

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

EASTMAN

Eastman(TM) Turbo Oil 2380

Version Revision Date: SDS Number: Date of last issue: 26.07.2016
4.3 29.07.2016 150000097793 Date of first issue: 31.05.2014
SDSGB / PRD / 0001

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
N-Phenylbenzenamine reaction products with 2,4,4-trimethylpentene	68411-46-1 270-128-1	STOT RE 2; H373 Aquatic Chronic 3; H412	1 - 5
Tricresyl phosphate	1330-78-5 215-548-8	Repr. 2; H361 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	< 3
N-phenyl-1-naphthylenamine	90-30-2 201-983-0	Acute Tox. 4; H302 Skin Sens. 1; H317 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	< 2.5

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : Move to fresh air.
If breathing is difficult, give oxygen.
Consult a physician if necessary.
- 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.

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6.3 Methods and material for containment and cleaning up

Methods for 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).

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice.
Do not get in eyes.
Do not get on skin or clothing.
Wash thoroughly after handling.
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 or maintenance.
Wear appropriate personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage : Keep containers tightly closed in a cool, well-ventilated place.
areas and containers

7.3 Specific end use(s)

Specific use(s) : www.EastmanAviationSolutions.com

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

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

Eye protection : Wear safety glasses with side shields (or goggles).

Hand protection

Material : Recommended gloves:
Nitrile rubber

Remarks : Wear suitable gloves. Contact the glove manufacturer for

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specific advice on glove selection and breakthrough times for your use conditions.

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

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : amber

Odour : No data available

Melting point/freezing point : -54 °C

Flash point : 246 °C
Method: Cleveland open cup

Flammability (solid, gas) : Not applicable

Relative density : 0.98 (15.6 °C)

Density : 980 kg/m³ (15.6 °C)

Solubility(ies)
Water solubility : insoluble

Partition coefficient: n-octanol/water : Not applicable Mixture

Viscosity
Viscosity, kinematic : 23 - 30 mm²/s (40 °C)

4.9 - 5.4 mm²/s (100 °C)

9.2 Other information

No data available

SECTION 10: Stability and reactivity

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10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid

Conditions to avoid : Keep away from sources of ignition - No smoking.

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

10.6 Hazardous decomposition products

Emits acrid smoke and fumes when heated to decomposition.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg
Assessment: Not classified

Acute inhalation toxicity : Acute toxicity estimate (Expert judgement): Exposure time: 4 h
Assessment: Not classified
Remarks: Read-across from a similar material

Acute dermal toxicity : Acute toxicity estimate (Expert judgement): Assessment: Not
classified
Remarks: Read-across from a similar material

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

N-phenyl-1-naphthylenamine:

Acute oral toxicity : LD50 Oral (Rat): 1,250 mg/kg

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

Skin corrosion/irritation

Product:

Species: Rabbit
Exposure time: 24 h
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.

N-phenyl-1-naphthylamine:

Species: Rabbit
Assessment: Not classified
Result: none

Serious eye damage/eye irritation

Product:

Species: Rabbit
Assessment: Not classified
Result: No eye irritation

Components:

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

Species: Rabbit
Assessment: Not classified
Result: slight

Tricresyl phosphate:

Species: Rabbit
Assessment: Not classified

N-phenyl-1-naphthylamine:

Species: Rabbit
Assessment: Not classified
Result: slight

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Respiratory or skin sensitisation

Product:

Test Type: Skin Sensitization
Assessment: Not classified
Method: Human Repeat Insult Patch Test
Result: non-sensitizing

Components:

Tricresyl phosphate:

Test Type: Skin Sensitization
Assessment: Not classified

N-phenyl-1-naphthylenamine:

Assessment: Skin sensitisation
Result: sensitizing

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Test Type: Mutagenicity
Metabolic activation: Read-across from a similar material
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.
Remarks: Read-across from a similar material

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.

Carcinogenicity

Product:

Species: Mouse
Application Route: Dermal
Remarks: negative

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Toxicity to fish (Chronic toxicity) : NOEC:
Species: 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

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

N-phenyl-1-naphthylenamine:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.44 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.30 - 0.68 mg/l
Exposure time: 48 h

Toxicity to bacteria : EC50 (Bacteria):
Exposure time: 3 h

12.2 Persistence and degradability

Product:

Biodegradability : Result: Readily biodegradable
Biodegradation: 92.36 %
Exposure time: 28 d

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

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

BOD/COD : Remarks: No data available

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Mixture

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14.6 Special precautions for user

Not applicable

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

Water contaminating class : WGK 1 slightly water endangering
(Germany)

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

TSCA	: On TSCA Inventory
DSL	: All components of this product are on the Canadian DSL
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	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

None.

SECTION 16: Other information

Full text of H-Statements

H302	: Harmful if swallowed.
H317	: May cause an allergic skin reaction.
H361	: Suspected of damaging fertility or the unborn child.
H373	: May cause damage to organs through prolonged or repeated exposure.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H412	: Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Acute aquatic toxicity
Aquatic Chronic	: Chronic aquatic toxicity
Repr.	: Reproductive toxicity

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Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; 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; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Sources of key data used to : www.EastmanAviationSolutions.com
compile the Safety Data Sheet

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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