

# Material Safety Data Sheet

HBF 3/280

**Infosafe™** 1EVFA **Issue Date** January 2008 **Status** ISSUED by HUNTSMAN **BS:** 1.9.46  
**No.**

**Not classified as hazardous according to criteria of NOHSC**

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## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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**Product Name** HBF 3/280

**Company Name** HUNTSMAN CORPORATION AUSTRALIA PTY LTD. (ABN 67 083 984 187)

**Address** 61 Market Road Brooklyn  
Victoria 3012

**Emergency Tel.** 1800 786 152 (ALL HOURS) / International: +65 6336 6011 (ALL HOURS)

**Telephone/Fax Number** Tel: +613 9316 3646  
Fax: +613 9316 3647

**Recommended Use** Motor vehicle brake fluid.

**Other Names** None Listed

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## 2. HAZARDS IDENTIFICATION

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**Hazard Classification** NON-HAZARDOUS SUBSTANCE.  
NON-DANGEROUS GOODS.

Hazard classification according to the criteria of NOHSC.  
Dangerous goods classification according to the Australia  
Dangerous Goods Code.

**Risk Phrase(s)** None Assigned.

**Safety Phrase(s)** None Assigned.

**Other Information** Hazard classification  
Non-Hazardous Substance. Non-Dangerous Goods.

Based on available information, this material is not  
classified as hazardous according to health criteria of

ASCC.

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

Classified as a C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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**Information on  
Composition**

Appearance: Viscous, clear, coloured liquid with mild odour.

<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	Polyglycol ether borate ester	-	>60 % w/w
	Corrosion Inhibitors	-	<1 % w/w
	Other additives	-	<1 % w/w

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### 4. FIRST AID MEASURES

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**Inhalation**

Remove victim from exposure. Keep at rest until fully recovered. Seek medical advice.

**Ingestion**

Rinse mouth with water. Give plenty of water to drink. If vomiting occurs give further water. Seek medical advice.

**Skin**

If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If irritation occurs seek medical attention. Wash contaminated clothing before re-use.

**Eye**

Irrigate with copious quantities of water. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.

**Advice to  
Doctor**

Medical attention and special treatment:  
Treat symptomatically. Following ingestion the polyglycol ether borate ester component is likely to hydrolyse to form a polyglycol ether and boric acid.  
For polyglycol ethers: Blockade of alkoxyacetic acid metabolite may follow competitive inhibition of alcohol dehydrogenase with ethanol or 4-methylpyrazole. Maintain a plasma ethanol level of 100 to 150 mg/dL (1).  
For boric acid: There is no specific antidote. Treat symptomatically.

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### 5. FIRE FIGHTING MEASURES

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**Suitable Extinguishing Media** For large fires use water fog, fine water spray or foam. Do not use water jets. For small fires use foam, dry chemical, carbon dioxide or water spray.

**Hazards from Combustion Products** Combustible liquid. On burning will emit toxic fumes including those of carbon monoxide and carbon dioxide.

**Hazchem Code** None Assigned.

**Decomposition Temp.** Not available

**Precautions in connection with Fire** Precautions for fire fighters and special protective equipment:  
Heating can cause expansion or decomposition leading to violent rupture of containers. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of combustion as well as structural fire fighters uniform.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Emergency Procedures** Emergency procedures: Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination. Do not touch or walk through spilled material.

**Methods and Materials for Containment and Clean Up Procedures** Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled drums for disposal. Wash area down with excess water to remove residual material.

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## 7. HANDLING AND STORAGE

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**Precautions for Safe Handling** Avoid eye contact and repeated or prolonged skin contact. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Do not dispose of material to sewers or waterways.

**Conditions for Safe Storage** Avoid contamination, which could result in brake system failure during use. Keep containers dry and closed at all times as material is hygroscopic and may absorb moisture from the air. Store away from oxidising agents.

Classified as a C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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<b>National Exposure Standards</b>	No value assigned for this specific material by the Australian Safety and Compensation Council (ASCC).
<b>Biological Limit Values</b>	Not Relevant.
<b>Engineering Controls</b>	Natural ventilation should be adequate under normal use conditions. Keep containers closed when not in use.
<b>Personal Protective Equipment</b>	OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES (Short) Wear overalls, safety glasses and impervious gloves.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance</b>	Viscous, clear, coloured liquid with mild odour.
<b>Decomposition Temperature</b>	Not available
<b>Melting Point</b>	Not available
<b>Boiling Point</b>	283 - 286°C
<b>Solubility in Water</b>	Miscible
<b>Specific Gravity</b>	1.08 (20°C)
<b>pH Value</b>	7.5 (neat product)
<b>Vapour Pressure</b>	Not available (20°C)
<b>Vapour Density (Air=1)</b>	Not available
<b>Evaporation Rate</b>	Not available
<b>Viscosity</b>	5 cP (20°C)
<b>Volatile Component</b>	Not available
<b>Flash Point</b>	155 -156°C
<b>Auto-Ignition Temperature</b>	Not available
<b>Flammable Limits - Lower</b>	Not available
<b>Flammable</b>	Not available

**Limits - Upper**

**Other Information** Solubility: Miscible with water and most organic solvents.  
Sublimation Point (°C): Not applicable  
(Typical values only - consult specification sheet)

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**10. STABILITY AND REACTIVITY**

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**Chemical Stability** Stable under normal conditions of use.

