SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: **MARINE 16 DIESEL INJECTOR CLEANER**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Aftermarket Diesel
Uses advised against: None identified.

1.3 Details of the supplier of the safety data sheet

Supplier

Company Name:	MARINE 16 LIMITED
Address:	ALDERTON 2, PRIORY PARK TETBURY, GLOS. GL88HZ GB
Telephone:	(44) 01666-817577
E-mail contact:	SALES@MARINE16.CO.UK www.marine16.co.uk

1.4 Emergency telephone number:

FOR TRANSPORT EMERGENCY CALL 01666 817577

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Skin irritation	Category 2	H315: Causes skin irritation.
Serious eye irritation	Category 2	H319: Causes serious eye irritation.

The full text for all H-phrases is displayed in section 16.

2.2 Label elements according to Regulation (EC) No 1272/2008 as amended

Signal Words: Warning

Hazard Statement(s): H315: Causes skin irritation.
H319: Causes serious eye irritation.

Precautionary Statements

Prevention: P264: Wash thoroughly after handling.

Response: P332+P313: If skin irritation occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P337+P313: If eye irritation persists: Get medical advice/attention.

Supplemental label information

EUH066: Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards: None identified.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Regulation No. 1272/2008.

Chemical name	Concentration	EC No.	REACH Registration No.	M-Factor:	Notes
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	20 - 50%	918-481-9			
2-Ethylhexan-1-ol	10 - 20%	203-234-3	01-2119487289-20		
Distillates (petroleum), hydrotreated heavy paraffinic	1 - 10%	265-157-1	01-2119484627-25		

600, 700 and 900 ECHA List Numbers do not have any legal significance; rather they are purely technical identifiers and are displayed for informational purposes only.

Classification Regulation No. 1272/2008.

Chemical name	Classification	Notes
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Asp. Tox. 1; H304	
2-Ethylhexan-1-ol	Acute Tox. 4; H332 Skin Corr. 2; H315 STOT SE 3; H335 Eye Dam. 2; H319	
Distillates (petroleum), hydrotreated heavy paraffinic	Asp. Tox. 1; H304	

The full text for all H-phrases is displayed in section 16.

See Section 15 for Regulation (EC) No. 1907/2006 REACH Article 59(1). Candidate List (Substances of Very High Concern (SVHC))

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation: Remove exposed person to fresh air if adverse effects are observed.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact: Take off contaminated clothing and wash before re-use. Wash skin thoroughly with soap and water. If skin irritation occurs, get medical attention.

Ingestion: Rinse mouth. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed:	See section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards:	No data available.
Treatment:	Treat symptomatically.

SECTION 5: Firefighting measures

General Fire Hazards:	Move containers from fire area if you can do so without risk.

5.1 Extinguishing media

Suitable extinguishing media:	CO_2, Dry chemical or Foam. Water can be used to cool and protect exposed material.
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.
5.2 Special hazards arising from the substance or mixture:	Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations. Vapors may travel considerable distance to a source of ignition and flash back. Water may cause splattering. Container may rupture on heating. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. See section 10 for additional information.

5.3 Advice for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. See Section 8 of the SDS for Personal Protective Equipment.
6.2 Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.
6.3 Methods and material for containment and cleaning up:	In case of leakage, eliminate all ignition sources. Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas.
6.4 Reference to other sections:	See sections 8 and 13 for additional information.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin. Avoid contact with eyes. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Launder contaminated clothing before reuse.
	Vapours are heavier than air and will tend to accumulate in low areas. Avoid use in confined areas without adequate ventilation. Areas of inadequate ventilation could contain concentrations high enough to cause eye irritation, headaches, respiratory discomfort or nausea. Carefully evaluate processes using this product at elevated temperatures to ensure safe operating conditions. Electrostatic buildup may occur when pouring or transferring this product from its container. The spark produced may be sufficient to ignite vapors of flammable liquids. Always transfer product by means which avoid static buildup. Avoid pouring product directly from its container into combustible or flammable solvent. Static ignition hazard can result from handling and use. Electrically bond and ground all containers and equipment before transfer or use of material. Do not breathe thermal decomposition products.
Maximum Handling Temperature:	50 °C
7.2 Conditions for safe storage, including any incompatibilities:	Keep cool. Store in a well-ventilated place. Do not store near potential sources of ignition. Store in containers made of same material as original container.
Maximum Storage Temperature:	45 °C
7.3 Specific end use(s):	End uses are listed in an attached exposure scenario when one is required.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

