



To Our Customers:

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All statements, technical information, and recommendations contained therein are solely that of the manufacturer of the product. We at Zep Inc. did not verify the accuracy and completeness of the statements and do not warrant or guarantee the information. We provide vendor SDSs to assist our customers in their compliance efforts. The attached document is in compliance with one of the respective country regulatory requirements noted below:

The OSHA Hazard Communication Standard (in the United States)
The Hazardous Products Regulations (in Canada)

We made every effort to deliver all of the information prepared by the manufacturer. We cannot anticipate all conditions under which this information will be used. If you have any questions about the statements on the SDS, please contact the company shown on the document.

Zep Inc. assumes no liability or responsibility for loss or damage resulting from the improper use or handling of this product, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the manufacturer's product label and Safety Data Sheet.

Sincerely,

Product Stewardship Team
Zep Inc.

SDS(Safety Data Sheet)

Product	GS WDCTF HD G		
MSDS Number	List No.	Issuing date	Last revised date
-	LB3226	2017-06-19	2024-09-02

1. IDENTIFICATION

1) Product name

GS WDCTF HD G

2) Recommended use of the chemical and restriction on use

- Recommended use Lubricants
- Restrictions on use Do not use for any other purpose.

3) Details of the supplier of the safety data sheet

○ Manufacturer

- Company name GS Caltex Corporation
- Address GS Tower, 508, Nonhyeon-ro, Gangnam-gu, Seoul, Korea
- Emergency telephone number 1544-5151

2. HAZARDS IDENTIFICATION

1) Classification of the product

- Not applicable

2) Label elements

○ Hazard pictograms

- Not applicable

○ Signal word

- Not applicable

○ Hazard statements

- Not applicable

○ Precautionary statements

1) Prevention

- Not applicable

2) Response

- Not applicable

3) Storage

- Not applicable

4) Disposal

- Not applicable

3) Other hazards

○ Product NFPA Level

(※ 0-Lack, 1-Low, 2-Moderate, 3-High, 4-Very High)

Product name	Health	Flammable	Reaction
GS WDCTF HD G	0	1	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	Trade names and Synonyms	CAS No.	EC No.	Contain Ratio(%)
1-Decene, homopolymer, hydrogenated	Hydrogenated decene homopolymer	68037-01-4	500-183-1	73 ~ 83
Trade secret				1 ~ 5
1-Decene, dimer, hydrogenated	9,10-dimethyloctadecane	68649-11-6	500-228-5	1 ~ 10
1-Dodecene polymer with 1-octene, hydrogenated	CSR081605-62629	163149-29-9		0.1 ~ 2.0
Isooctadecanoic acid reaction products with tetraethylenepentamine	CSR160805-24703	68784-17-8	272-225-4	0.1 ~ 2.0
Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated	CSR160805-24364	151006-58-5		0.1 ~ 0.2
N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine	; 1-(N,N-bis(2-ethylhexyl)aminomethyl)-1,2,4-triazole ; 1H-1,2,4-Triazole-1-methanamine, N,N-bis(2-ethylhexyl)-	91273-04-0		0.001 ~ 0.1

4. FIRST AID MEASURES

1) Eye contact

- In case of contact with material, immediately flush eyes with running water for at least 15 minutes.
- If eye irritation persists: Get medical advice/attention.

2) Skin contact

- In case of contact with material, immediately flush skin with running water for at least 15 minutes.
- Remove and isolate contaminated clothing and shoes.
- Launder contaminated clothing and shoes before re-use.
- If skin irritation occurs: Get medical advice/attention.

3) Inhalation

- Move victim to fresh air.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

4) Ingestion

- If unconscious but breathing, never give anything by mouth
- If swallowed do not induce vomiting, seek medical advice immediat.
- Get immediate medical advice/attention.

- Rinse mouth.

5) Indication of any immediate medical attention and special treatment needed

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. FIRE FIGHTING MEASURES

1) Suitable (and unsuitable) extinguishing media

- Small fire: Dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO₂ (Suitable extinguishing media)
- Large fire: Water spray/fog, regular foam (Suitable extinguishing media)
- High-pressure water (Unsuitable extinguishing media)

2) Special hazards arising from the substance or mixture

- May be ignited by heat, sparks or flames.
- Fire may produce irritating and/or toxic gases.
- May cause toxic effects if inhaled.

