

Eastman(TM) Turbo Oil 25

Version Revision Date: SDS Number: Date of last issue: 07/27/2016
5.2 07/28/2016 150000094084 Date of first issue: 02/28/2014
SDSUS / PRD / 0001

SECTION 1. IDENTIFICATION

Product name : Eastman(TM) Turbo Oil 25
Product code : 34356-00, E3435601, P3435600, P3435601, P3435602,
P3435604

Manufacturer or supplier's details

Company name of supplier : Eastman Chemical Company
Address : 200 South Wilcox Drive
Kingsport TN 37660-5280
Telephone : (423) 229-2000
Emergency telephone number : CHEMTREC: +1-800-424-9300, +1-703-527-3887 CCN7321
For emergency transportation information, in the United States:
call CHEMTREC at 800-424-9300 or call 423-229-2000.

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant
Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Skin sensitisation : Category 1

GHS label elements

Hazard pictograms : 

Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing should not be allowed out of
the workplace.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/
attention.

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P363 Wash contaminated clothing before reuse.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Components**

Chemical name	CAS-No.	Concentration (% w/w)
N-Phenylbenzenamine reaction products with 2,4,4-trimethylpentene	68411-46-1	< 5
Phenothiazine	92-84-2	< 1
Tricresyl phosphate	1330-78-5	< 1
1,4-dihydroxy-9,10-anthracenedione	81-64-1	< 0.1

SECTION 4. FIRST AID MEASURES

- If inhaled : If breathed in, move person into fresh air.
 If breathing is difficult, give oxygen.
 Consult a physician if necessary.
 Persons who have inhaled vapours or smoke fumes have to be put under medical observation for at least 48 hours, due to the delayed appearance of poisoning.
- In case of skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
 Wash contaminated clothing before reuse.
 If symptoms persist, call a physician.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
 Get medical attention if symptoms occur.
- If swallowed : Rinse mouth.
 Call a physician or poison control centre immediately.
 Do NOT induce vomiting.
 Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : Prolonged skin contact may defat the skin and produce dermatitis.
 Contact with hot product will cause thermal burns.
 Inhalation of thermal decomposition products may lead to adverse effects including pulmonary edema.
 May cause an allergic skin reaction.
- Notes to physician : Treat symptomatically.

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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Foam
Dry powder
Carbon dioxide (CO₂)
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire-fighting : Hazardous combustion products
carbon dioxide, carbon monoxide
oxides of phosphorus
- Further information : In case of fire and/or explosion do not breathe fumes.
Use water spray to cool unopened containers.
Prevent fire extinguishing water from contaminating surface water or the ground water system.
- Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.
-

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ventilate the area.
Material can create slippery conditions.
Use personal protective equipment.
Local authorities should be advised if significant spillages cannot be contained.
- Environmental precautions : Avoid release to the environment.
- Methods and materials for containment and cleaning up : Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
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SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Do not get in eyes.
Do not get on skin or clothing.
Wash thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Do not breathe vapours or spray mist.
Use only in area provided with appropriate exhaust ventilation.
Drain or remove substance from equipment prior to break-in
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or maintenance.

Conditions for safe storage : Keep containers tightly closed in a cool, well-ventilated place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Phenothiazine	92-84-2	TWA	5 mg/m ³	ACGIH
		TWA	5 mg/m ³	NIOSH REL
		TWA	5 mg/m ³	OSHA P0

Hazardous components without workplace control parameters

Components	CAS-No.
N-Phenylbenzenamine reaction products with 2,4,4-trimethylpentene	68411-46-1
Tricresyl phosphate	1330-78-5

Engineering measures : 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.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection

Material : Recommended gloves:

Material : Nitrile rubber

Remarks : Wear suitable gloves.

Eye protection : Safety glasses with side-shields
Safety goggles

Protective measures : Ensure that eye flushing systems and safety showers are located close to the working place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance : liquid
Colour : amber
Odour : No data available
Odour Threshold : not determined
Melting point/freezing point : -60 °C
Flash point : 246 °C
 Method: Cleveland open cup
Evaporation rate : not determined
Vapour pressure : not determined
Relative density : 0.995
Solubility(ies)
 Water solubility : insoluble
Viscosity
 Viscosity, kinematic : 23 - 30 mm²/s (40 °C)
 4.9 - 5.4 mm²/s (100 °C)
Explosive properties : Classification Code: Not classified
Oxidizing properties : Not classified

SECTION 10. STABILITY AND REACTIVITY

Reactivity : None reasonably foreseeable.
Chemical stability : Stable under normal conditions.
Conditions to avoid : Keep away from sources of ignition - No smoking.
Incompatible materials : Strong oxidizing agents
Hazardous decomposition products : Emits acrid smoke and fumes when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Not classified based on available information.

Product:

Acute oral toxicity : LD50 Oral (Rat): > 10,000 mg/kg

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Acute dermal toxicity : LD50 Dermal (Rabbit): > 3,160 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Components:**N-Phenylbenzenamine reaction products with 2,4,4-trimethylpentene:**

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 2,000 mg/kg

Tricresyl phosphate:

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.2 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD50 Dermal (Rabbit): > 10,000 mg/kg

Phenothiazine:

Acute oral toxicity : Assessment: Harmful if swallowed.

Skin corrosion/irritation

Not classified based on available information.

Product:

Species: Rabbit

Assessment: Not classified as hazardous.