**Conditions to Avoid** None known.

**Incompatible Materials** Reacts with strong oxidising agents.

**Hazardous Decomposition Products** Carbon monoxide and carbon dioxide.

**Hazardous Reactions** None known.

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**11. TOXICOLOGICAL INFORMATION**

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**Toxicology Information** Acute toxicity / Chronic toxicity  
Dermal LD50 (rat): > 2000 mg/kg (4)

**Health Hazard** No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may arise if the product is mishandled are: For WSA format, please refer to Health Effects Section for acute effects.

**Inhalation** Inhalation of vapour can result in headaches, dizziness, possible nausea and irritation to the respiratory tract, experienced as nasal discomfort and discharge with chest pain and coughing.

**Ingestion** Following ingestion the polyglycol ether borate ester component is likely to hydrolyse to form a polyglycol ether and boric acid.  
For polyglycol ethers: Initial symptoms following a massive dose (>100 mL in a single dose) are those of alcohol intoxication. These symptoms soon progress to vomiting, cyanosis (bluish skin discolouration), headache, tachypnea (excessive respiration frequency), tachycardia (abnormally rapid heart rate), hypotension (abnormally low blood pressure), pulmonary oedema, muscle tenderness, stupor, anuria (urine suppression), prostration and unconsciousness with convulsions. Hypoglycaemia (glucose deficiency in bloodstream) may occur. Death may occur within a few hours from respiratory failure or within the first 24 hours from

pulmonary oedema. (2)

**Skin** Contact with skin may result in irritation. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis. (3)

**Eye** May be an eye irritant.

**Chronic Effects** Long Term Effects:  
Following ingestion the polyglycol ether borate ester component is likely to hydrolyse to form a polyglycol ether and boric acid.  
For polyglycol ethers: Animal studies have shown that long term repeated exposure to high doses of polyglycol ethers in the diet causes kidney and liver injury. (3)

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## 12. ECOLOGICAL INFORMATION

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**Ecotoxicity** No LC50 data available for product.

**Persistence / Degradability** No data available for product.

**Mobility** No data available for product.  
Avoid contaminating waterways.

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## 13. DISPOSAL CONSIDERATIONS

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**Disposal Considerations** Empty containers should be forwarded to an approved agent for recycling. Avoid unauthorised discharge to sewer.

**Special precautions for landfill or incineration** Special precautions for landfill or incineration:  
Material suitable for disposal by incineration or landfill through an approved agent.

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## 14. TRANSPORT INFORMATION

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**Transport Information** Road and Rail Transport  
Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

Marine Transport  
Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport  
Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

**Hazchem Code** None Assigned.

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## 15. REGULATORY INFORMATION

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<b>Regulatory Information</b>	Country/Region	Inventory	Status
	Australia listed	AICS	All components
	Canada	DSL/NDSL	Not determined
	Europe	EINECS	Not determined
	Japan	ENCS	Not determined
	Korea	ECL	Not determined
	New Zealand listed	NZIoC	All components
	United States	TSCA	Not determined

**Poisons Schedule** Not Scheduled

**Symbol** None Assigned.

**AICS (Australia)** All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

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## 16. OTHER INFORMATION

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**Literature References** Literary reference

- (1) 'Triethylene glycol poisoning treated with intravenous ethanol infusion', Vassiliadis J. et al., Clinical Toxicology, 37(6), pp 773-776, 1999.
- (2) Dreisbach's Handbook of Poisoning, 13th Edition, True, B-L and Driesbach, R.H., p. 210, The Parthenon Publishing Group, 2002.
- (3) Technical Report No. 64 - The Toxicology of Glycol Ethers and its Relevance to Man, ECETOC, Brussels, Belgium, 1995.
- (4) Acute Dermal Toxicity Test, April, 2000.

<b>User Codes</b>	<u><b>User Title Label</b></u>	<u><b>User Code</b></u>
	Approval Number	8468
	Part Number	92026651
	Part Number	92139842
	Part Number	92147062
	Part Number	92155965
	Part Number	92155966
	Part Number	HN1796
	Part Number	M39210
	Part Number	M41005
	Part Number	PLB0002

**Revisions Highlighted** Reason(s) For Issue: New regulatory information.

**User Information** THE PRINTED FORM OF THIS MSDS IS CONSIDERED AN  
'UNCONTROLLED' DOCUMENT ONE WEEK FROM THE PRINT DATE.

**Other Information** Substance Key: 000053356401  
Version: 2.2

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End of MSDS

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