3) Special protective equipment and precautions for firefighters

- Substance may be transported hot.
- Runoff may cause pollution.
- Contact may cause burns to skin and eyes.
- Dike fire-control water for later disposal; do not scatter the material.
- Move containers from fire area if you can do it without risk.
- Fire involving Tanks: Cool containers with flooding quantities of water until well after fire is out.
- Fire involving Tanks: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Fire involving Tanks: ALWAYS stay away from tanks engulfed in fire.

6. ACCIDENTAL RELEASE MEASURES

1) Health considerations and protective equipment

- Do not touch or walk through spilled material.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Ventilate the contaminated area.
- Stop leak if you can do it without risk.
- Prevent dust cloud.
- Please note that materials and conditions to be avoided.

2) Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

3) Methods and material for containment and cleaning up

- Small Spill: Flush area with flooding quantities of water.
- Large Spill: Dike far ahead of liquid spill for later disposal.
- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.
- Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

- Small Spill: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

7. HANDLING AND STORAGE

1) Precautions for safe handling

- Wash ... thoroughly after handling.
- Please note that materials and conditions to be avoided.
- Handling refer to engineering control/personal protection section.
- Caution: High temperature

2) Conditions for safe storage (including any incompatibilities)

- Store in a dry place. Store in a closed container.
- Please note that materials and conditions to be avoided.
- Store in a closed container.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

1) Control parameters

Chemical name	Exposure limits	ACGIH TLV	OSHA PEL	Biological limit values(BLV)
1-Decene, homopolymer, hydrogenated	Not available	Not available	Not available	Not available
Trade secret	Not available	Not available	Not available	Not available
1-Decene, dimer, hydrogenated	Not available	Not available	Not available	Not available
1-Dodecene polymer with 1-octene, hydrogenated	Not available	Not available	Not available	Not available
Isooctadecanoic acid reaction products with tetraethylenepentamine	Not available	Not available	Not available	Not available
Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated	Not available	Not available	Not available	Not available
N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine	Not available	Not available	Not available	Not available

2) Appropriate engineering controls

- Adjust the ventilation rate to suit the condition.
- If the exposure limits are not set, keep the air level at an acceptable level.

3) Personal protection equipment

- **Respiratory protection** - Wear a adequate respiratory protection equipment with certificate by considering physicochemical properties of exposed particulate material.
- In case exposed to particulate material, the respiratory protective equipments as follow are recommended. - facepiece filtering respirator or air-purifying respirator, high-efficiency particulate air(HEPA) filter media or respirator equipped with power
- In lack of oxygen(<19.6%), wear the supplied-air respirator or self-contained breathing apparatus.

○ **Eye protection**

- Consider the warning characteristics beforehand.
- Wear breathable safety goggles to protect from material causing eye irritation or other disorder.
- An eye wash unit and safety shower station should be available nearby work place.
- In case of direct exposure or potential exposure to the substance, wear safety glasses for chemicals approved in the country.

○ **Hand protection**

- Wear appropriate protective gloves by considering physical and chemical properties of chemicals.
- In case of direct exposure or potential exposure to the substance, wear safety gloves for chemicals approved in the country.

○ **Body protection**

- Wear appropriate protective clothing by considering physical and chemical properties of chemicals.
- In case of direct exposure or potential exposure to the substance, wear protective clothing for chemicals approved in the country.

9. PHYSICAL AND CHEMICAL PROPERTIES

Item	Input Value
Apperance	Liquid
Color	No Data
Smell	Petroleum
Smell Threshold	No Data
pH (Numerical value)	No Data
Melting/Freezing Point	No Data
Boilling Point	No Data
Flash Point	200 °C
Evaporating Rate	No Data
Flammability(Solid, Gas)	No Data
Explosibility Range	No Data
Steam Pressure	No Data
Solubility	No Data
Vapor Density	No Data
Specific Gravity	0.836
Distribution Coefficient	No Data
Selflgnition Temperature	No Data
Pyrolysis Temperature	No Data

Viscosity	5.4 mm ² /s (at 100°C)
Molecular Weight	No Data

10. STABILITY AND REACTIVITY

- 1) Chemical Stability and hazardous reactivity**
 - Stable under normal temperatures and pressures.
 - Containers may explode when heated.
 - Some may burn but none ignite readily.
- 2) Conditions to avoid**
 - Ignition source(heat, spark, flame)
- 3) Incompatible materials**
 - Combustibles
 - Irritating and/or toxic gas
- 4) Hazardous decomposition products**
 - Not available

11. TOXICOLOGICAL INFORMATION

1) Information on the likely routes of exposures

- ☐ **Inhalation**
 - No inhalation effects through respiratory system.
- ☐ **Skin contact**
 - No effect on skin contact.
- ☐ **Eye contact**
 - No effect on eye contact.
- ☐ **Ingestion**
 - No ingestion effect through mouth.

