SAFETY DATA SHEET

MSDS: A4155_E71USUS Date Prepared: 2017/06/12

Date Revised:

Product Name: ENEOS Import DPS Fluid

1. Identification

Product name: ENEOS Import DPS Fluid

Recommended use and restrictions on use:

General industrial application

Manufacturer/Supplier:

JX Nippon Oil & Energy USA Inc.

Address:

20 N. Martingale Rd., Suite 325, Schaumburg, IL 60173

Emergency telephone

(TEL:+1-847-413-2188)

number:

2. Hazards identification

Hazard category Category

Flammable liquids No Classification
Acute toxicity (oral) No Classification
Acute toxicity (dermal) No Classification

Skin sensitizer Category 1

Aspiration hazard No Classification

Acute hazards to the aquatic environment Category 3

Label elements

Pictograms:



Signal word: Warning

Hazard statement: May cause allergic skin reaction

Harmful to aquatic life

Precautionary statements:

Prevention Do not handle until all safety precautions have been read and

understood.

Wear protective gloves/protective clothing/eye protection/face

protection.

Do not allow the eyes to become exposed to the product. Do not

swallow the product.

Avoid release to the environment.

Contaminated work clothing should not be allowed out of the

workplace.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash hands thoroughly after handling.

Do no eat, drink or smoke when using this product.

Response IF SWALLOWED: Immediately call a POISON CENTER or

doctor/physician.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

SAFETY DATA SHEET

MSDS: A4155_E71USUS Date Prepared: 2017/06/12

Date Revised:

Product Name: ENEOS Import DPS Fluid

If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician.

IF ON SKIN: Wash with plenty of soap and water.

Take off contaminated clothing and wash before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

Storage The product must be stored in a cool, well-ventilated location

where it will not be exposed to direct sunlight.

Containers that have been opened must be tightly sealed.

Disposal Dispose of contents/container in accordance with

local/regional/national/international regulations.

If there are any doubts about proper methods of handling the product, contact the point of purchase before proceeding with usage.

3. Composition/information on ingredients

Substance/Mixture: Mixture

Ingredients and Concentration

| Chemical Name | Concentr ation wt.% | CAS# |
|--|---------------------------|---------------|
| Base Oil(s) | 70-80 | Trade Sectret |
| Additives | <30 | Trade Sectret |
| C14-18 alpha-olefin epoxide, reaction products with boric acid | 0. 1-0. 9 | Trade Sectret |
| Ethanol, 2,2'-iminobis-, N-tallow alkyl derivatives | 0. 1-0. 9 | Trade Sectret |
| N-Phenyl-1-Naphthylamine | 0.1-0.9 | Trade Sectret |

4. First-aid measures

Eye contact:

Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a

position comfortable for breathing.

Cover the body with blankets to keep warm and quiet. If you feel

unwell, seek medical advice.

Skin contact: Immediately flush skin with large amounts of water.

Wash contaminated clothing before reuse.

If skin irritation occurs: Get medical advice/attention.

Rinse with clean water carefully for several minutes. Remove contact lenses if present and if removal is easy, then continue

rinsing. Rinse for 15 minutes at a minimum and seek medical

attention.

SAFETY DATA SHEET

MSDS: A4155_E71USUS Date Prepared: 2017/06/12

Date Revised:

Product Name: ENEOS Import DPS Fluid

Ingestion: Do not induce vomiting. Drink [one glass] [two glasses] of water.

Call a physician [or poison control

center] immediately.

Most important symptoms/effects,

acute and delayed.

May cause allergic skin reaction. Dermatis. Rash.

5. Fire-fighting measures

Suitable extinguishing media: Mist of loaded liquid, dry chemicals, carbon dioxide, fire foam,

and dry sand are effective.

Unsuitable extinguishing media: Use of straight stream of water can cause a risk of spreading

fire.

Specific hazards arising from the

chemical:

In some cases of fire, may release irritant gases.

When burnt, may generate carbon monoxide and other toxic gases.

Specific extinguishing methods: Spray water to the surrounding facilities for cooling.