8.2 Exposure controls

Appropriate engineering controls:	No special requirements under ordinary conditions of use and with adequate ventilation. Use material in well ventilated area only. Adequate ventilation should be provided so that exposure limits are not exceeded. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information: Please follow the recommended personal protective equipment (PPE) guidelines below and refer to the appropriate EN standard where applicable. Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/face protection: Wear tight-fitting goggles or face shield. Eye protection should meet the standards set out in EN 166.

Skin protection

Hand Protection: Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water. Viton. Chemical resistant gloves

General: Because specific work environments and material handling practices vary, safety procedures should be specific for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures). Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions. For typical use and handling of chemical substances, gloves should meet the standards set out in EN 374. For applications involving mechanical risks with potential for abrasion or puncture, the standards set out in EN 388 should be considered. For tasks involving thermal hazards, the standards set out in EN 407 should be considered.

Break-through time: Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type.
For continuous contact, we suggest gloves with a minimum breakthrough time of 240 minutes, or > 480 minutes if suitable gloves can be obtained. If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.
For short-term, transient exposures and splash protection, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

Glove thickness:	For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It is important to note that glove thickness is not the only predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times. Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task. Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example: Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, before being disposed of. Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.
Other:	Wear apron or protective clothing in case of contact. Do not wear rings, watches or similar apparel that could entrap the material. Gloves, coveralls, apron, boots as necessary to minimize contact.
Respiratory Protection:	A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator. Under normal use conditions, respirator is not usually required. Use appropriate respiratory protection if exposure to dust particles, mist or vapors is likely. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites. Use respirator with a combination organic vapor and dust/mist cartridge. Respiratory Protective Equipment (RPE) is not normally required where there is adequate natural or local exhaust ventilation to control exposure. In case of insufficient ventilation, wear suitable respiratory equipment. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions. Please refer to the relevant EN standards for the RPE selected.
Hygiene measures:	Observe good industrial hygiene practices. Avoid contact with skin. Avoid contact with eyes. Wash contaminated clothing before reuse. When using do not smoke. Wash hands before breaks and immediately after handling the product.
Environmental Controls:	No data available. See section 6 for details.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	Dark red
Odor:	Mild
Odor Threshold:	No data available.
pH:	No data available.
Freezing point:	No data available.
Boiling Point:	No data available.
Flash Point:	67 °C (Pensky-Martens Closed Cup)
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability Limit - Upper (%):	No data available.
Flammability Limit - Lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Relative density:	0.872 - 0.912 (15.6 °C)
Solubility(ies)	
Solubility in Water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	225 mm2/s (40 °C); 2,600 mm2/s (0 °C)
Explosive properties:	No data available.
Oxidizing properties:	No data available.
VOC Content:	No data available.

Other information	
Bulk density:	7.44 lb/gal (25 °C)
Pour Point Temperature:	-54 °C

SECTION 10: Stability and reactivity

10.1 Reactivity:	No data available.
10.2 Chemical Stability:	Material is stable under normal conditions.
10.3 Possibility of hazardous reactions:	Will not occur.
10.4 Conditions to avoid:	Heat, sparks, flames. Do not expose to excessive heat, ignition sources, or oxidizing materials. Excessive heat. Contact with acids. Strong oxidizing agents. Strong caustic agents.