2) Health hazard information

- ☐ **Acute toxicity**
 - * Oral - Not classified (ATEmix > 2000 mg/kg)**
 - 1-Decene, homopolymer, hydrogenated : rat(male/female); LD50 > 5000 mg/kg bw, no deaths (OECD TG 423, GLP) (ECHA)
 - Trade secret : Not available
 - 1-Decene, dimer, hydrogenated : rat(male/female); LD50 > 5000 mg/kg bw, no deaths (16 CFR 1500, GLP) (ECHA)
 - 1-Dodecene polymer with 1-octene, hydrogenated : Not available
 - Isooctadecanoic acid reaction products with tetraethylenepentamine : rat; LD50 > 5000 mg/kg bw, no deaths (EPA OPP 81-1, GLP) (HPVIS)
 - Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : rat(male/female); LD50 > 5000 mg/kg bw, no deaths (OECD TG 420, GLP) (ECHA)
 - N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : rat(male/female); LD50 = 2356 mg/kg bw (OECD TG 401) (ECHA)
 - * Dermal - Not classified (ATEmix > 2000 mg/kg)**
 - 1-Decene, homopolymer, hydrogenated : rat(male/female); LD50 > 2000 mg/kg bw, no deaths (OECD TG 402,

GLP) (read across: Oronite XS 1010) (ECHA)

- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : rabbit(male/female); LD50 > 3000 mg/kg bw, no deaths (OECD TG 402) (ECHA)
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : rabbit; LD50 > 2000 mg/kg bw, no deaths (OECD TG 402, GLP) (HPVIS)
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : rat(male/female); LD50 > 2000 mg/kg bw, no deaths (OECD TG 402, GLP) (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : rat(male/female); LD50 > 2000, no deaths (OECD TG 402) (ECHA)

*** Inhalation(Gas) - Not applicable**

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

*** Inhalation(Vapour) - Not classified (ATEmix > 20 mg/L)**

- 1-Decene, homopolymer, hydrogenated : Not available
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : Not available
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not available
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not available

*** Inhalation(Dust, mist) - Not classified (ATEmix > 5 mg/L)**

- 1-Decene, homopolymer, hydrogenated : rat(male/female); inhalation: aerosol; LC50 > 5.2 mg/L air /4h, no deaths (OECD TG 403, GLP) (ECHA)
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : rat(male/female); inhalation: aerosol; LC50 > 5.06 mg/L air /4h, no deaths (OECD TG 403, GLP) (read across: Alkane 4) (ECHA)
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : rat(male/female); inhalation: aerosol; LC50 > 1.81 mg/L air /4h (OECD TG 403, GLP) (read across: SHF-21) (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not available

○ Skin corrosion/Irritation : Not classified

- 1-Decene, homopolymer, : rabbit; not irritating (OECD TG 404, GLP) (ECHA)
hydrogenated
- Trade secret : Not available
- 1-Decene, dimer, : rabbit; not irritating (OECD TG 404) (ECHA)
hydrogenated
- 1-Dodecene polymer with : Not available

1-octene, hydrogenated

- Isooctadecanoic acid : Not available
reaction products with
tetraethylenepentamine
- Reaction products of 1- : rabbit; not irritating (OECD TG 404, GLP) (ECHA)
decene and 1-dodecene,
dimer, hydrogenated
- N,N-Bis(2-ethyl hexyl)- : rabbit; corrosive; noted up to 14 days observation (OECD TG 404, GLP) (ECHA)
[(1,2,4-triazol-1-
yl)methyl]amine