Keep unauthorized persons off the site of occurrence of fire and

the surroundings.

Even after extinction, cool containers thoroughly with plenty of

water

Special protective equipment and precautions for fire fighters:

Wear fire/flame resistant/retardant clothing.

Fight fire from windward direction while wearing protective equipment. If contact with skin is expected, wear impervious

protective equipment and gloves.

Use air-breathing apparatus and protective clothing whenever

necessary.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment when working.

Remove nearby potential ignition sources immediately.

When mist is generated, use respiratory equipment to prevent

inhalation of mist.

Do not touch or walk through spillage.

Pay attention to the site of spillage, which is slippery.

Environmental precautions: Prevent spreading of oil spill with earth and sand, sandbags, or

other proper materials and use care not to allow the oil spill to

flow to street drains, sewer systems, and rivers.

At sea, install oil spill containment booms to prevent spreading

of spills and absorb with absorption mat or other proper

materials.

Methods and materials for containment

and cleaning up:

In case of spillage in small quantity, collect spillage by absorbing with earth, sand, sawdust, waste, or other proper

materials.

SAFETY DATA SHEET

MSDS: A4155 E71USUS Date Prepared: 2017/06/12

Date Revised:

Product Name: ENEOS Import DPS Fluid

In case of spillage in large quantity, enclose with embankment to

prevent spreading of spillage and collect spillage in empty

containers to the extent possible.

Prevention of second accident: In case of spillage, immediately inform the organizations

concerned of the spillage to prevent possible accidents and

spreading of spillage.

Remove nearby potential ignition sources immediately and make fire-extinguishing agents available. Remove spillage completely,

and ventilate and clean the site and the surroundings.

7. Handling and storage

Handling

Technical measures: Keep away from any possible contact with sparks, open flames, and

high-temperature materials, and do not allow release of vapor

without justification.

Use pumps or other proper equipment for taking out from containers. Do not siphon with your mouth using a tube. Do not

drink.

When mist is generated, use respiratory equipment to prevent

inhalation of mist.

In case of vapor/mist dispersion, install a closed system, local ventilation system, and/or other proper equipment for the sources

of vapor/mist generation.

Avoid rough handling of containers such as falling, dropping,

exposing to shock, and dragging.

Ventilation requirements: Maintain adequate ventilation when handling indoors.

Precautions: Wash hands and face thoroughly after handling.

Be careful with fire.

Precautions for safe

handling:

Avoid falling, dropping, exposing to shock, or dragging of

containers.

Wear protective gloves when opening containers to eliminate a

risk of hand injury.

Storage

Storage conditions: Store in a well ventilated, cool, dry, dark place, protecting

from direct sunlight and keeping away from any potential ignition

sources and high-temperature materials.

Store tightly stopped after use to prevent possible contamination

with dust and moisture.

Preferably store locked up in a proper storage area.

materials:

Safety adequate container Use spill-proof containers that are free of damage/corrosion.

8. Exposure controls/personal protection

SAFETY DATA SHEET

MSDS: A4155_E71USUS Date Prepared: 2017/06/12

Date Revised:

Product Name: ENEOS Import DPS Fluid

Appropriate engineering controls: In case of mist generation, enclose the source of mist

generation, or install a ventilation system.

Install eye cleaning and body cleaning equipment near the

handling site.

Control parameters

| Chemical Name | U.S OSHA | | | ACGIH | |
|--------------------------|----------------|----------------|----------------|----------------|--|
| Chemical Name | | STEL | TWA | TLV-STEL | TLV-TWA |
| Base Oil(s) | -ppm -mg/m3 | -ppm -mg/m3 | -ppm -mg/m3 | -ppm -mg/m3 | -ppm 5mg/m3(M ineral Oil Mist) |
| N-Phenyl-1-Naphthylamine | -ppm -mg/m3 | -ppm -mg/m3 | -ppm -mg/m3 | -ppm -mg/m3 | -ppm -mg/m3 |

Personal protective equipment

Respiratory protection: Not needed under normal conditions, but wear a gas mask (against

organic gases) whenever required.

Hand protection: In case of prolonged or repeated exposure, wear oil-resistant

hand protection.

