

SECTION I-MATERIAL IDENTIFICATION AND USE

Material Name/Identifier:	Dot 4 Super Heavy Duty Brake Fluid	Stock No.	532
Manufacturer's Name:	Kleen-Flo Tumbler Industries Ltd	Street Address:	75 Advance Blvd.
City:	Brampton	Province:	Ontario
Postal Code:	L6T 4N1	Emergency Phone #:	CANUTEC:- 613-996-6666 (24HR)
Chemical Name:	mixture (N.Ap.)	Chemical Family:	glycols/polyglycols/glycol ethers.
Chemical Formula:	mixture (N.Ap.)	Trade Names & Synonyms:	none
Material Use:	Auto brake fluid	Molecular Weight:	mixture (N.Ap.)

SECTION II-HAZARDOUS INGREDIENTS OF MATERIAL

Hazardous Ingredients	C.A.S.	Approximate % Concentration	LD50 Species & Route	LC50 Species & Route
2,5,8,11-Tetraoxatridecan-13-ol	176022-80-3	15 - 40	N/Av.	N/Av.
Triethylene glycol monomethyl ether	112-35-6	10 - 30	7400mg/kg rabbit-dermal	N/Av.
Polyethylene glycol monomethyl ether	9004-74-4	10 - 30	7400mg/kg rabbit-dermal	N/Av.
Polyethylene glycol monobutyl ether	9004-77-7	7 - 13	3500mg/kg rabbit-dermal	N/Av.
Triethylene Glycol monobutyl ether	143-22-6	10 - 30	3500 mg/kg rabbit-dermal	>200ppm (1hr) rat-inhal
Tetraethylene glycol	112-60-7	5- 10	22460mg/kg rabbit-dermal	N/Av.
Pentaethylene glycol	4792-15-8	1 - 5	20000mg/kg rabbit-dermal	N/Av.
Triethylene glycol	112-27-6	3 - 7	18016mg/kg rabbit-dermal	4.5mg/L(4hr) rat-inhal
Diisopropanolamine	110-97-4	0.1 - 1.5	8000mg/kg rabbit-dermal	N/Av.
Sodium hydroxide	1310-73-2	0.1 - 1.0	N/Av.	N/Av.

SECTION III-PHYSICAL DATA FOR MATERIAL

Physical State:	liquid	Odour/Appearance:	Mild amine odor/ clear amber liquid
Specific Gravity:	1.05	Odour Threshold(p.p.m.):	N/Av.
Boiling Point:	>265 °C	Evaporation Rate:	N/E
Freezing Point:	<-59 °C	Solubility in Water:	Soluble
% Volatile(by volume):	N/E	Vapour Pressure(mm)Hg:	<0.1
Vapour Density(Air=1):	>10	Coefficient of Water/Oil Distribut:	N/E
pH:	7-11		

SECTION IV-FIRE AND EXPLOSION HAZARD OF MATERIAL

Flammability Yes/No	No	If yes under which conditions?:	N.Ap.
Auto Ignition Temperature:	N/E	Means of Extinguishing:carbon monoxide or dry chemical media	
Flashpoint and Method:	132 oC PMcc	Hazardours Combustion Products:	carbon dioxide, Carbon monoxide, trace amount of nitrogen oxide
Upper Flammable limit (%vol)	N/E	Lower Flammable Limit (% by volume):	N/E
Explosion Data:	Sensitivity to Mechanical Impact: : No	Sensitivity to Static Discharge:	No

SECTION V-REACTIVITY DATA

Chemical Stability Yes/No:	Yes	If no under which conditions?	
Incompatibility to Other Substances Yes/No:	Yes	If so which ones? Strong Acid, Base and Oxidizer	
Reactivity and under what conditions?	None		
Hazardous Decomposition Products:	Burning can produce carbon monoxide and/or carbon dioxide and trace amounts of oxides of nitrogen.		
N/E: not established	N.Ap.:not applicable	N/Av.: not available	

SECTION VI-TOXICOLOGICAL PROPERTIES OF PRODUCT

Routes of entry: ALL Routes	--SKIN CONTACT --SKIN ABSORPTION --EYE CONTACT --INHALATION --INGESTION		
Effects of Acute Exposure:	Skin contact may cause slight redness. High Vapor Concentration may cause irritation.		
	May cause irritation and moderate corneal injury.		
Effects of Chronic Exposure:	Contains components which have been reported to cause effect on the following organs in animals:		
	Bladder, Kidney. These effect were only observed at exaggerated doses.		
LD 50 of Product:	N/E	LC 50 of Product:	N/E
Irritancy of Product:	eye irritation	Exposure Limits of Product:	N/E
Sensitization of Product:	N/Av.	Toxicologically Synergistic Materials:	N/Av.
--CARCINOGENICITY --REPRODUCTIVE EFFECTS --TERATOGENICITY --MUTAGENICITY			none known

SECTION VII-PREVENTIVE MEASURES

Personal Protective Equipment to be used:

Gloves(specify):	Nitrile, PVA, Butyl rubber, Latex.	Eye (specify):	Safety glasses
Respiratory(specify):	Not required during normal use	Clothing:	Not required
Respiratory Protection:	If used indoors or on a continuous basis, use of NIOSH approved respirator is recommended		
Engineering Controls:	Local and mechanical ventilation recomended.		
Leak and Spill Procedure:	Absorb with material such as sand, vermiculite. Collect and disposed according to local or provincial regulation.		
Waste Disposal:	Dispose at registered waste management facility as per municipal or provincial regulation.		
Storage Requirements:	Store at room temperature. Keep container tight closed at all times. Do not store in copper container. Store away from direct sunlight.		
Handling Procedures and	Handle with care. Keep away from children. Do not inhale or ingest. Do not get in to eyes.		
TDG Classification:	Not regulated.		
WHMIS Classification:	Consumer Commodity.		

SECTION VIII-FIRST AID MEASURES

Eye:	Flush eyes thoroughly with water for at least 15 minutes. See doctor if irritation persist.
Skin:	Wash with soap and water. See doctor if irritation persist.
Inhalation	Remove patient to fresh air and restore breathing if required seek medical help if discomfort persist.
Ingestion:	If patient is conscious, give two glasses of water. DO NOT INDUCE VOMITING. Obtain medical attention.

SECTION IX-PREPARATION DATE OF M.S.D.S.

Additional Info/Comments:		Sources Used: Dow chemical/Union carbide technical data
Phone Number:	(905) 793-4311	Prepared By: Quality Control Laboratory
Date Prepared:	January 2, 2012.	Kleen-Flo Tumbler Industries Limited

THIS SHEET SUPERSEDES ANY OTHER M.S.D.S. PREVIOUSLY PREPARED

N/Av.: not available

N/Ap.: not applicable

N/E: not established