○ **Serious eye damage/irritation : Not classified**

- 1-Decene, homopolymer, : rabbit; not irritating (OECD TG 405, GLP) (ECHA)
hydrogenated
- Trade secret : Not available
- 1-Decene, dimer, : rabbit; not irritating (16 CFR 1500, GLP) (ECHA)
hydrogenated
- 1-Dodecene polymer with : Not available
1-octene, hydrogenated
- Isooctadecanoic acid : Not available
reaction products with
tetraethylenepentamine
- Reaction products of 1- : rabbit; not irritating (OECD TG 405, GLP) (ECHA)
decene and 1-dodecene,
dimer, hydrogenated
- N,N-Bis(2-ethyl hexyl)- : Because this substance is classified as corrosive to skin so is considered to be
[(1,2,4-triazol-1- corrosive to eye.
yl)methyl]amine

○ **Respiratory sensitization : Not classified**

- 1-Decene, homopolymer, : Not available
hydrogenated
- Trade secret : Not available
- 1-Decene, dimer, : Not available
hydrogenated
- 1-Dodecene polymer with : Not available
1-octene, hydrogenated
- Isooctadecanoic acid : Not available
reaction products with
tetraethylenepentamine
- Reaction products of 1- : Not available
decene and 1-dodecene,
dimer, hydrogenated
- N,N-Bis(2-ethyl hexyl)- : Not available
[(1,2,4-triazol-1-
yl)methyl]amine

○ **Skin sensitization : Not classified**

- 1-Decene, homopolymer, hydrogenated : guinea pig; not sensitising (OECD TG 406, GLP) (ECHA)
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : guinea pig; not sensitising (OECD TG 406, GLP) (ECHA)
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : guinea pig; not sensitising (OECD TG 406, GLP) (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : guinea pig; 85 to 95% of the animals were sensitised by the test article under the experimental conditions employed. The test substance is therefore regarded a skin sensitizer.; >=30% responding at >1% intradermal induction dose (OECD TG 406, GLP) (ECHA)

○ **Carcinogenicity : Not classified**

- 1-Decene, homopolymer, hydrogenated : IARC, EU CLP 1272/2008, OSHA, ACGIH, US EPA IRIS, NTP : not listed
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : IARC, EU CLP 1272/2008, OSHA, ACGIH, US EPA IRIS, NTP : not listed
- 1-Dodecene polymer with 1-octene, hydrogenated : IARC, EU CLP 1272/2008, OSHA, ACGIH, US EPA IRIS, NTP : not listed
- Isooctadecanoic acid reaction products with tetraethylenepentamine : IARC, NTP; UES EPA IRIS, ACGIH, EU CLP 1272/2008 : not listed
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : IARC, EU CLP 1272/2008, OSHA, ACGIH, US EPA IRIS, NTP : not listed
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : IARC, EU CLP 1272/2008, OSHA, ACGIH, US EPA IRIS, NTP : not listed

○ **Germ cell mutagenicity : Not classified**

- 1-Decene, homopolymer, hydrogenated : In vitro Bacterial Reverse Mutation Assay : negative (OECD TG 471, GLP) (ECHA)
In vivo Mammalian Erythrocyte Micronucleus Test : negative (OECD TG 474, GLP) (read across: Oronite XS 101) (ECHA)
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : In vitro Bacterial Reverse Mutation Assay : negative (OECD TG 471, GLP) (read across: Alkane-5) (ECHA), In Vitro Mammalian Chromosome Aberration Test : negative (OECD TG 473, GLP) (read across: Alkane-4) (ECHA)
In vivo Mammalian Erythrocyte Micronucleus Test : negative (OECD TG 474, GLP) (read across: Oronite XS 101) (ECHA)
- 1-Dodecene polymer with : Not available

1-octene, hydrogenated

- Isooctadecanoic acid : in vitro bacterial reverse mutation assay : negative (OECD TG 471, GLP) (HPVIS)
reaction products with : In vivo : not available
tetraethylenepentamine
- Reaction products of 1- : In vitro bacterial reverse mutation assay : negative (OECD TG 471, GLP) (ECHA)
decene and 1-dodecene, : In vivo Mammalian Erythrocyte Micronucleus Test : negative (OECD TG 474, GLP)
dimer, hydrogenated (ECHA)
- N,N-Bis(2-ethyl hexyl)- : In vitro Reverse Mutation Test Using Bacteria; Negative (OECD TG 471) (ECHA)
[(1,2,4-triazol-1-yl)methyl]amine : In vivo Mammalian Erythrocyte Micronucleus Test: negative (OECD TG 474)
(ECHA)