10.5 Incompatible Materials:	Strong oxidizing agents. Strong acids. Aluminum. Strong oxidizing agents. Lead and lead alloys Oxidizing agents, Reactive metals, Sodium or Calcium Hypochlorite. Avoid heat or Dehydrating Agents. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Materials reactive with hydroxyl compounds.
10.6 Hazardous Decomposition Products:	Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, and other products of incomplete combustion.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	No data available.
Ingestion:	No data available.
Skin Contact:	Causes skin irritation.
Eye contact:	Causes serious eye irritation.

11.1 Information on toxicological effects

Acute toxicity

Oral

Product**:**	Not classified for acute toxicity based on available data. Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death. Ingestion can cause central nervous system effects such as headache, dizziness, drowsiness, and generalized weakness.

Dermal

Product**:**	Not classified for acute toxicity based on available data.

Inhalation

Product**:**	ATEmix (, 4 h): >5 mg/l. Dusts, mists and fumes High concentrations may cause headaches, dizziness, nausea, behavioral changes, weakness, drowsiness and stupor.

Skin Corrosion/Irritation:

Product**:**	Causes skin irritation. Remarks: Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.

Serious Eye Damage/Eye Irritation:

Product**:**	Remarks: Causes serious eye irritation.

Respiratory sensitization:

No data available

Skin sensitization:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Classification: Not a skin sensitizer. (Literature) Not a skin sensitizer.

2-Ethylhexan-1-ol	Classification: Not a skin sensitizer. (Literature)
Distillates (petroleum), hydrotreated heavy paraffinic	Classification: Not a skin sensitizer. (Read across)

Specific Target Organ Toxicity - Single Exposure:

Product**:**	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.
2-Ethylhexan-1-ol	Respiratory tract irritation.

Aspiration Hazard:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death.
Distillates (petroleum), hydrotreated heavy paraffinic	Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death.

Chronic Effects

Carcinogenicity:

Product**:**	This product contains mineral oils which are severely refined and not considered carcinogenic. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.
Distillates (petroleum), hydrotreated heavy paraffinic	All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test. This product contains mineral oils which are severely refined and not considered carcinogenic.

Germ Cell Mutagenicity:

2-Ethylhexan-1-ol	This material has not exhibited mutagenic or genotoxic potential in laboratory tests.
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	In vitro and in vivo genetic toxicity studies were negative.

Reproductive toxicity:

2-Ethylhexan-1-ol	No evidence of adverse effects were found in a developmental toxicity study of 2-ethylhexanol in rats. Doses up to 3 ml/kg applied to the skin during the most critical part of the gestation period produced evidence of toxicity to mothers, but no evidence of injury in the developing offspring. In a previous study, birth defects were observed by oral administration, an unlikely route of exposure in the workplace.

Specific Target Organ Toxicity - Repeated Exposure:

2-Ethylhexan-1-ol	Repeated overexposure may result in liver and kidney damage. A 14-day dermal toxicity study of 2-ethylhexanol in rats showed blood effects, decreased spleen weight and decreased triglycerides. Unknown: Target Organ(s): Blood, Liver, Spleen., Kidney

SECTION 12: Ecological information

12.1 Ecotoxicity

Fish

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	LL 50 (Oncorhynchus mykiss, 96 h): > 1,000 mg/l
2-Ethylhexan-1-ol	LC 50 (Fathead Minnow, 4 d): 28.2 mg/l LC 50 (Golden Orfe, 4 d): 17.1 mg/l NOEC (Golden Orfe, 4 d): 14 mg/l

Aquatic Invertebrates

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	EC 50 (Water flea (Daphnia magna), 2 d): > 1,000 mg/l
2-Ethylhexan-1-ol	EC 50 (Water flea (Daphnia magna), 2 d): 39 mg/l
Distillates (petroleum), hydrotreated heavy paraffinic	EC 50 (Water flea (Daphnia magna), 2 d): > 10,000 mg/l EC 50 (Water flea (Daphnia magna), 21 d): > 10 mg/l NOEC (Water flea (Daphnia magna), 21 d): 10 mg/l

