



GAP PROFESSIONAL PRODUCTS

Safety Data Sheet GAP DOT 4 Brake Fluid

SECTION 1: Identification

1.1 GHS Product identifier

Product name	GAP DOT 4 Brake Fluid
Product number	70489 70446 70556
Brand	GAP Professional Products

1.3 Recommended use of the chemical and restrictions on use

Automotive Brake System Fluid
Professional Automotive, Industrial, or Commercial uses Only. Not for general consumer use.

1.4 Supplier's details

Name	GAP Professional Products
Address	122 Route 105 Keswick Ridge NB E6L 1B1 Canada
Telephone	(506) 363-9708
Fax	(506) 363-4241
email	info@gapauto.com

1.5 Emergency phone number

For Medical or Transport Emergencies
CANUTEC (24 Hours)
(613) 996-6666

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: WHMIS 2015

- Serious eye damage/eye irritation, Cat. 2B
- Skin corrosion/irritation, Cat. 2
- Skin sensitizer, Cat. 1
- Acute toxicity, oral, Cat. 5
- Serious eye damage/eye irritation, Cat. 1
- Toxic to reproduction, Cat. 2

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2.2 GHS label elements, including precautionary statements

Pictograms



1. Exclamation mark; 2. Corrosion; 3. Health hazard

Signal word

Danger

Hazard statement(s)

H303	May be harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H320	Causes eye irritation
H361	Suspected of damaging fertility or the unborn child [effect, route]

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash ... thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER/doctor/...
P312	Call a POISON CENTER/doctor/... if you feel unwell.
P321	Specific treatment (see ... on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container to ...

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Component	Concentration
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (CAS no.: 30989-05-0; EC no.: 250-418-4)	15 - 40 % (weight)
CLASSIFICATIONS: No data available. HAZARDS: No data available.	

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Ethanol, 2-[2-(2-methoxyethoxy)ethoxy]- (CAS no.: 112-35-6; EC no.: 203-962-1)	15 - 40 % (weight)
CLASSIFICATIONS: No data available. HAZARDS: No data available.	
2-[2-(2-butoxyethoxy)ethoxy]ethanol (CAS no.: 143-22-6; EC no.: 205-592-6; Index no.: 603-183-00-0)	20 - 40 % (weight)
CLASSIFICATIONS: Serious eye damage/eye irritation, Cat. 1. HAZARDS: H318 - Causes serious eye damage. [SCLs/M-factors/ATEs]: Eye Dam. 1; H318: C ≥ 30 %; Eye Irrit. 2; H319: 20 % ≤ C < 30 %	
DIETHYLENE GLYCOL (CAS no.: 111-46-6; EC no.: 203-872-2; Index no.: 603-140-00-6)	5 - 10 % (weight)
CLASSIFICATIONS: Acute toxicity, oral, Cat. 4. HAZARDS: H302 - Harmful if swallowed.	
Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy- (CAS no.: 9004-77-7; EC no.: 500-012-0)	< 5 % (weight)
CLASSIFICATIONS: No data available. HAZARDS: No data available.	
DIISOPROPANOLAMINE (CAS no.: 110-97-4; EC no.: 203-820-9; Index no.: 603-083-00-7)	< 5 % (weight)
CLASSIFICATIONS: Serious eye damage/eye irritation, Cat. 2. HAZARDS: H319 - Causes serious eye irritation.	
BUTYLATED HYDROXYTOLUENE (CAS no.: 128-37-0; EC no.: 204-881-4)	< 1 % (weight)
CLASSIFICATIONS: No data available. HAZARDS: No data available.	
DIETHYLENE GLYCOL MONOMETHYL ETHER (CAS no.: 111-77-3; EC no.: 203-906-6; Index no.: 603-107-00-6)	< 1 % (weight)
CLASSIFICATIONS: Toxic to reproduction, Cat. 2. HAZARDS: H361d - .	

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled	If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, quiet, and get medical attention
In case of skin contact	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician if symptoms occur. Wash contaminated clothes before reuse
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes. Remove contact lenses if easy to do. Get medical attention if symptoms occur.
If swallowed	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms/effects, acute and delayed

Mild tissue inflammation, rash, nausea.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Treat surrounding material. Regular foam, Water Spray, Water Fog, carbon dioxide or dry chemical. Spray using fog nozzles. Keep containers cool with water. Use caution when applying carbon dioxide in confined spaces.

5.2 Specific hazards arising from the chemical

Product is not flammable, but will burn in a fire. Product may also give rise to hazardous vapors in a fire. Vapors/fumes may be irritating, corrosive, and/or toxic.

