According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

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SECTION 1. IDENTIFICATION		
Product name	: Martin Air Tool Oil	
Droduct code	: 001D7738	
Product code	001D7738	
Manufacturer or supplier's	details	
Manufacturer/Supplier	: Martin Engineering One Martin Place Neponset, IL 61345	
SDS Request Customer Service	USA 800-544-2947	
Emergency telephone num	ber	
Spill Information	: 877-504-9351	
Health Information	: 877-242-7400	
Recommended use of the	chemical and restrictions on use	
Recommended use	: Machine oil.	

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification Chronic aquatic toxicity	: Category 3
GHS Label element Hazard pictograms	: No symbol
Signal word	: No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	 Prevention: P273 Avoid release to the environment. Response: No precautionary phrases. Storage: No precautionary phrases. Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

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Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis. Used oil may contain harmful impurities. Not classified as flammable but will burn.

The classification of this material is based on OSHA HCS 2012 criteria.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

: Highly refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSOextract, according to IP346.

Hazardous components

Chemical Name	Synonyms	CAS-No.	Concentration (%)
Butylated hydroxytoluene	2,6-di-tert-butyl-p- cresol	128-37-0	0.1 - 0.24
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate >5%]	Phenol, isopropy- lated, phosphate (3:1)	68937-41-7	0.1 - 2.4

SECTION 4. FIRST-AID MEASURES

General advice	:	Not expected to be a health hazard when used under normal conditions.
If inhaled	:	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact	:	Remove contaminated clothing. Flush exposed area with wa- ter and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
In case of eye contact	:	Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
If swallowed	:	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Most important symptoms and effects, both acute and delayed	:	Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.
Protection of first-aiders	:	When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.
Immediate medical attention, special treatment	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

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Suitable extinguishing media	: Foam, water spray or fog. Dry o xide, sand or earth may be use	
Unsuitable extinguishing media	: Do not use water in a jet.	
Specific hazards during fire- fighting	 Hazardous combustion product A complex mixture of airborne s gases (smoke). Carbon monoxide may be evolv occurs. Unidentified organic and inorga 	solid and liquid particulates and ved if incomplete combustion
Specific extinguishing me- thods	: Use extinguishing measures the cumstances and the surrounding	
Special protective equipment for firefighters	: Proper protective equipment ind gloves are to be worn; chemica large contact with spilled produc Breathing Apparatus must be w a confined space. Select fire fig relevant Standards (e.g. Europ	I resistant suit is indicated if ct is expected. Self-Contained vorn when approaching a fire in hter's clothing approved to

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- tive equipment and emer- gency procedures	:	Avoid contact with skin and eyes.
Environmental precautions	:	Use appropriate containment to avoid environmental contami- nation. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
Additional advice	:	For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

Technical measures	: Use local exhaust ventilation if there is risk of inhalation of
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	Use ses ate	ours, mists or aerosols. the information in this data sment of local circumstance controls for safe handling, s erial.	s to help determine appropri-
Precautions for safe handling	Avc Wh wor Pro	n and proper handling equip	ists. s, safety footwear should be
Avoidance of contact	: Stro	ng oxidising agents.	
Product Transfer	Pro	s material has the potential t per grounding and bonding ng all bulk transfer operation	procedures should be used
Storage			
Other data	plac	p container tightly closed ar e. properly labeled and closa	
	Sto	e at ambient temperature.	
Packaging material	stee	able material: For container I or high density polyethyler uitable material: PVC.	rs or container linings, use mild ne.
Container Advice		vethylene containers should atures because of possible r	not be exposed to high tem- risk of distortion.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA ((inhal- able frac- tion))	5 mg/m3	US. ACGIH Threshold Limit Values
		(Mist)	5 mg/m3	OSHA_TRA NS

Biological occupational exposure limits

No biological limit allocated. **Monitoring Methods**

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and sam-

ples analysed by an accredited laboratory.

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tact the supplier. Further nat National Institute of Occupat http://www.cdc.gov/niosh/ Occupational Safety and He http://www.osha.gov/ Health and Safety Executive http://www.hse.gov.uk/ Institut für Arbeitsschutz Der http://www.dguv.de/inhalt/ind	ommended exposure measurement mer tional methods may be available. tional Safety and Health (NIOSH), USA alth Administration (OSHA), USA: Sam e (HSE), UK: Methods for the Determina utschen Gesetzlichen Unfallversicherur dex.jsp rche et de Securité, (INRS), France http	x: Manual of Analytical Methods apling and Analytical Methods ation of Hazardous Substances ng (IFA) , Germany
Engineering measures	 The level of protection and types vary depending upon potential ex controls based on a risk assessin Appropriate measures include: Adequate ventilation to control a 	xposure conditions. Select nent of local circumstances.
	Where material is heated, spraye greater potential for airborne cor	
	General Information: Define procedures for safe hand controls. Educate and train workers in the ures relevant to normal activities Ensure appropriate selection, tes equipment used to control expos equipment, local exhaust ventilat Drain down system prior to equip ance. Retain drain downs in sealed sto subsequent recycle. Always observe good personal h washing hands after handling the drinking, and/or smoking. Routir protective equipment to remove taminated clothing and footwear Practice good housekeeping.	e hazards and control meas- associated with this product. sting and maintenance of sure, e.g. personal protective tion. oment break-in or mainten- orage pending disposal or hygiene measures, such as e material and before eating, hely wash work clothing and contaminants. Discard con-
Personal protective equip	ment	
Respiratory protection	 No respiratory protection is ordin conditions of use. In accordance with good industri tions of band by talent to quoted by 	

In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours [Type A/Type P boiling point >65°C (149°F)].

