Brake Fluid 550 DOT3

SECTION 1. IDENTIFICATION

Product Identifier	Brake Fluid 550 DOT3
Other Means of Identification	35-830PRES, 15-831OEM
Recommended Use	Please refer to Product label.
Restrictions on Use	None known.
Manufacturer / Supplier	Recochem Inc., 850 Montee de Liesse, Montreal, QC, H4T 1P4, Compliance and Regulatory Department, 905-878-5544, www.recochem.com
Emergency Phone No.	CANUTEC, 613-996-6666, 24 Hours
SDS No.	1589

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) - Category 4; Acute toxicity (Dermal) - Category 4; Skin corrosion/irritation - Category 2; Serious eye damage/eye irritation - Category 2A; Specific target organ toxicity (single exposure) - Category 3

GHS Label Elements

Signal Word:
Warning

Hazard Statement(s):

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary Statement(s):

Prevention:

P261	Avoid breathing fume, mist, vapours, spray.
P264	Wash hands and skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing.

Response:

P301 + P312	IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
P330	Rinse mouth.

P302 + P352 IF ON SKIN: Wash with plenty of water.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P337 + P313 If eye irritation persists: Get medical advice/attention.

Storage:
Store in a well ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.

Note:
10.50
% of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Triethylene glycol butyl ether	143-22-6	40-70	
Pentaethylene glycol	4792-15-8	15-40	
Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy-	9004-77-7	7-13	
Diethylene glycol monobutyl ether	112-34-5	7-13	
Poly(oxy-1,2-ethanediyl), alpha-methyl-omega-hydroxy-	9004-74-4	7-13	
Triethylene glycol	112-27-6	7-13	
Polyethylene glycol 400	25322-68-3	7-13	
Diethylene glycol	111-46-6	1-5	
Trisodium phosphate	7601-54-9	1-5	

Notes

The specific chemical identity and/or exact percentage of composition (concentration) has been withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Call a Poison Centre or doctor if you feel unwell or are concerned.

Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Call a Poison Centre or doctor if you

feel unwell or are concerned. If skin irritation occurs get medical advice/attention. Clean clothing, shoes and leather goods.

Eye Contact

Avoid direct contact. Wear chemical protective gloves if necessary. Quickly and gently blot or brush chemical off the face. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Remove contact lenses, if present and easy to do. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists, get medical advice/attention.

Ingestion

Rinse mouth with water. Call a Poison Centre or doctor if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Immediate Medical Attention and Special Treatment

Target Organs

Skin, eyes, kidneys.

Special Instructions

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Medical Conditions Aggravated by Exposure

None known.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

This product presents no unusual hazards in a fire situation. Can ignite if strongly heated. Closed containers may rupture violently when heated releasing contents.
In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides.

Special Protective Equipment and Precautions for Fire-fighters

Review Section 6 (Accidental Release Measures) for important information on responding to leaks/spills.
See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

No special precautions are necessary.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for

waste disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for Safe Storage

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	**TWA**	**STEL**	**TWA**	**Ceiling**	**8-hr TWA**	**TWA**
Triethylene glycol butyl ether	Not established	Not established	Not established	Not established		
Pentaethylene glycol	Not established	Not established	Not established	Not established		
Diethylene glycol monobutyl ether	10 ppm					
Triethylene glycol	Not established	Not established	Not established	Not established		
Diethylene glycol					10 mg/m3	
Trisodium phosphate	Not established	5 mg/m3	Not established	Not established		
Polyethylene glycol 400	Not established	Not established	Not established	Not established		

Appropriate Engineering Controls

The hazard potential of this product is relatively low. General ventilation is usually adequate. For large scale use of this product: provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

Not normally required if product is used as directed. For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Colourless brown liquid.
Odour	Hydrocarbon
Odour Threshold	Not available
pH	7.0 - 11.5
Melting Point/Freezing Point	-47 ºC (-53 ºF) (melting); -47 ºC (-53 ºF) (freezing)
Initial Boiling Point/Range	260 ºC (500 ºF)
Flash Point	143.3 ºC (289.9 ºF) (closed cup)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	< 0.01 mm Hg (0.00 kPa) at 20 ºC
Vapour Density (air = 1)	7 (estimated)
Relative Density (water = 1)	1.010 - 1.040 at 20 ºC
Solubility	Soluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	2.0 centistokes at 20 ºC (estimated) (kinematic); Not available (dynamic)

Other Information

Physical State	Liquid
Molecular Weight	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity

None known.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Do not allow product to become dry. High temperatures. Temperatures above 143.0 ºC (289.4 ºF)

Incompatible Materials

Strong acids (e.g. hydrochloric acid), strong oxidizing agents (e.g. perchloric acid).

Hazardous Decomposition Products

Very toxic, flammable aldehydes.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Skin contact; eye contact.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Triethylene glycol butyl ether	Not available	5300 mg/kg (male rat)	3.54 ml/kg bw (rabbit)
Pentaethylene glycol	Not available	22500 mg/kg (guinea pig)	Not available
Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy-	Not available	Not available	Not available
Diethylene glycol monobutyl ether		6560 mg/kg (rat)	2764 mg/kg (rabbit)
Poly(oxy-1,2-ethanediyl), alpha-methyl-omega-hydroxy -		39800 mg/kg (rat)	> 20000 mg/kg (rabbit)
Triethylene glycol	> 3.9 mg/L (rat) (4-hour exposure)	17000 mg/kg (rat)	22460 mg/kg (rabbit)
Diethylene glycol	4600 mg/m3 (rat) (30-minute exposure)	12565 mg/kg (rat)	11890 mg/kg (rabbit)
Trisodium phosphate	Not available	4100 mg/kg (rat)	> 7940 mg/kg (rabbit)
Polyethylene glycol 400	Not available	15700 mg/kg (guinea pig)	Not available

LC50: Not applicable.

