Bioban-S	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0001303-96-4	Borates, tetra, sodium salts, decahydrate	OSHA	No Established Limit
		ACGIH	TWA: 2 mg/m ³ STEL: 6 mg/m ³
		NIOSH	TWA 5 mg/m ³
		Supplier	No Established Limit
Proprietary	MPG Cosolvent	OSHA	No Established Limit

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	ACGIH	No Established Limit
	NIOSH	No Established Limit
	Supplier	No Established Limit

8.2. Exposure controls

Respiratory	Not necessary where area is properly ventilated.
Eyes	Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.
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 to keep skin contact to a minimum. Refer to the manufacturer's recommendations regarding the suitability of any gloves used.
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.

9. Physical and chemical properties

Appearance	Clear, slightly viscous, fluorescent orange Liquid
Odor	Pungent
Odor threshold	Not determined
pH	8 - 9.2
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	91 - 97 C (196 - 207F)
Flash Point	61 - 63C (142 - 146F)
Evaporation rate (Ether = 1)	< 1 (n-Butyl acetate = 1)
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: 7 (formaldehyde) Upper Explosive Limit: 73 (formaldehyde)
Vapor pressure (Pa)	Not Measured
Vapor Density	>1
Specific Gravity	1.050 - 1.070
Solubility in Water	Complete
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured

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Decomposition temperature Not Measured
 Viscosity (cSt) Not Measured
 VOC Content 97%

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 the recommended storage and handling conditions prescribed. At higher temperatures, product may form formic acid and methanol.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid heat and open flame. Exposure to cold may cause precipitation of the polymer, will redissolve upon gentle heating.

10.5. Incompatible materials

Avoid contact with strong oxidizers, strong alkalis, strong mineral acids, phenol and urea.

10.6. Hazardous decomposition products

May form formaldehyde gas, carbon oxides, hydrogen, formic acid and various hydrocarbons. Incomplete combustion may also produce irritating smoke and toxic and/or irritating gases or fumes.

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
Formaldehyde - (50-00-0)	260.00, Guinea Pig - Category: 3	270.00, Rabbit - Category: 3	No data available	No data available	No data available
MPG Cosolvent - (Proprietary)	No data available	No data available	No data available	No data available	No data available
Methanol - (67-56-1)	143.00, Human - Category: 3	No data available	No data available	No data available	64,000.00, Rat - Category: NA
1,5-Pentanedial - (111-30-8)	285.00, Rat -	>2,000.00,	No data	No data available	No data

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	Category: 3	Rabbit - Category: 5	available		available
Borates, tetra, sodium salts, decahydrate - (1303-96-4)	2,660.00, Rat - Category: 5	10,000.00, Rabbit - Category: NA	No data available	2.00, Rat - Category: 4	No data available
Edetic acid (EDTA) - (60-00-4)	No data available	No data available	No data available	No data available	No data available
Bioban-S - (137-40-6)	No data available	No data available	No data available	No data available	No data available

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000050-00-0	Formaldehyde	OSHA	Regulated Carcinogen: Yes
		NTP	Known: Yes; Suspected: Yes
		IARC	Group 1: Yes; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000060-00-4	Edetic acid (EDTA)	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;
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;
0000111-30-8	1,5-Pentanedial	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;
0000137-40-6	Bioban-S	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;
0001303-96-4	Borates, tetra, sodium salts, decahydrate	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;
Proprietary	MPG Cosolvent	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;

Classification	Category	Hazard Description
Acute toxicity (oral)	4	Harmful if swallowed.
Acute toxicity (dermal)	3	Toxic in contact with skin.
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.

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Skin sensitization	1	May cause an allergic skin reaction.
Germ cell mutagenicity	2	Suspected of causing genetic defects.
Carcinogenicity	1B	May cause cancer.
Reproductive toxicity	---	Not Applicable
STOT-single exposure	2	May cause damage to organs.
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

Harmful 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
Formaldehyde - (50-00-0)	1.41, Oncorhynchus mykiss	5.80, Daphnia pulex	0.00 (96 hr),
MPG Cosolvent - (Proprietary)	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
1,5-Pentanedial - (111-30-8)	10.00, Oncorhynchus mykiss	14.87, Daphnia magna	0.375 (72 hr), Desmodesmus subspicatus
Borates, tetra, sodium salts, decahydrate - (1303-96-4)	74.00, Limanda limanda	484.00, Daphnia magna	24.00 (72 hr), Scenedesmus subspicatus
Edetic acid (EDTA) - (60-00-4)	Not Available	Not Available	Not Available
Bioban-S - (137-40-6)	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 PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

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13. Disposal considerations

13.1. Waste treatment methods

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

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN1992		
14.2. UN proper shipping name	UN1992, Flammable liquids, toxic, n.o.s., (Formaldehyde), 3, II	Flammable liquids, toxic, n.o.s., (Formaldehyde)	Flammable liquids, toxic, n.o.s., (Formaldehyde)
14.3. Transport hazard class(es)	DOT Hazard Class: 3	IMDG: 3 Sub Class: 6.1	Air Class: 3
14.4. Packing group	III	III	III
14.5. Environmental hazards			
IMDG	Marine Pollutant: Yes;		
14.6. Special precautions for user	No further information		

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS 1988 Classification	B3 D1B E
US EPA Tier II Hazards	Fire: Yes Sudden Release of Pressure: No Reactive: No Immediate (Acute): Yes Delayed (Chronic): Yes
EPCRA 302 Extremely Hazardous:	Formaldehyde

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EPCRA 313 Toxic Chemicals:

Formaldehyde

Methanol

Proposition 65 - Carcinogens (>0.0%):

Formaldehyde

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.

16. Other information

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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.

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

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

H335 May cause respiratory irritation.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H360FD May damage fertility. Suspected of damaging the unborn child.

H370 Causes damage to organs.

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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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