TESLA CORPORATION
PO BOX 114132, Dubai, UAE
MATERIAL SAFETY DATA SHEET

Section 1 - PRODUCT IDENTIFICATION

SUPPLIER
TESLA Corporation,
PO BOX 114132, Dubai, UAE

EMERGENCY TELEPHONE NUMBERS
Company (+971) 561144201

CHEMICAL NAME AND SYNONYMS
None

TRADE NAME AND SYNONYMS
BERYL 3000/4000 BRAKE FLUIDS

CHEMICAL FAMILY MIXUTURE

FORMULA Proprietory

CAS REGISTRY NUMBER Not applicable

SECTION 2 - COMPOSITION/INFORMATION ON INGRDIENTS

Component Name	CAS#	EU Inventory	Wt%	Risk	Symbol
Triethylene Glycol Monobutyl ether	143-22-6	205-592-6	23-35	None	None
Triethylene Glycol Monomethyl ether	112-35-6	203-962-1	3-10	None	None
Diethylene Glycol	111-46-6	203-872-2	10-20	R22	Xn
Tetrethylene Glycol Monobutyl ether	1559-34-8	216-322-1	9-14	None	None
Tetraethylene glycol	112-60-7	203-989-9	6 - 10	None	None
Triethylene glycol monoethyl ether	112-505	203-978-9	8-20	None	None
Pentaethylene glycol monobutyl ether	23601-39-0	245-774-2	2-5	None	None
Diethylene Glycol monobutyl ether	112-34-5	203-961-6	1-8	R33	Xi
Polyethylene glycol methyl ether	9004-74-4	Not assigned	<4	None	None
Diethylene glycol monoethyl ether	119-90-0	203-919-7	<2	None	None

Concentrations given are typical values: See Section 16 for full text of risk phrases
All Relevant Risk Phrases: R22 Harmful if swallowed: R 36 Irritating to eyes

SECTION 3 HAZARD IDENTIFICATION

Emergency overview
This material is hazardous by OSHA Hazard communication definition
Signal Warning: WARNING
Hazards: Liquid, Vapours or mist may be irritating to eyes, skin and respiratory tract

	NFPA	HMIS
Health	1	1
Flammability	1	1
Reactivity	0	0

Physical State	Color	Odor	Odor Threshold
Liquid	Clear to Amber	Mild Odor	No value available

Potential Health Effects — Signs and Symptons of Acute Exposure
Skin, Eye, Inhalation — See Component Summary

Triethylene Glycol Monobutyl Ether CAS 143-22-6
Contact may cause severe eye irritation, but not expected to cause permanent damage. No other signs of symptons of acute exposure are expected during normal use with standard manufacturing practices

Triethylene Glycol Monomethyl ether CAS 112-35-6
Mildly toxic by ingestion and skin contact. A mild skin and eye irritant

Diethylene Glycol CAS 111-46-6
This substance may cause effects on the central nervous system, liver and kidneys

Tetraethylene Glycol Monobutyl Ether CAS 1559-34-8
No known chronic health effects

Tetraethylene Glycol CAS 112-60-7
No adverse chronic human health effects have beenr reported for this material

Tetraethylene Glycol monoethyl ether CAS 112-5-03
May be irritating to skin

Pentaethylene glycol monobutyl ether CAS 23601-39-0
Not expected to present a significant health hazard with short term exposure

Diethylene Glycol monobutyl ether CAS 112-34-5
Moderate eye irritant. Effects of eye irritation are reveersible. Contact may cause mild skin irritation. Not expected to be a sensitizer. Not a skin absorption hazard

Polyethylene glycol methyl ether CAS 9004-74-4
Mild skin irritant. May cause minor eye irritation

Diethylene glycol monoethyl ether CAS 111-90-0
Moderate eye irritant. Slight skin irritant. May produce symptons of CNS depression including headache, dizziness nausea, loss of sense of balance, drowsiness and visual disturbances

Skin: May cause slight irritation if left in contact with skin. May be absorbed in toxic amounts through the skin

Inhalation: Due to low vapour pressure, significant exposure by inhalation appears unlikely. However, exposure to high concentrations of mist, aerosol, or vapours at elevated temperatures may cause irritation, coughing, and discomfort in the nose, throat and chest

Ingestion: May cause symptoms of CNS depression including headache, dizziness, nausea, loss of sense of balance, drowsiness and visual disturbances

Chronic Health Effects: See component summary

Triethylene Glycol Monobutyl Ether CAS 143-22-6

Repeated or prolonged contact may cause skin irritation. May cause dermatitis by defatting the skin from prolonged or repeated contact

Triethylene Glycol Monomethyl ether CAS 112-35-6

No chronic health hazards are expected to occur from anticipated conditions of normal use of this material