Result: slight

Components:**N-Phenylbenzenamine reaction products with 2,4,4-trimethylpentene:**

Species: Rabbit

Assessment: Not classified

Result: slight

Tricresyl phosphate:

Species: Rabbit

Exposure time: 24 h

Assessment: Not classified as hazardous.

Result: Non-irritating to the skin.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Species: Rabbit

Result: slight

Assessment: Not classified

Components:**N-Phenylbenzenamine reaction products with 2,4,4-trimethylpentene:**

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Species: Rabbit
Result: slight
Assessment: Not classified

Tricresyl phosphate:

Species: Rabbit
Assessment: Not classified

Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.
Respiratory sensitisation: Not classified based on available information.

Product:

Test Type: OECD 429: LLNA
Species: Mouse
Assessment: May cause sensitisation by skin contact.
Result: sensitizing

Components:**Tricresyl phosphate:**

Test Type: Skin Sensitization
Assessment: Not classified

Phenothiazine:

Test Type: Skin sensitisation
Assessment: May cause sensitisation by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Product:

Genotoxicity in vitro : Test Type: Mutagenicity
Result: Based on available data, the classification criteria are not met.

Genotoxicity in vivo : Test Type: Mutagenicity
Result: Based on available data, the classification criteria are not met.

Components:**Tricresyl phosphate:**

Genotoxicity in vitro : Test Type: various
Result: Based on available data, the classification criteria are not met.
Remarks: Not classified

Genotoxicity in vivo : Test Type: various
Result: Based on available data, the classification criteria are not met.

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Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Components:**N-Phenylbenzenamine reaction products with 2,4,4-trimethylpentene:**

Assessment: Not classified

Tricresyl phosphate:

Assessment: Based on available data, the classification criteria are not met.

Repeated dose toxicity**Components:****Tricresyl phosphate:**

Species: Rat

NOEL: 300 mg/l

Phenothiazine:

Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Aspiration toxicity

Not classified based on available information.

Product:

Not classified

Components:**Tricresyl phosphate:**

Not classified

Experience with human exposure**Product:**

Inhalation	: Remarks: None known.
Skin contact	: Remarks: May cause an allergic skin reaction. Prolonged skin contact may defat the skin and produce dermatitis.
Eye contact	: Remarks: None known.
Ingestion	: Remarks: None known.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

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- Toxicity to fish : LC50 (Fish):
 Exposure time: 96 h
 Remarks: Not classified as hazardous.
 (limit of solubility in fresh water)
 Read-across from a similar material
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)):
 Exposure time: 48 h
 Remarks: Not classified as hazardous.
 (limit of solubility in fresh water)
 Read-across from a similar material
- Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (algae)):
 Exposure time: 72 h
 Remarks: Not classified as hazardous.
 (limit of solubility in fresh water)
 Read-across from a similar material
- Toxicity to fish (Chronic toxicity) : NOEC (Fish):
 Remarks: Not classified as hazardous.
 (limit of solubility in fresh water)
 Read-across from a similar material
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC:
 Remarks: Not classified as hazardous.
 (limit of solubility in fresh water)
 Read-across from a similar material
- Ecotoxicology Assessment
 Acute aquatic toxicity : This product has no known ecotoxicological effects.
- Chronic aquatic toxicity : This product has no known ecotoxicological effects.
- Components:**
- Tricresyl phosphate:**
- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.6 mg/l
 Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.146 mg/l
 Exposure time: 48 h
- M-Factor (Acute aquatic toxicity) : 1
- Phenothiazine:**
- M-Factor (Acute aquatic toxicity) : 1
- M-Factor (Chronic aquatic toxicity) : 1
- Ecotoxicology Assessment
 Acute aquatic toxicity : Very toxic to aquatic life.

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Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability**Product:**

Biodegradability : Remarks: Expected to be biodegradable

Biochemical Oxygen Demand (BOD) : Remarks: No data available

Chemical Oxygen Demand (COD) : Remarks: No data available

Bioaccumulative potential**Product:**

Bioaccumulation : Remarks: Mixture
Not applicable

Components:**Tricresyl phosphate:**

Bioaccumulation : Bioconcentration factor (BCF): 2,000
Remarks: No information available.

Partition coefficient: n-octanol/water : Pow: 860,000
log Pow: 5.93

Mobility in soil**Components:****Tricresyl phosphate:**

Distribution among environmental compartments : log Koc: 4.31

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.

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SECTION 14. TRANSPORT INFORMATION**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

Not applicable for product as supplied.

National Regulations**49 CFR**

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act**

SARA 311/312 Hazards : Acute Health Hazard

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 any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

The components of this product are reported in the following inventories:

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TSCA	: On TSCA Inventory
DSL	: On the inventory, or in compliance with the inventory
AICS	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: Not listed
IECSC	: On the inventory, or in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

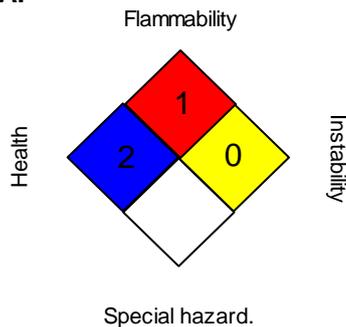
SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Sub-

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stance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information**NFPA:****HMIS III:**

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
 2 = Moderate, 3 = High
 4 = Extreme, * = Chronic

Sources of key data used to compile the Safety Data Sheet : www.EastmanAviationSolutions.com
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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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