according to Regulation (EC) No. 1907/2006



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

1.1 Product identifier

Trade name : Eastman(TM) Turbo Oil 2380

Product code : 34359-00, E3435901, P3435905, P3435903, P3435902,

P3435901, P3435900

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

Use of the Sub- : Lubricant

stance/Mixture

Recommended restrictions

on use

: None known.

1.3 Details of the supplier of the safety data sheet

Company : Eastman Chemical Company

200 South Wilcox Drive 37660-5280 Kingsport

Telephone : +14232292000

E-mail address of person : Visit our website at www.EASTMAN.com or email

responsible for the SDS emnmsds@eastman.com

1.4 Emergency telephone number

Emergency telephone number : For emergency health, safety, and environmental information:

telephone 800-EASTMAN or 423 229-4511 in the United

States; or

+44 (0)1235 239 670 in Europe.: For emergency transportation

information, call 423-229-4511 in the United States; 800 964214 in England; or +44(0)1235 239 670 in the other European countries. Identify the call as a transportation emergency.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Supplemental Hazard : EUH208: Contains N-phenyl-1-

Statements naphthylamine. May produce an allergic re-

action.

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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.	Classification	Concentration (% w/w)
N-Phenylbenzenamine reaction	Registration number 68411-46-1	STOT RE 2; H373	1 - 5
products with 2,4,4-	270-128-1	Aquatic Chronic 3;	
trimethylpentene Tricresyl phosphate	1330-78-5 215-548-8	Repr. 2; H361 Aquatic Acute 1; H400 Aquatic Chronic 1;	< 3
	100.00.0	H410	0.5
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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4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Prolonged skin contact may defat the skin and produce der-

matitis.

Contact with hot product will cause thermal burns.

Inhalation of thermal decomposition products may lead to

adverse effects including pulmonary edema.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

: Hazardous combustion products carbon dioxide, carbon monoxide

oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment

for firefighters

: Wear an approved positive pressure self-contained breathing

apparatus in addition to standard fire fighting gear.

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Ventilate the area.

Material can create slippery conditions. Use personal protective equipment.

Local authorities should be advised if significant spillages

cannot be contained.

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.

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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 areas and containers

: Keep containers tightly closed in a cool, well-ventilated place.

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

according to Regulation (EC) No. 1907/2006



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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 ven-

tilation 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

according to Regulation (EC) No. 1907/2006



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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-naphthylenamine:

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-naphthylenamine:

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

according to Regulation (EC) No. 1907/2006



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Reproductive toxicity

Product:

Effects on fertility : Species: Rat

Remarks: No known significant effects or critical hazards.

Effects on foetal develop: : Species: Rat

ment Remarks: No known significant effects or critical hazards.

Reproductive toxicity - As-

sessment

: No toxicity to reproduction

Components:

Tricresyl phosphate:

Effects on fertility : Species: Rat

Remarks: Suspected of damaging fertility.

Effects on foetal develop-

ment

: Species: Rat

Remarks: Suspected of damaging the unborn child.

Reproductive toxicity - As-

sessment

: May damage the unborn child. Suspected of damaging fertili-

ty.

STOT - single exposure

Product:

Exposure routes: inhalation (dust/mist/fume)

Assessment: Not classified

Components:

Tricresyl phosphate:

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

STOT - repeated exposure

Product:

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

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.

N-phenyl-1-naphthylenamine:

Assessment: Not classified

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Repeated dose toxicity

Product:

Remarks: No known significant effects or critical hazards.

Components:

Tricresyl phosphate:

Species: Rat NOEL: 300 mg/l

Aspiration toxicity

Product:

Not classified

Components:

Tricresyl phosphate:

Not classified

Experience with human exposure

Product:

Inhalation : Remarks: None known.

Skin contact : Remarks: Prolonged skin contact may defat the skin and pro-

duce dermatitis.

Eye contact : Remarks: Contact with the eyes may be very painful but does

not cause damage.

Ingestion : Remarks: None known.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (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

: NOEC: : Remarks: Not classified as hazardous.

(limit of solubility in fresh water) Read-across from a similar material

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (algae)): Remarks:

Not classified as hazardous. (limit of solubility in fresh water) Read-across from a similar material

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Toxicity to fish (Chronic tox-

icity)

: 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 (Chron-

ic 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 tox-

icity)

: 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 De-

mand (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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Not applicable

Components:

Tricresyl phosphate:

Bioaccumulation : Bioconcentration factor (BCF): 2,000

Remarks: No information available.

Partition coefficient: n-

octanol/water le

: Pow: 860,000 log Pow: 5.93

12.4 Mobility in soil

Components:

Tricresyl phosphate:

Distribution among environ-

mental compartments

: log Koc: 4.31

12.5 Results of PBT and vPvB assessment

Product:

Assessment : 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...

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

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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

(Germany)

: WGK 1 slightly water endangering

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

: Specific target organ toxicity - repeated exposure STOT RE

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 compile the Safety Data

Sheet

: www.EastmanAviationSolutions.com

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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