Polyethylene glycol methyl ether CAS 9004-74-4

No known chronic health effects

Diethylene Glycol CAS 111-46-6

No adverse chronic human health effects have beenr reported for this material

Tetraethylene Glycol CAS 11206-07

No adverse chronic human health effects have beenr reported for this material

Tetraethylene Glycol Monobutyl Ether CAS 1559-34-8

No adverse chronic human health effects have beenr reported for this material

Tetraethylene Glycol monoethyl ether CAS 112-5-03

No known chronic health effects

Pentaethylene glycol monobutyl ether CAS 23601-39-0

No known chronic health effects

Diethylene Glycol monobutyl ether CAS 112-34-5

May cause dermatitis be defatting the skin from prolonged or repeated contact

Polyethylene glycol methyl ether CAS 9004-74-4

No known chronic health effects

Diethylene glycol monoethyl ether CAS 111-90-0

Repeated or prolonged skin contact may cause slight transient irritation. Skin absorption may add significantly to the overal toxic effect. Prolonged or high exposure may cause CNS effects and liver and kidney changes

CONDITIONS AGGRAVATED BY EXPOSURE

Any pre-exisitng disorders or diseases of the eyes, skin, blood and/or central nervous system (CNS)

4. FIRST AID MEASURES

General Take proper precautions to ensure your own health and safety before attempting to resuce and providing first aid For specific information refer to the Emergency Overview in Section 3 of this MSDS

Skin: Wash skin with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. Discard contaminated shoes. If irritation occurs, get medical attention

Inhalation Remove exposed person to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. CALL A PHYSICIAN IMMEDIATELY

Eye Flush eyes with large amounts of water for at least 15 minutes, lifting eye lids to insure complete flushing of surface. GET MEDICAL ATTENTION IMMEDIATELY

Ingestion Never give anything by mouth to an unconcious person. Have patient drink several glasses of water, then induce vomitting by having patient tickle back of throad with finger. Keep airway clear. GET MEDICAL ATTENTION IMMEDIATELY

5. FIRE FIGHTING MEASURES

Flammable properties

Classification

OSHA/NFPA Class IIIB combustible Fluid

Flash Point: 121 deg C PMCC

Auto ignition temperature: 310 deg C

Lower Flammable Limit: NO Data Available

Upper Flammable Limit: No data available

Extinguishing Media

Suitable: SMALL FIRE: Use dry chemicals, CO2, Water spray or alcohol resistant foam.

LARGE FIRE: use water spray, water fog or alcohol resistant foam

Unsuitable: Do not use solid water stream

Protection for Firefighters

Protective Equipment/Coating: Wear positive pressure self contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection

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Fire Fighting Guidance: Fight fire from maximum distance or use unmanned hose handlers or monitor nozzles. Move

containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire
Hazardous Combustion Products: Carbon oxides (CO, CO2)

6. ACCIDENTAL RELEASE INFORMATION

Release Response
Combustible fluid. Eliminate all sources of ignition. Do not touch or walk through spilled material. Stop leak if u can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. Absorb or cover with dry earth, sand, and other non-combustible material and transfer to containers. Use clean non-sparkling tools to collect absorbed mtl

7. HANDLING AND STORAGE

Handling: Normal precautions common to good manufacturing practise should be followed in handling and storage. Open and handle container with care. Do not handle near heat, sparks or flame. Avoid contact with incompatible agents. Use only with adequate ventilation/personal protection. Avoid contact with eyes, skin, and clothing. Do not enter storage area unless adequately ventilated. Metal containers involved in the transfer of this material should be grounded and bonded. Handle empty containers with care as resude may be combustible. After handlng, always wash hands with soap and water. Isolate, vent, drain wash and purge systems or equipment before maintenance or repair. Observe precautions pertaining to confined space entry. Check atmosphere for explosiveness and oxygen deficiencies. Use only non-sparkling tools.
Storage: Store in well ventilated area. Store away from heat, open flame and strong oxidising agents. Keep container tightly closed and properly labelled. Ground all equipment containing this material. Use only non sparkling tools

8. EXPOSURE CONTROL/PERSONAL PROTECTIVE EQUIPMENT

Engineering controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levesl below recommended exposure limits
Personal Protection:
Inhalation: A respiratory protection program that meets OSHA's 29 CFR 1910/134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. No occupational exposure limits have been established for this material or its components. If nuisance mists cause discomfort, US National Institute for Occupational Safety and Health (NIOSH) approved respiratory protection is suggested
SKIN: Wear chemical resistant gloves such as rubber, neoprene, or vinyl. When skin contact is possible, protective clothing inlcuding gloves, apron, sleeves, boots, head and face protection should be worn. The equipment must be cleaned thoroughly after each use
EYE Safety glasses are required as minimum requirements. Use splash goggles when eye contact due to splashing or spraying liquid is possible
Additonal Remarks: Selection of appropriate personal protective equipment should be based on an evalluation of the performance characteristics of the protective equipment relative to the tasks to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Emergency eye wash fountains and safety showers should be available in the immeidate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands befor eating, drinking, smoking or using toilet facilities. Prompty remove soiled clothing and wash thoroughly before reuse. Use care in walking on spilled material. Material spilled on hard surfaces can be a serious slipping/falling hazard

