

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revis	sion date: 09/03/2014 : Vers
SECTION 1: Identification of the s	substance/mixture and of the company/undertaking
1.1. Product identifier	
Product form	: Mixture
Trade name	: JOHNSEN'S DOT 4 BRAKE FLUID 1 GALLON
Product code	: 5034
1.2. Relevant identified uses of the s	ubstance or mixture and uses advised against
Use of the substance/mixture	: Brake Fluid
1.3.Details of the supplier of the safeTechnical Chemical CompanyP.O. BOX 139Cleburne, Texas 76033T 817-645-6088	ety data sheet
1.4. Emergency telephone number	
Emergency number	: CHEMTREC 24 Hour 1-800-424-9300, 1-703-527-3887 (International)
SECTION 2: Hazards identificatio	n
2.1. Classification of the substance of	
Classification (GHS-US)	
Acute Tox. 4 (Oral)H302Acute Tox. 4 (Inhalation:dust,mist)H332Skin Irrit. 2H315Eye Dam. 1H318STOT RE 2H373Full text of H-phrases: see section 16	
2.2. Label elements	
GHS-US labeling	
Hazard pictograms (GHS-US)	GHS05 GHS07 GHS08
Signal word (GHS-US)	: Danger
Hazard statements (GHS-US)	 H302+H332 - Harmful if swallowed or if inhaled H315 - Causes skin irritation H318 - Causes serious eye damage H373 - May cause damage to organs through prolonged or repeated exposure
Precautionary statements (GHS-US)	 P260 - Do not breathe dust,fumes,gas,mist,vapor spray P261 - Avoid breathing dust,fume,gas,mist,vapor spray P264 - Wash affected areas 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,eye protection,face protection P301+P312 - If swallowed: Call a poison center, doctor if you feel unwell P302+P352 - If on skin: Wash with plenty of soap and water P304+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove continenses, if present and easy to do. Continue rinsing P310 - Immediately call a poison center, doctor, if you feel unwell. P312 - Call a POISON CONTROL CENTER, doctor, if you feel unwell. P314 - Get medical advice/attention if you feel unwell P321 - Specific treatment: See section 4.1 on SDS P330 - Rinse mouth P332+P313 - If skin irritation occurs: Get medical advice/attention P362 - Take off contaminated clothing and wash before reuse P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance willocal, regional, national, international regulations.
	iosai, regionai, nationai, international regulations.
2.3. Other hazards	

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2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

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Not applicable

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Name	Product identifier	%	Classification (GHS-US)
2,5,8,11-Tetraoxatridecan- 13-ol, Mixed Esters With Boric Acid	(CAS No) 176022-80-3	15 - 40	Not classified
Triethylene Glycol Monomethyl Ether	(CAS No) 112-35-6	10 - 30	Not classified
Methoxy Polyethylene Glycol 350	(CAS No) 9004-74-4	10 - 30	Not classified
Triethylene Glycol Monobutyl Ether	(CAS No) 143-22-6	8 - 18	Eye Dam. 1, H318
Polyalkylene Glycol Monobutyl Ether	(CAS No) 9004-77-7	7 - 13	Not classified
Tetraethylene Glycol	(CAS No) 112-60-7	1 - 10	Not classified
Triethyleneglycol	(CAS No) 112-27-6	1 - 5	Not classified
3,6,9,12-Tetraoxatetradecane-1,14-diol	(CAS No) 4792-15-8	1 - 5	Not classified
Diisopropanolamine	(CAS No) 110-97-4	<= 1.5	Not classified

SECTION 4: First aid measures 4.1. Description of first aid measures First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation	: Assure fresh air breathing. Allow the victim to rest. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor/physician if you feel unwell.
4.2. Most important symptoms and effect	ts, both acute and delayed
Symptoms/injuries	: Causes damage to organs.
Symptoms/injuries after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.

Symptoms/injuries after skin contact : May cause moderate irritation. Causes skin irritation. Itching. Red skin. Skin rash/inflammation.