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Hand protection Remarks	glove suppliers. Contaminated Personal hygiene is a key elem Gloves must only be worn on o gloves, hands should be washe cation of a non-perfumed mois For continuous contact we reco through time of more than 240 480 minutes where suitable gloves short-term/splash protection we recognize that suitable gloves may not be available and in thi time maybe acceptable so long	andards (e.g. Europe: EN374, wing materials may provide VC, neoprene or nitrile rubber y of a glove is dependent on ation of contact, chemical re- terity. Always seek advice from gloves should be replaced. nent of effective hand care. clean hands. After using ed and dried thoroughly. Appli- durizer is recommended. ommend gloves with break- minutes with preference for > oves can be identified. For e recommend the same, but offering this level of protection is case a lower breakthrough g as appropriate maintenance followed. Glove thickness is not tance to a chemical as it is osition of the glove material. ically greater than 0.35 mm
Eye protection	: If material is handled such that protective eyewear is recomme	
Skin and body protection	: Skin protection is not ordinarily work clothes. It is good practice to wear cher	
Protective measures	: Personal protective equipment mended national standards. Cl	
Environmental exposure of	controls	
General advice	: Take appropriate measures to vant environmental protection I of the environment by following necessary, prevent undissolver charged to waste water. Waste municipal or industrial waste w discharge to surface water. Local guidelines on emission li must be observed for the disch vapour.	legislation. Avoid contamination g advice given in Chapter 6. If d material from being dis- e water should be treated in a vater treatment plant before imits for volatile substances

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid at room temperature.
Colour	: light brown
Odour	: Slight hydrocarbon

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Odour Threshold	: Data not available	
рН	: Not applicable	
pour point	: -30 °C / -22 °FMethod: ISO 3016	
Initial boiling point and boiling range		s)
Flash point	: 179 °C / 354 °F Method: ASTM D93	
Evaporation rate	: Data not available	
Flammability (solid, gas)	: Data not available	
Upper explosion limit	: Typical 10 %(V)	
Lower explosion limit	: Typical 1 %(V)	
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)	
Relative vapour density	: > 1estimated value(s)	
Relative density	: 0.870 (15 °C / 59 °F)	
Density	: 870 kg/m3 (15.0 °C / 59.0 °F) Method: ISO 12185	
Solubility(ies) Water solubility	: negligible	
Solubility in other solvents	: Data not available	
Partition coefficient: n- octanol/water	: Pow: > 6(based on information on	similar products)
Auto-ignition temperature	: > 320 °C / 608 °F	
Viscosity Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: 22 mm2/s (40.0 °C / 104.0 °F) Method: ASTM D445	
	4.2 mm2/s (100 °C / 212 °F)	

Method: ASTM D445

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Conductivity	: This material is not expected to	be a static accumulator.
Decomposition temperature	: Data not available	

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	: Stable.
Possibility of hazardous reac- tions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: Hazardous decomposition products are not expected to form during normal storage.

SECTION 11. TOXICOLOGICAL INFORMATION

	Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise,	
		the data presented is representative of the product as a whole, rather than for individual component(s).

Information on likely routes of exposure

Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

Acute toxicity

Pr	od	uc	t:

Acute oral toxicity	:	LD50 (rat): > 5,000 mg/kg Remarks: Expected to be of low toxicity:
Acute inhalation toxicity	:	Remarks: Not considered to be an inhalation hazard under normal conditions of use.
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg Remarks: Expected to be of low toxicity:

Skin corrosion/irritation

Product:

Remarks: Expected to be slightly irritating., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Serious eye damage/eye irritation

Product:

Remarks: Expected to be slightly irritating.

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Respiratory or skin sensitisation

Product:

Remarks: Not expected to be a skin sensitiser.

Germ cell mutagenicity

Product:

: Remarks: Not considered a mutagenic hazard.

Carcinogenicity

Product:

Remarks: Not expected to be carcinogenic.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Product:

Remarks: Not expected to impair fertility., Not expected to be a developmental toxicant.

STOT - single exposure

Product:

Remarks: Not expected to be a hazard.

:

STOT - repeated exposure

Product:

Remarks: Not expected to be a hazard.

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Aspiration toxicity

Product:

Not considered an aspiration hazard.