5.3 Special protective actions for fire-fighters

Wear full protective clothing and self-contained breathing apparatus

SECTION 6: Accidental release measures

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6.1 Personal precautions, protective equipment and emergency procedures

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs. See Section 8 for recommended personal protective equipment.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

LARGE SPILLS: Dike far ahead of spill to prevent further movement. Recover by pumping or by using a suitable absorbent.

SMALL SPILLS: Contain and absorb with absorbent material and place into containers for later disposal. Wash site of spillage thoroughly with water. Dispose in suitable waste container.

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure adequate ventilation. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid dust formation. dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container(s) tightly closed. Use and store this material at room temperature away from sources of ignition, heat, direct sunlight and hot surfaces. Keep away from any incompatible materials (see section 10)

Specific end use(s)

Store in original container. Store as directed by manufacturer

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (CAS: 30989-05-0 EC: 250-418-4)

STEL: 6mg/m³; USA (US/OSHA)

TWA: 2mg/m³; USA

2. DIETHYLENE GLYCOL (CAS: 111-46-6 EC: 203-872-2)

WEL: 101mg/m³, 23ppm; GB

IOELV: 100mg/m³, 23ppm; Ireland

WEL: 10mg/m³; USA

3. BUTYLATED HYDROXYTOLUENE (CAS: 128-37-0 EC: 204-881-4)

EL: 2mg/m³; CAN

EV: 2mg/m³; CAN

WEL: 10mg/m³; GB

OEL: 10mg/m³; Ireland

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LMPE: 2mg/m³; MEX

REL: 10mg/m³; USA

TLV: 2mg/m³; USA

4. DIETHYLENE GLYCOL MONOMETHYL ETHER (CAS: 111-77-3 EC: 203-906-6)

IOELV: 1mg/m³, 10ppm; EU

WEL: 1mg/m³, 10ppm; GB

OEL: 1mg/m³, 10ppm; Ireland

8.2 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Showers, eyewash stations, and ventilation systems should be present and in good working order. Wash hands before breaks and at the end of workday.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Wear Nitrile gloves, chemical resistant gloves.

Respiratory protection

Recommended: Dust mask or Respirator should be worn if product is used in confined space or used for a prolonged period of time.

SECTION 9: Physical and chemical properties

Appearance, such as physical state and colour

Amber Liquid

Amber

Amber Liquid

Odour

Characteristic

Odour threshold

Not determined

pH

8.2

Melting point and freezing point

-60°C (-76°F)

Initial boiling point and boiling range

261°C (501°F)

Flash point

132°C (269°F)

Evaporation rate

<1 (Butyl Acetate)

Flammability, in the case of solids and gases

Not Determined

Upper and lower flammability or explosive limits

Not Determined

Vapour pressure

<0.01 kPa

Vapour density

Not Determined

Relative density

1.06

Solubility

Fully miscible

Partition coefficient — n-octanol/water

Auto-ignition temperature

>250°C / 482°F (based on constituents)

Decomposition temperature

Not Available

Viscosity

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Additional properties

Physical state	Liquid
Colour	Amber
Explosive properties	Not Determined
Oxidising properties	None

SECTION 10: Stability and reactivity

10.1 Reactivity

None under normal use conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Stable under normal use conditions.

10.4 Conditions to avoid

Avoid storing in direct sunlight and avoid extremes of temperature.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Oxides of carbon, oxides of sulfur, oxides of phosphorus, oxides of nitrogen, amines, aliphatic compounds, toxic by-products.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

The ATE LD50 (oral) of the mixture is: 2000 mg/kg bw

DIETHYLENE GLYCOL

LD50 Skin - Rabbit - 11890mg/kg

LD50 Oral - Rat - 12565mg/kg

LD50 Skin - Rabbit - 11890mg/kg

BUTYLATED HYDROXYTOLUENE

LD50 Skin - Rat - >6000mg/kg

LD50 Skin - Rat - >2000mg/kg

Skin corrosion/irritation

Causes skin irritation

Serious eye damage/irritation

Risk of serious damage to eyes.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

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No data available

Carcinogenicity

No data available

Reproductive toxicity

Suspected of damaging fertility or the unborn child

Specific target organ toxicity (STOT) - single exposure

No data available

Specific target organ toxicity (STOT) - repeated exposure

May cause damage to kidneys with prolonged exposure. Pre-existing skin, eye and respiratory disorders may be aggravated by exposure to product.

Aspiration hazard

This product does not pose an appreciable aspiration hazard.