- Symptoms/injuries after eye contact : Causes serious eye damage. Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue.
- Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed No additional information available

SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.
5.2. Special hazards arising from the s	substance or mixture
No additional information available	
5.3. Advice for firefighters	
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release me	asures
6.1. Personal precautions, protective of	equipment and emergency procedures
General measures	: Remove ignition sources. Use special care to avoid static electric charges.
6.1.1. For non-emergency personnel	
Protective equipment	: Gloves. Safety glasses.
Emergency procedures	: Evacuate unnecessary personnel.
6.1.2. For emergency responders	
Protective equipment	: Equip cleanup crew with proper protection.
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Emerg	ency procedures	: Ventilate area.
6.2.	Environmental precautions	
Prever	t entry to sewers and public waters. No	tify authorities if liquid enters sewers or public waters.
6.3.	Methods and material for contain	nent and cleaning up
For co	ntainment	: Dam up the liquid spill. Plug the leak, cut off the supply. Contain released substance, pump into suitable containers.
Method	ds for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
6.4	Reference to other sections	

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation or vapor. Use only outdoors or in a well-ventilated area. Avoid breathing dust,fume,gas,mist,vapor spray.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
7.2. Conditions for safe storage, includ	ng any incompatibilities
Technical measures	: Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight.
Storage area	: Keep only in the original container.
Special rules on packaging	: Keep only in original container.
7.3. Specific end use(s)	

Follow Label Directions.

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2,5,8,11-Tetraoxatridecan- 13-ol, M	Mixed Esters With Boric Acid (176022-80-3)	
USA ACGIH ACC	GIH TWA (mg/m³)	2 mg/m³
8.2. Exposure controls		
Appropriate engineering controls	: Local exhaust venilation, vent hoods.	
Personal protective equipment	: Gloves. Safety glasses. Avoid all unne	ecessary exposure.
Hand protection	: Wear protective gloves.	
Eye protection	: Chemical goggles or safety glasses.	
Skin and body protection	: Wear suitable protective clothing.	
Respiratory protection	: Wear appropriate mask.	
Other information	: Do not eat, drink or smoke during use	

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9.1. Information on basic physical and	chemical properties
Physical state	: Liquid
Appearance	: Liquid.
Color	: Colourless to light yellow.
Odor	: Mild . Ammoniacal.
Odor threshold	: No data available
pH	: 7-9
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: <-59 ℃

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Freezing point	: No data available
Boiling point	: > 243 °C
Flash point	: >121 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: < 0.01 mm Hg Estimated
Relative vapor density at 20 °C	: No data available
Relative density	: 1.03 - 1.08
Solubility	: Soluble in water. Water: 100% Estimated
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: 1100 mm ² /s @ -40 deg C Estimated
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available
9.2. Other information	

VOC content

: 0%

SECTIO	DN 10: Stability and reactivity
10.1.	Reactivity
No additio	onal information available
10.2.	Chemical stability
Not estab	lished.
10.3.	Possibility of hazardous reactions
Not estab	lished.
10.4.	Conditions to avoid
Direct sur	nlight. Extremely high or low temperatures.
10.5.	Incompatible materials
Oxidizing	agent. Strong acids. Strong bases.
10.6.	Hazardous decomposition products
Toxic fum	e Carbon monoxide. Carbon dioxide.
SECTIC	DN 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

: Harmful if swallowed. Harmful if inhaled.

Triethylene Glycol Monomethyl Ether (112-35-6)	
LD50 oral rat	11865 mg/kg (Rat)
LD50 dermal rabbit	7455 mg/kg (Rabbit)
Methoxy Polyethylene Glycol 350 (9004-74-	4)
LD50 oral rat	22000 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)
Triethylene Glycol Monobutyl Ether (143-22	2-6)
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	3480 mg/kg (Rabbit)
Tetraethylene Glycol (112-60-7)	
LD50 oral rat	29000 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)
Triethyleneglycol (112-27-6)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)

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Diisopropanolamine (110-97-4)	
LD50 oral rat	4765 mg/kg (Rat)
LD50 dermal rat	16000 mg/kg (Rat)
LD50 dermal rabbit	8000 mg/kg (Rabbit)
Skin corrosion/irritation	: Causes skin irritation.
	pH: 7 - 9
Serious eye damage/irritation	: Causes serious eye damage.
	pH: 7 - 9
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Polyalkylene Glycol Monobutyl Ether (9004	-77-7)
IARC group	4
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated	: May cause damage to organs through prolonged or repeated exposure.