Occupational Exposure Limits

Component Name	Sources/Date	Value	Type	Notation
Tetraethylene Glycol	US (ACGIH)/2007	N/L		
	US (OSHA)/2007	N/L		
Diethylene Glycol	US (ACGIH)/2006	N/L		
	US (OSHA)/1993	N/L		
Triethylene Glycol Monoethly ether	US (ACGIH)/2003	N/L		
	US (OSHA)/2003	N/L		
Diethylene Glycol monobutyl ether	US (ACGIH)/2004	N/L		
	US (OSHA)/2000	N/L		
Diethylene Glycol monoethyl ether	US (ACGIH)/2006	N/L		

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid Amber	Flammability: OSHA/NFPA Class IIIB combustible liquid
Odor	Mild Odor	Relative density: 1.05
Boiling Point/Boiling Range	>210 deg C	Solubility(Water) Soluble in Water
Freezing Point/Freezing Range	-50 deg C	
Flash Point	121 degC, PMCC	
Auto ignition	310 deg C	

10. STABILITY AND REACTIVITY

Chemical Stability	This product is stable
Conditions to Avoid	Avoid contact with strong oxidisers, excessive heat, sparks and open flame

Substances to avoid	Oxidisers
Decomposition products	Carbon di oxides
Hazardous polyr	Will Not occur
Reactions with Air and water	Does not react with air, water or other common materials

11. TOXICOLOGICAL INFORMATION

Product Summary
This product appears to be of low toxicity, except for possible mild irritant effects in humans. A high does may produce central nervous system depression, but there are no reports of adverse health effects from occupational exposure
Triethylene Glycol Monobutyl ether CAS 143-22-6
Acute Toxicity - Lethal doses
LD50 Oral Rat 5300 mg/kg LD 50 Skin Rabbit 3540 UL/kg
Irritation
Skin Repeated or prolonged contact may cause slight skin irritation. No significant signs or symptons indicative of any health hazard are expected to occur as a result of skin absorption exposure. Not expected to be a sensitizer
Eye: Contact may cause severe eye irritation, but is not expected to cause permanent eye damage
Target Organ effects: Eye, Skin
Repeated Dose Toxicity> No known chronic health effects. Repeated or prolonged contact with skin may cause defatting and drying of the skin which may result in dermatitis
Reproductive Effects Not expected to occur
Developmental Effects: Results from animal studies demonstrate that this material is not a teratogen, not is it toxic to the developing embryo or fetus at non maternally toxic doses
Carcinogenicity: Not listed by IARC, NTP or OSHA
Triethylene Glycol Monomethyl ether CAS 112-35-6
Acute Toxicity - Lethal doses
LD50 Oral Rat 11.8 g/kg LD 50 Skin Rabbit 7.4 g/kg
Irritation
Skin This substance is a mild skin irritant
Eye This product is suspected to be a mild eye irritant
Repeated Dose Toxicity In severe everexposure enough mateiral might be absorbed into the skin to cause systemic injury
Reproductive Effects Laboratory tests indicate high doses may cause adverse reproductive effects in rats and mice
Carcinogenicity: No conclusive data found in literature search. Not listed by IARC, NTP or OSHA
Polyethylene Glycol Methyl Ether CAS 9004-74-4
Acute Toxicity - Lethal doses
LD50 Oral Rat 22-40 g/kg LD 50 Skin Rabbit >20 ml/kg
Reproductive Effects: Maternally toxic oral doses did not produce malformations and was not selectively toxic to developing conceptus
Diethylene Glycol CAS 111-46-6
Acute Toxicity - Lethal doses
LD50 Oral Rat 12256 g/kg BWT; Mouse: 23700 mg/kgBWT LD 50 Skin Rabbit >11900 mg/kg
Acute toxicity effects - Inhalation: none expected
Irritation:
Skin: Not expected to be a sensitizer
Eye May cause minor eye irritation
Repeated Dose Toxicity: Diethylene glycol given to rats in the diet for two years caused bladdr stones, tumours and kidney and liver damage. These effects were probably due to contaminating ethylene glycol, and the bladder stones were formed from oxlate crystals
Reproductive Effects: Reproductive and developmental effects have been noted in animals following very large (>3000 mg/kg bw/day) oral doses. However, comparable internal does levels are not possible with dermal or inhalation exposures under normal conditions of use. Therefore, diethylene glycol is not considered a possible reproductive or developmental hazard except during very large oral doses