Toxicity to Aquatic Plants

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	LC 50 (Green algae (Selenastrum capricornutum), 3 d): > 1,000 mg/l EC 50 (Green algae (Selenastrum capricornutum), 3 d): > 1,000 mg/l
2-Ethylhexan-1-ol	EC 50 (Green algae (Scenedesmus quadricauda), 3 d): 16.6 mg/l

Toxicity to soil dwelling organisms

No data available

Sediment Toxicity

No data available

Toxicity to Terrestrial Plants

No data available

Toxicity to Above-Ground Organisms

No data available

Toxicity to microorganisms

2-Ethylhexan-1-ol	EC 50 (Pseudomonas putida, 0.1 d): 540 mg/l EC 50 (Sludge, 0.5 d): > 100 mg/l

12.2 Persistence and Degradability

Biodegradation

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Oxygen depletion 80 % (28 d, OECD TG 301 F)
2-Ethylhexan-1-ol	Dissolved organic carbon (DOC) 95 % (5 d, OECD TG 302 B) Oxygen depletion 100 % (14 d, OECD TG 301 C)
Distillates (petroleum), hydrotreated heavy paraffinic	Oxygen depletion 31 % (28 d, OECD TG 301 F)

BOD/COD Ratio

No data available

12.3 Bioaccumulative Potential

Bioconcentration Factor (BCF)

2-Ethylhexan-1-ol	Bioconcentration Factor (BCF): 25.35 (calculated)

Partition Coefficient n-octanol / water (log Kow)

2-Ethylhexan-1-ol	Log Kow: 2.9 (Measured)

12.4 Mobility:

2-Ethylhexan-1-ol	soil - 1.42

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other Adverse Effects: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal methods: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product.

Contaminated Packaging: Container packaging may exhibit hazards.

SECTION 14: Transport information

ADR
Not regulated.

IMDG
Not regulated.

IATA
Not regulated.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

None known.

Shipping descriptions may vary based on mode of transport, quantities, temperature of the material, package size, and/or origin and destination. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. For transportation, steps must be taken to prevent load shifting or materials falling, and all relating legal statutes should be obeyed. Review classification requirements before shipping materials at elevated temperatures.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU Regulations

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer:
None present or none present in regulated quantities.

Regulation (EC) No. 850/2004 on persistent organic pollutants:
None present or none present in regulated quantities.

Regulation (EC) No. 689/2008 Import and export of dangerous chemicals:
None present or none present in regulated quantities.

Regulation (EC) No. 1907/2006, REACH Article 59(1). Candidate List:
None present or none present in regulated quantities.

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended:
None present or none present in regulated quantities.

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

Chemical name	EC No.	Concentration
Propylene oxide	200-879-2	<0.1%

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.:
None present or none present in regulated quantities.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.:
None present or none present in regulated quantities.

Directive 96/82/EC (Seveso III): on the control of major accident hazards involving dangerous substances:
None present or none present in regulated quantities.

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants:
None present or none present in regulated quantities.

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:
None present or none present in regulated quantities.

Inventory Status

Australia (AICS)
All components are in compliance with chemical notification requirements in Australia.

Canada (DSL/NDSL)
All substances contained in this product are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List (DSL) or are exempt.

China (IECSC)
This product contains a substance or polymer that has been notified and is restricted to import by the notifier.

European Union (REACh)
To obtain information on the REACH compliance status of this product, please e-mail REACH@SDSInquiries.com.

Japan (ENCS)
This product contains a substance or polymer that has been notified and is restricted to import by specific legal entities.

Korea (ECL)
All components are in compliance in Korea.

New Zealand (NZIoC)
All components are in compliance with chemical notification requirements in New Zealand.

Philippines (PICCS)
All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).

Switzerland (SWISS)
All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.

Taiwan (TCSCA)
All components of this product are listed on the Taiwan inventory.

United States (TSCA)
All substances contained in this product are listed on the TSCA inventory or are exempt.

The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.

15.2 Chemical safety assessment: No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Key literature references and sources for data: Internal company data and other publically available resources.