Eye/face protection: In case of exposure to splashes, wear ordinary type goggles.

Skin protection: In case of handling over a prolonged period of time or in case of

exposure to oil, wear oil-resistant, long-sleeved work clothing.

Hygiene measures: Take off contaminated clothing and wash thoroughly before reuse.

Wash hands thoroughly after handling.

9. Physical and chemical properties

 ${\tt Product}$

pH: No data. Vapour pressure: No data.

Auto-ignition temperature: Estimate200−410(°C)

Appearance: Liquid

Melting point/freezing

Pour Point-54(℃)

point:

Flash point: 188(°C)Cleveland Open Cup

Evaporation rate No data.
Flammability (solid, gas) Not applicable

Vapour density: No data.

Density(g/cm3): Density0.8593(15 $^{\circ}$ C) Solubility: water: Insoluble.

Partition coefficient: n- No data.

octanol/water:

SAFETY DATA SHEET

MSDS: A4155_E71USUS Date Prepared: 2017/06/12

Date Revised:

Product Name: ENEOS Import DPS Fluid

Decomposition temperature: No data.

Kinematic viscosity: $>20.5 \text{ (mm2/sec)} (40^{\circ}\text{C})$

10. Stability and reactivity

Chemical stability: Stable when stored or preserved in a dark place at room temperature. Possibility of hazardous Keep away from any possible contact with strong oxidizing agents.

reactions:

Conditions to avoid: Contact with incompatible hazard substances

Prolonged heating, open flames, and ignition sources

Incompatible materials: Use care to keep away from any possible contact with halogens, strong acids,

alkalis, and acidifying substances.

Hazardous decomposition

products:

When burnt, may release carbon monoxide and other gases.

11. Toxicological information

Symptoms related to the physical, chemical and May cause allergic skin reaction. Dermatitis. Rash. toxicological characteristics:

Delayed and immediate effects and also chronic effects from short- and long- term exposure:

Short term exposure:

Potential immediate effects : No information Potential delayed effects : No information

<u>Long term exposure:</u>

Potential immediate effects : No information Potential delayed effects : No information

Product

Acute toxicity (oral): For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Acute toxicity (dermal): For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Acute toxicity (inhalation): For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Skin corrosion/irritation: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Serious eye damage/irritation: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Respiratory sensitization: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Skin sensitization: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Mutagenicity: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Carcinogenicity: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

SAFETY DATA SHEET

MSDS: A4155_E71USUS Date Prepared: 2017/06/12

Date Revised:

Product Name: ENEOS Import DPS Fluid

Reproductive toxicity: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Target organ effect/Single For mixtures, hazard category was identified based on

exposure: the classification criteria for mixtures.

Target organ effect/Multi exposure: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Respiratory toxic: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Other information:

Ingredient Base Oil(s)

 $\label{eq:local_local_local} \begin{tabular}{ll} Acute toxicity (oral): & $LD50$:$ $\ge 5000 $mg/kg[rat]$ \\ Acute toxicity (dermal): & $LD50$:$ $\ge 5000 $mg/kg[rat]$ \\ \end{tabular}$

Serious eye damage/irritation: Practically None

Skin sensitization: None Buehler method [guinea pig]

Mutagenicity: Ames Test:Negative

Carcinogenicity: EU:Category 2: R45 need not apply. (NOTE L is

Applicable), IARC:3

No Data No Data

N-Phenyl-1-Naphthylamine

Acute toxicity (oral): LD50: > 200~5000 mg/kg[rat], LD50: 1625 mg/kg[rat]

Acute toxicity (dermal): LD50:> 5000 mg/kg[rabbit]

Skin corrosion/irritation: Mild , Effect on animals: No relevant information found

Serious eye damage/irritation: None , Effect on animals: No relevant information found

Respiratory sensitization: Effect on person: No relevant information found

Skin sensitization: Strong 90% Maximization method [guinea pig], Effect on

person: No relevant information found

Respiratory toxic: Effect on person: No relevant information found

12. Ecological information

Product

Ecotoxicity

Fish acute toxicity: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Algae acute toxicity: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Fish chronic toxicity: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Algae chronic toxicity: For mixtures, hazard category was identified based on

the classification criteria for mixtures.