exposure)	
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed. Harmful if inhaled.
Symptoms/injuries after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
Symptoms/injuries after skin contact	: May cause moderate irritation. Causes skin irritation. Itching. Red skin. Skin rash/inflammation.
Symptoms/injuries after eye contact	: Causes serious eye damage. Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Triethylene Glycol Monomethyl Ether (112-35-6)		
LC50 fish 1	> 5000 mg/I (96 h; Brachydanio rerio; Measured concentration)	
EC50 other aquatic organisms 1	> 5000 mg/l (16 h; Activated sludge; Cell numbers)	
LC50 fish 2	> 10000 mg/l (96 h; Pimephales promelas)	
TLM fish 1	> 1000 ppm (96 h; Pisces)	
TLM other aquatic organisms 1	> 1000 ppm (96 h)	
Threshold limit algae 1	> 500 mg/l (72 h; Scenedesmus subspicatus)	
Methoxy Polyethylene Glycol 350 (900	14-74-4)	
LC50 fish 1	> 10000 mg/l (Pimephales promelas)	
Triethylene Glycol Monobutyl Ether (143-22-6)		
LC50 fish 1	2400 mg/l (96 h; Pimephales promelas)	
EC50 Daphnia 1	3200 mg/l (24 h; Daphnia magna)	
LC50 fish 2	2200 mg/l (96 h; Leuciscus idus)	
EC50 Daphnia 2	> 500 mg/l (48 h; Daphnia magna)	
Threshold limit algae 1	> 500 mg/l (72 h; Scenedesmus subspicatus)	
Tetraethylene Glycol (112-60-7)		
LC50 fish 1	> 5000 mg/l (24 h; Carassius auratus)	
Triethyleneglycol (112-27-6)		
LC50 fish 1	59900 mg/l (96 h; Pimephales promelas)	
EC50 Daphnia 1	42426 mg/l (48 h; Daphnia magna)	
LC50 fish 2	61000 mg/l (96 h; Lepomis macrochirus)	
TLM fish 1	> 1000 ppm (96 h; Pisces)	
TLM other aquatic organisms 1	> 1000 ppm (96 h)	
Threshold limit algae 1	3600 mg/l (168 h; Microcystis aeruginosa)	
Threshold limit algae 2	> 10000 mg/l (168 h; Scenedesmus quadricauda)	
Diisopropanolamine (110-97-4)		
LC50 fish 1	1000 - 2200 mg/l (96 h; Brachydanio rerio; pH > 7)	