Further information

Product:

Remarks: Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal., ALL used oil should be handled with caution and skin contact avoided as far as possible.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment	Ecotoxicological data have not been determined specificall for this product. Information given is based on a knowledge of the compone and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is represen tive of the product as a whole, rather than for individual cor ponent(s).(LL/EL/IL50 expressed as the nominal amount of product required to prepare aqueous test extract).	ents Ita- m-
Ecotoxicity		
Product: Toxicity to fish (Acute toxic- ity)	Remarks: Expected to be harmful: LL/EL/IL50 10-100 mg/I	
Toxicity to daphnia and other aquatic invertebrates (Acute toxicity)	Remarks: Expected to be harmful: LL/EL/IL50 10-100 mg/I	
Toxicity to algae (Acute toxic- ity)	Remarks: Expected to be harmful: LL/EL/IL50 10-100 mg/I	
Toxicity to fish (Chronic toxic- ity)	Remarks: Data not available	
Toxicity to daphnia and other aquatic invertebrates (Chron-ic toxicity)	Remarks: Data not available	
Toxicity to bacteria (Acute toxicity)	Remarks: Data not available	

Components:

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Butylated hydroxytoluene: M-Factor (Acute aquatic tox- icity)	: 1		
Persistence and degradabilit			
Product:			
Biodegradability	Major cons	tituents are expected	adily biodegradable. I to be inherently biodegrada at may persist in the environ
Bioaccumulative potential			
Product:			
Bioaccumulation	Remarks: 0 cumulate.	Contains components	s with the potential to bioac-
Mobility in soil			
Product:			
Mobility			vironmental conditions. soil particles and will not be
	Remarks: F	loats on water.	
Other adverse effects			
no data available			
Product: Additional ecological informa- tion	expected to Not expect	b be released to air ir ed to have ozone de	tile components, which are n n any significant quantities. pletion potential, photochemi global warming potential.
		ble mixture. physical fouling of a	quatic organisms.
			use any chronic effects to tions less than 1 mg/l.

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	Disposal should be in accordance national, and local laws and regional and local laws and regional structure and r	
Local legislation Remarks	: Disposal should be in accordance national, and local laws and reg	

SECTION 14. TRANSPORT INFORMATION

National Regulations

US Department of Transportation Classification (49 CFR Parts 171-180)

Not regulated as a dangerous good

International Regulation

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

	0
Pollution category Ship type Product name Special precautions	 Not applicable Not applicable Not applicable Not applicable Not applicable
Special precautions for us	ser
Remarks	: Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.
Additional Informatio	n : MARPOL Annex 1 rules apply for bulk shipments by sea.

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : No OSHA Hazards

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ., Shell classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

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SARA 302	: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.	
SARA 313	: This material does not contain a known CAS numbers that excee reporting levels established by S	ed the threshold (De Minimis)
Clean Water Act		
This product does not conta Section 311, Table 117.3.	ain any Hazardous Chemicals listed un	der the U.S. CleanWater Act,
Pennsylvania Right To Kr Distillates naphthenio	(petroleum), hydrotreated heavy 64	742-52-5
California Prop 65	This product does not contain a of California to cause cancer, b productive harm.	
The components of this p	roduct are reported in the following	inventories:
EINECS	: All components listed or polyme	
TSCA	: All components listed.	
DSL	: All components listed.	

SECTION 16. OTHER INFORMATION

Further information

NFPA Rating (Health, Fire, Reac- 0, 1, 0 tivity)

significant change to the nature o A vertical bar () in the left margin	luct to GHS classification and labelling, there has been a f the information presented in chapter 2. indicates an amendment from the previous version. The standard abbreviations and acronyms used in this docu- ment can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.
	ACGIH = American Conference of Governmental Industrial Hygienists ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road AICS = Australian Inventory of Chemical Substances ASTM = American Society for Testing and Materials BEL = Biological exposure limits BTEX = Benzene, Toluene, Ethylbenzene, Xylenes CAS = Chemical Abstracts Service CEFIC = European Chemical Industry Council CLP = Classification Packaging and Labelling COC = Cleveland Open-Cup DIN = Deutsches Institut fur Normung DMEL = Derived Minimal Effect Level

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	DNEL = Derived No Effect Lev DSL = Canada Domestic Subs EC = European Commission EC50 = Effective Concentratio ECETOC = European Center of gy Of Chemicals ECHA = European Chemicals EINECS = The European Inver Chemical Substances EL50 = Effective Loading fifty ENCS = Japanese Existing and Inventory EWC = European Waste Code GHS = Globally Harmonised S Labelling of Chemicals	stance List n fifty on Ecotoxicology and Toxicolo- Agency ntory of Existing Commercial d New Chemical Substances
	LL50 = Lethal Loading fifty MARPOL = International Conv Pollution From Ships NOEC/NOEL = No Observed E served Effect Level	br Research on Cancer port Association In fifty Dangerous Goods entory test method N° 346 for the matics DMSO-extractables cals Inventory ifty ent. ective Loading/Inhibitory loading rention for the Prevention of Effect Concentration / No Ob- osure - High Production Volume ative and Toxic of Chemicals and Chemical Concentration tion And Authorisation Of International Carriage of Dan- mit nent Control Act ge
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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.