Additional information

None

DIETHYLENE GLYCOL: *TOXICITY:
typ. dose mode specie amount units other
LCLo ihl mus 130 mg/m³/2H
LD50 orl cat 3300 mg/kg
LD50 orl dog 9000 mg/kg
LD50 orl gpg 7800 mg/kg
LDLo orl hmn 1 gm/kg
LD50 orl mus 23700 mg/kg
LD50 orl rat 12565 mg/kg
LD50 orl rbt 4400 mg/kg
LD50 skn rbt 11890 mg/kg
TDLo orl chd 2400 mg/kg
LDLo ims rat 7826 mg/kg
LDLo ims rbt 4472 mg/kg
LD50 ipr mus 9719 mg/kg
LD50 ivn rat 6565 mg/kg
LDLo ivn rbt 2236 mg/kg
LDLo scu mus 5 gm/kg
LD50 scu rat 18800 mg/kg
LD50 ipr rat 7700 mg/kg

*AQTX/TLM96: Not available

*SAX TOXICITY EVALUATION:

THR: Poison by inhalation. Moderately toxic to humans by ingestion.
Moderately toxic experimentally by ingestion and intravenous routes.
Mildly toxic by subcutaneous route. An experimental carcinogen,
tumorigen and teratogen. An eye and human skin irritant.

*CARCINOGENICITY:

Tumorigenic Data:

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TDLo: orl-rat 890 gm/kg/53W-C
TD : orl-rat 1752 gm/kg/2Y-C
TD : orl-rat 584 gm/kg/2Y-C
Status: NTP Carcinogenesis Studies; selected, May 1988

***MUTATION DATA:**

test lowest dose | test lowest dose

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Not available |

***TERATOGENICITY:**

Reproductive Effects Data:

TDLo: orl-rat 50 gm/kg (1-20D preg)

***STANDARDS, REGULATIONS & RECOMMENDATIONS:**

OSHA: None

ACGIH: None

NIOSH Criteria Document: None

NFPA Hazard Rating: Health (H): 1

Flammability (F): 1

Reactivity (R): 0

H1: Materials only slightly hazardous to health (see NFPA for details).

F1: Materials that must be preheated before ignition can occur (see NFPA for details).

R0: Materials which are normally stable even under fire exposure conditions and which are not reactive with water (see NFPA for details).

***OTHER TOXICITY DATA:**

Skin and Eye Irritation Data:

skn-hmn 112 mg/3D-I MLD

skn-rbt 500 mg MLD

eye-rbt 50 mg MLD

Review: Toxicology Review-2

Status: EPA TSCA Chemical Inventory, 1986

EPA TSCA Test Submission (TSCATS) Data Base, June 1988

Meets criteria for proposed OSHA Medical Records Rule

DIISOPROPANOLAMINE: *TOXICITY:

typ. dose mode specie amount unit other

LD50 ORL RAT 6720 MG/KG

*AQTX/TLM96: TLM96: 1000-100 PPM

*SAX TOXICITY EVALUATION: THR=LOW to MOD via oral route.

*CARCINOGENICITY: Not available

*MUTAGENICITY: Not available

*TERATOGENICITY: Not available

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***STANDARDS, REGULATIONS & RECOMMENDATIONS:**

OSHA: None

ACGIH: None

NIOSH Criteria Document: None

NFPA Hazard Rating: Health (H): None

Flammability (F): None

Reactivity (R): None

***OTHER TOXICITY DATA:**

Skin and Eye Irritation Data:

skn-rbt 500 mg open MLD

eye-rbt 50 mg SEV

Status: Reported in EPA TSCA Inventory 1980

EPA TSCA 8(a) Preliminary Assessment Information Proposed Rule

BUTYLATED HYDROXYTOLUENE: *TOXICITY:

typ. dose mode specie amount unit other

LD50 orl rat 890 mg/kg

LD50 orl mus 1040 mg/kg

LD50 ipr mus 138 mg/kg

LDLo orl cat 940 mg/kg

LDLo orl rbt 2100 mg/kg

LD50 orl gpg 10700 mg/kg

*AQTX/TLM96: Not available

*SAX TOXICITY EVALUATION:

THR: MODERATE via oral route. An experimental teratogen via oral route. Used as a food additive. It may be a tumorigen.