LD50 (oral): Not applicable.

LD50 (dermal): Not applicable.

Skin Corrosion/Irritation

Human experience and animal tests show moderate or severe irritation. (Pentaethylene glycol). (Trisodium phosphate)

Serious Eye Damage/Irritation

Animal tests show serious eye irritation. (Triethylene glycol butyl ether). (Pentaethylene glycol)

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause At high concentrations nose and throat irritation.

Skin Absorption

Not harmful based on limited evidence.

Ingestion

May be harmful based on human experience and animal tests. If large amounts are swallowed symptoms may include nausea, vomiting, stomach cramps and diarrhea. Depression of the central nervous system, harmful effects on the kidneys. (Diethylene glycol)

Aspiration Hazard

Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause At high concentrations harmful effects on the kidneys, harmful effects on the liver. Blood tests may show abnormal results. effects similar to STOT (Specific Target Organ Toxicity) - Single Exposure, as described above.

Respiratory and/or Skin Sensitization

Not a skin sensitizer. Not known to be a respiratory sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Triethylene glycol butyl ether	Not Listed	Not designated	Not Listed	Not Listed
Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy-	Not Listed	Not designated	Not Listed	Not Listed
Diethylene glycol monobutyl ether	Not Listed	Not designated	Not Listed	Not Listed

Poly(oxy-1,2-ethanediyl), alpha-methyl-omega-hydroxy-	Not Listed	Not designated	Not Listed	Not Listed
Triethylene glycol	Not Listed	Not designated	Not Listed	Not Listed
Diethylene glycol	Not Listed	Not designated	Not Listed	Not Listed
Trisodium phosphate	Not Listed	Not designated	Not Listed	Not Listed
Polyethylene glycol 400	Not Listed	Not designated	Not Listed	Not Listed

Reproductive Toxicity

Development of Offspring

Animal studies show effects on the offspring. However, these effects are only seen with significant toxicity in the mothers. Has been associated with: decreased weight. (Triethylene glycol)
Animal studies show effects on the offspring. However, these effects are only seen with significant toxicity in the mothers. (Diethylene glycol)

Sexual Function and Fertility

May cause effects on sexual function and/or fertility. However, these effects were seen in the presence of significant other toxicity. (Diethylene glycol)

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not known to be a mutagen.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Triethylene glycol butyl ether	2400 mg/L (Pimephales promelas (fathead minnow); 96-hour; static)			
Pentaethylene glycol	Not available	Not available		
Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy-	Not available			
Diethylene glycol monobutyl ether	1300 mg/L (Lepomis macrochirus (bluegill); 96-hour)	100 mg/L (Daphnia magna (water flea); 48-hour)		
Poly(oxy-1,2-ethanediyl), alpha-methyl-omega-hydroxy-	10000 mg/L (Pimephales promelas (fathead minnow); 96-hour)	Not available		
Triethylene glycol	> 100 mg/L (Pimephales promelas (fathead minnow); 96-hour)	46500 mg/L (Daphnia magna (water flea); 48-hour)		

Diethylene glycol	75200 mg/L (Pimephales promelas (fathead minnow); 96-hour; fresh water)	10000 mg/L (Daphnia magna (water flea); 48-hour)		Not available
Trisodium phosphate	88300 ug/L (Western Mosquito Fish; 24 hr; fresh water; static)	Not available		
Polyethylene glycol 400	> 5000 mg/L (Goldfish; 24 hr; fresh water; static)	Not available		

Chronic Aquatic Toxicity

Chemical Name	NOEC Fish	EC50 Fish	NOEC Crustacea	EC50 Crustacea
Triethylene glycol butyl ether	Not available		Not available	
Pentaethylene glycol	Not available		Not available	
Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy-	Not available		Not available	
Diethylene glycol monobutyl ether	Not available		Not available	
Poly(oxy-1,2-ethanediyl), alpha-methyl-omega-hydroxy-	Not available		Not available	
Triethylene glycol	Not available		Not available	
Diethylene glycol	Not available		Not available	Not available
Trisodium phosphate	Not available		Not available	
Polyethylene glycol 400	Not available		Not available	

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

Mobility in Soil

No information was located.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG Regulations. Not regulated under US DOT Regulations.

Environmental Hazards	Not applicable
Special Precautions for User	Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

SDS Prepared By	Compliance and Regulatory Department
Phone No.	905-878-5544
Date of Preparation	October 26, 2015
Additional Information	We are committed to uphold the Industry Consumer Ingredient Communication Voluntary Initiative. Please send us your request by visiting our website at www.recochem.com. Ingredients present (intentionally added ingredients) at a concentration of greater than one percent (1%) shall be listed in descending order of predominance. Ingredients present at a concentration of not more than one percent shall be listed but may be disclosed without respect to order of predominance.
Disclaimer	Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.