Other impact:

Ingredient

SAFETY DATA SHEET

MSDS: A4155_E71USUS Date Prepared: 2017/06/12

Date Revised:

Product Name: ENEOS Import DPS Fluid

Base Oil(s)

Ecotoxicity

Fish acute toxicity: 96hLC50:> 5000 mg/L[Oncorhynchus mykiss]

Daphnia acute toxicity: 48hEC50:> 1000 mg/L[Daphnia magna]

No Data

Ecotoxicity

Fish acute toxicity: LC50: 10~100 mg/L

N-Phenyl-1-Naphthylamine

Ecotoxicity

Fish acute toxicity: 96hrLC50: 0.7 mg/L
Algae acute toxicity: 72hrEC50: 0.034 mg/L
Algae chronic toxicity: 72hrNOEC: 0.0036 mg/L

13. Disposal considerations

Disposal Dispose of contents/container in accordance with local/regional/national/international

methods: regulations.

Every customer/user of the product should dispose of industrial waste on its own responsibility, otherwise it must rely on a company authorized by prefectural governor for treating industrial waste or a local public body involved in the disposal of industrial

waste for proper disposal.

Before disposal of used container, remove contents completely.

14. Transport information

IATA UN number: Not applicable

Proper Not applicable

shipping name:

Packing group: Not applicable

IMDG UN number: Not applicable

Proper Not applicable

shipping name:

Packing group: Not applicable

Marine pollutant (Yes/No): Not applicable

Transport in bulk Not applicable

(according to Annex II of MARPOL73/78 and the IBC

Code):

SAFETY DATA SHEET

MSDS: A4155_E71USUS Date Prepared: 2017/06/12

Date Revised:

Product Name: ENEOS Import DPS Fluid

Specific security precaution and condition of transportation:

Transport containers without causing any significant friction or shaking.

15. Regulatory information

US California Proposition 65

None of the ingredients is listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA Title ${\rm I\hspace{-.1em}I\hspace{-.1em}I}$)

None present or none present in regulated concentrations.

Australia (AICS): In the case where one or more components are not listed or, even if listed,

in the case of importing to the country or area concerned, an application or

notification is required.

Canada(DSL): All components are listed or exempted.

China(IECSC): In the case where one or more components are not listed or, even if listed,

in the case of importing to the country or area concerned, an application or

notification is required.

EU(REACH): In the case where one or more components are not listed or, even if listed,

in the case of importing to the country or area concerned, an application or

notification is required.

Korea(KECL): In the case where one or more components are not listed or, even if listed,

in the case of importing to the country or area concerned, an application or

notification is required.

New Zealand (NZIoC): In the case where one or more components are not listed or, even if listed,

in the case of importing to the country or area concerned, an application or

notification is required.

Philippines (PICCS): In the case where one or more components are not listed or, even if listed,

in the case of importing to the country or area concerned, an application or

notification is required.

Taiwan(TCSI): In the case where one or more components are not listed or, even if listed,

in the case of importing to the country or area concerned, an application or

notification is required.

USA(TSCA): All components are listed or exempted.

16. Other information

NFPA Health hazard rating blue:0, Flammability hazard rating:1

HMIS Health Ratings:0, Flammability Ratings:1

Date Prepared: 3/6/2018

Date Revised:

SAFETY DATA SHEET

MSDS: A4155_E71USUS Date Prepared: 2017/06/12

Date Revised:

Product Name: ENEOS Import DPS Fluid

Disclaimer: We at JXTG Nippon Oil & Energy Corporation have prepared the copyrighted

Safety Data Sheet to provide reference information on the hazardous chemical product of interest for our customers/users to ensure secure and safe

nandling.

We would like every customer/user of the product to refer to the information and understand the necessity of taking appropriate measures for the actual handling conditions on their own responsibilities for optimum practical

application of the product of interest.

Consequently, the Safety Data Sheet is not intended to guarantee the safety

of the product referenced to herein.