*CARCINOGENICITY:

Tumorigenic Data:

TDLo: ipr-mus 1200 mg/kg/8W-I

Review: IARC Cancer Review: Animal Limited Evidence

IARC: Not classifiable as a human carcinogen (Group 3) [610]

Status: NCI Carcinogenesis Bioassay (Feed); Negative: Male and Female Rat, Male and Female Mouse [620]

*MUTATION DATA:

test lowest dose | test lowest dose

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dlt-mus-ork 12 gm/kg/10W-C | dni-hmn:lym 20 umol/L

spm-mus-ipr 350 mg/kg/5D-I |

*TERATOGENICITY:

Reproductive Effects Data:

TDLo: orl-rat 18 gm/kg (2W male/2W pre-3W post)

TDLo: orl-rat 9 gm/kg (2W male/2W pre-3W post)

TDLo: orl-mus 43800 mg/kg (52D pre/1-21D preg)

TDLo: orl-mus 12600 mg/kg (1-21D preg)

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TDLo: orl-rat 120 gm/kg (14W male/14W pre-3W post)

*STANDARDS, REGULATIONS & RECOMMENDATIONS:

OSHA: Federal Register (1/19/89)

Final Limit: PEL-TWA 10 mg/m³ [610]

ACGIH: TLV-TWA 10 mg/m³ [610]

NIOSH Criteria Document: None

NFPA Hazard Rating: Health (H): None

Flammability (F): None

Reactivity (R): None

*OTHER TOXICITY DATA:

Skin and Eye Irritation Data:

skn-hmn 500 mg/48H MLD

skn-rbt 500 mg/48H MOD

eye-rbt 100 mg/24H SEV

Review: Toxicology Review

Status: Reported in EPA TSCA Inventory, 1980.

Meets criteria for proposed OSHA Medical Records Rule

"NIOSH Manual of Analytical Methods" Vol 1 226

DIETHYLENE GLYCOL MONOMETHYL ETHER: LD50/LC50:

CAS# 111-77-3:

Draize test, rabbit, eye: 500 mg Moderate;

Draize test, rabbit, eye: 500 mg/24H Mild;

Oral, mouse: LD50 = 8222 mg/kg;

Oral, rabbit: LD50 = 7190 mg/kg;

Oral, rat: LD50 = 4 mL/kg;

Skin, rabbit: LD50 = 2500 uL/kg;

.
Oral, rat: LD50 = 1746-10502 mg/kg rat: LD50 = 1746-15918

*TOXICITY:

typ. dose mode specie amount units other

LDLo ipr rat 3000 mg/kg

LD50 orl gpg 4160 mg/kg

LD50 orl rat 5500 mg/kg

LD50 orl rbt 7190 mg/kg

LD50 skn rbt 650 mg/kg

*AQTX/TLM96: Not available

*SAX TOXICITY EVALUATION:

THR: Moderately toxic by skin contact and intraperitoneal routes. Mildly toxic by ingestion. An experimental teratogen. Other experimental reproductive effects. An eye irritant.

*CARCINOGENICITY: Not available

*MUTATION DATA:

test lowest dose | test lowest dose

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Not available |

*TERATOGENICITY:

Reproductive Effects Data:

TDLo: orl-mus 32 gm/kg (7-14D preg)

TDLo: orl-rat 21650 mg/kg (7-16D preg)

TDLo: orl-rat 7200 mg/kg (7-16D preg)

TDLo: skn-rbt 3250 mg/kg (6-18D preg)

*STANDARDS, REGULATIONS & RECOMMENDATIONS:

OSHA: None

ACGIH: None

NIOSH Criteria Document: None

NFPA Hazard Rating: Health (H): 1

Flammability (F): 1

Reactivity (R): 0

H1: Materials only slightly hazardous to health (see NFPA for details).

F1: Materials that must be preheated before ignition can occur (see NFPA for details).

R0: Materials which are normally stable even under fire exposure conditions and which are not reactive with water (see NFPA for details).

*OTHER TOXICITY DATA:

Skin and Eye Irritation Data:

eye-rbt 500 mg MOD

eye-rbt 500 mg/24H MLD

Status: EPA TSCA Chemical Inventory, 1986

EPA TSCA Test Submission (TSCATS) Data Base, September 1989

SECTION 12: Ecological information

Toxicity

Harmful to aquatic life with long lasting effects.

BUTYLATED HYDROXYTOLUENE

EC50 - Daphnia - 0.48mg/L

BUTYLATED HYDROXYTOLUENE

LC50 - Fish - 1.1mg/L

Persistence and degradability

No data available

Bioaccumulative potential

No further information available

Other adverse effects

None

SECTION 13: Disposal considerations

Disposal methods

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Product disposal

Dispose of accordance in local, and provincial regulations for solvent and oil materials

Packaging disposal

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

Other disposal recommendations

Prevent the material from entering drains and water courses. Do not discharge directly to a water source. Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

SECTION 14: Transport information

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Canadian Domestic Substances List (DSL)

All components of this product are listed on the Canadian Domestic Substance List

Canadian Non-Domestic Substances List (NDSL)

SECTION 16: Other information

This Safety Data Sheet was prepared in good faith from the most recent information available. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use.

16.2 Preparation information

Prepared by Craig Gourley