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Diisopropanolamine (110-97-4) LC50 other aquatic organisms 1 100 - 1000 mg/l (48 h; Xenopus laevis) EC50 Daphnia 1 353.8 mg/l (24 h; Daphnia magna) LC50 fish 2 1100 mg/l (24 h; Carassius auratus) LC50 other aquatic organisms 2 410 mg/l EC50 Daphnia 2 277.7 mg/l (48 h; Daphnia magna) Threshold limit other aquatic organisms 1 100 - 1000,48 h; Xenopus laevis Threshold limit other aquatic organisms 2 410 mg/l Threshold limit other aquatic organisms 2 410 mg/l Threshold limit other aquatic organisms 2 410 mg/l Threshold limit algae 1 270 mg/l (72 h; Scenedesmus subspicatus) 12.2. Persistence and degradability JOHNSEN'S DOT 4 BRAKE FLUID 1 GALLON Persistence and degradability Not established. Triethylene Glycol Monomethyl Ether (112-35-6) Persistence and degradability Inherently biodegradable. Non degradable in the soil. Photodegradation in the a Methoxy Polyethylene Glycol 350 (9004-74-4) Inherently biodegradable.	
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Methoxy Polyethylene Glycol 350 (9004-74-4)	
Persistence and degradability Not readily biodegradable in water.	
BOD (% of ThOD) (28 day(s)) 0.1	
Triethylene Glycol Monobutyl Ether (143-22-6)	
Persistence and degradability Readily biodegradable in water.	
Biochemical oxygen demand (BOD) 0.02 g O ₂ /g substance	
Chemical oxygen demand (COD) 1.83 g O ₂ /g substance	
Tetraethylene Glycol (112-60-7)	
Persistence and degradability Readily biodegradable in water.	
Biochemical oxygen demand (BOD) 0.50 g O ₂ /g substance (10d)	
ThOD 2.23 g O ₂ /g substance	
BOD (% of ThOD) 0.286 % ThOD	
2,5,8,11-Tetraoxatridecan- 13-ol, Mixed Esters With Boric Acid (176022-80-3)	
Persistence and degradability Not established.	
Polyalkylene Glycol Monobutyl Ether (9004-77-7) Persistence and degradability Not established.	
3,6,9,12-Tetraoxatetradecane-1,14-diol (4792-15-8)	
Persistence and degradability Biodegradability in water: no data available.	
Triethyleneglycol (112-27-6)	
Persistence and degradability Inherently biodegradable. Readily biodegradable in water. Photolysis in the air.	
Biochemical oxygen demand (BOD) 0.03 g O ₂ /g substance	
Chemical oxygen demand (COD) 1.57 g O ₂ /g substance	
ThOD $1.6 \text{ g } \text{O}_2 / \text{g substance}$	
ThOD 1.6 g O ₂ /g substance	
ThOD 1.6 g O ₂ /g substance Diisopropanolamine (110-97-4) Persistence and degradability Not readily biodegradable in water.	
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2,5,8,11-Tetraoxatridecan- 13-ol, Mixed Este	rs With Boric Acid (176022-80-3)
Bioaccumulative potential	Not established.
Polyalkylene Glycol Monobutyl Ether (9004	-77-7)
Bioaccumulative potential	Not established.
3,6,9,12-Tetraoxatetradecane-1,14-diol (4792	2-15-8)
Log Pow	-2.30 (Estimated value)
Bioaccumulative potential	Bioaccumulation: not applicable.
Triethyleneglycol (112-27-6)	
Log Pow	-2.081.17 (Calculated)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Diisopropanolamine (110-97-4)	
Log Pow	-0.79
Bioaccumulative potential	Bioaccumulation: not applicable.
12.4. Mobility in soil	
Triethylene Glycol Monomethyl Ether (112-3	35-6)
Surface tension	0.0314 N/m
Methoxy Polyethylene Glycol 350 (9004-74-4	4)
Surface tension	0.04 N/m
Tetraethylene Glycol (112-60-7)	
Surface tension	0.019 N/m
Triethyleneglycol (112-27-6)	
Surface tension	0.045 N/m (20 °C)
12.5. Other adverse effects	
12.5. Other adverse effects Other information	: Avoid release to the environment.
SECTION 13: Disposal consideration	ns
13.1. Waste treatment methods	
Waste disposal recommendations	 Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.
Ecology - waste materials	: Avoid release to the environment.
SECTION 14: Transport information	
In accordance with ADR / RID / IMDG / IATA / A	DN
US DOT (ground): Not regulated,	
ICAO/IATA (air): Not regulated,	
MO/IMDG (water): Not regulated,	
UN proper shipping name Proper Shipping Name (DOT)	: Not regulated
14.3. Additional information Other information	: No supplementary information available.
Juler mormation	
Overland transport No additional information available	
Transport by sea	
Air transport No additional information available	
SECTION 15: Regulatory information	n
15.1. US Federal regulations	
15.1. US Federal regulations JOHNSEN'S DOT 4 BRAKE FLUID 1 GALLO	

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JOHNSEN'S DOT 4 BRAKE FLUID 1 GALLON		
	SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
		Delayed (chronic) health hazard

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD] Not classified

15.2.2. National regulations

JOHNSEN'S DOT 4 BRAKE FLUID 1 GALLON

Listed on AICS (Australian Inventory of Chemical Substances)

15.3. US State regulations		
JOHNSEN'S DOT 4 BRAKE FLUID 1 GALLON		
State or local regulations	U.S California - Proposition 65 - Maximum Allowable Dose Levels (MADL) U.S Pennsylvania - RTK (Right to Know) List U.S New Jersey - Right to Know Hazardous Substance List	

SECT	ION 16: Other information	
Other in	formation	: None.
Full text	of H-phrases: see section 16:	
[Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
[Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
	Eye Dam. 1	Serious eye damage/eye irritation Category 1
	Skin Irrit. 2	Skin corrosion/irritation Category 2
	STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
	H302	Harmful if swallowed
	H315	Causes skin irritation
	H318	Causes serious eye damage
	H332	Harmful if inhaled
	H373	May cause damage to organs through prolonged or repeated
		exposure

NFPA health hazard	: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
NFPA fire hazard	: 1 - Must be preheated before ignition can occur.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.
HMIS III Rating	
Health	: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability	: 1 Slight Hazard

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SDS US (GHS HazCom 2012) - TCC

Physical

Personal Protection

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The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.