○ **Reproductive toxicity : Not classified**

- 1-Decene, homopolymer, : rat(male/female); 0, 100, 500, or 1000 mg/kg/day; one-generation reproductive
hydrogenated toxicity; Ethylflo 166 did not appear to have any effects on reproduction. (OECD
TG 415, GLP) (ECHA)
- Trade secret : Not available
- 1-Decene, dimer, : rat(male/female); 0, 100, 500, or 1000 mg/kg/day; one-generation reproductive
hydrogenated toxicity; Ethylflo 166 did not appear to have any effects on reproduction. (OECD
TG 415, GLP) (read across: Ethylflo 166 poly alpha olefin) (ECHA)
- 1-Dodecene polymer with : Not available
1-octene, hydrogenated
- Isooctadecanoic acid : rat; The NOAEL was reported to be >1000 mg/kg-bw/day for systemic and
reaction products with reproductive toxicity in the parental generation and for developmental toxicity
tetraethylenepentamine in the pups. (CESAR)
- Reaction products of 1- : rat(male/female); 0, 50, 250, 1000 mg/kg bw/day; one-generation reproductive
decene and 1-dodecene, toxicity; resulted in no treatment-related effects. The 'No Observed Effect Level'
dimer, hydrogenated for adult toxicity and reproductive and developmental toxicity was therefore
considered to be 1000 mg/kg/day. (OECD TG 415, GLP) (read across: Alkane 4)
(ECHA)
- N,N-Bis(2-ethyl hexyl)- : rat(male); oral; 10, 30, 100 mg/kg; The NOAEL for reproductive and
[(1,2,4-triazol-1-yl)methyl]amine developmental toxicity was considered to be 100 mg/kg bw/day for both sexes.
(OECD TG 421, GLP) (ECHA)

○ **Specific target organ toxicity (single exposure) : Not classified**

- 1-Decene, homopolymer, : oral; rat(male/female); Clinical observations included transient mild depression
hydrogenated and oily hair coats. Animals appeared grossly normal by day 5 post-exposure.
LD50 > 5000 mg/kg bw, no deaths (OECD TG 423, GLP) (ECHA)
dermal; rat(male/female); Necropsy at the end of the 14 day observation period
revealed a dilated pelvis in the kidney of one male rat treated at 2000 mg/kg,
but this was not considered to be a treatment-related. LD50 > 2000 mg/kg bw,
no deaths (OECD TG 402, GLP) (read across: Oronite XS 1010) (ECHA)
inhalation: aerosol; rat(male/female); No treatment-related changes in pathology
were observed. LC50 > 5.2 mg/L air /4h, no deaths (OECD TG 403, GLP) (ECHA)
- Trade secret : Not available
- 1-Decene, dimer, : oral; rat(male/female); No gross pathological changes were noted. LD50 > 5000
hydrogenated mg/kg bw, no deaths (16 CFR 1500, GLP) (ECHA)
dermal; rabbit(male/female); No gross pathological alterations were noted or

observed. LD50 > 3000 mg/kg bw, no deaths (OECD TG 402) (ECHA)
 inhalation; rat(male/female); At terminal sacrifice, there were no gross abnormalities observed. LC50 > 5.06 mg/L air /4h, no deaths (OECD TG 403, GLP) (read across: Alkane 4) (ECHA)

- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : dermal; rat(male/female); Skin irritation was noted in controls and treated animals, but the irritation was more severe and persistent in the treated animals with cracking and scarring occurring in the treated animals. Ocular discharge occurred in both the controls and treated animals. LD50 > 2000 mg/kg bw, no deaths (OECD TG 402, GLP) (ECHA)
 inhalation; rat(male/female); No significant daily clinical observations in animals in either group 1 or 2. Animals in group 3 exhibited respiratory rales (2 of 10 males and 8 of 9 surviving females) on day 2. Rales were resolved by day 3. There were no other test material-related findings. LC50 > 1.81 mg/L air /4h (OECD TG 403, GLP) (read across: SHF-21) (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : oral; rat(male/female); LD50 = 2356 mg/kg bw (OECD TG 401) (ECHA); In the 2000 mg/kg bw dose group, in one female hemorrhagic contents was found in the abdominal cavity.
 dermal; rat(male/female); No deviations from normal morphology were found. (OECD TG 402) (ECHA)

○ **Specific target organ toxicity (repeated exposure) : Not classified**

- 1-Decene, homopolymer, hydrogenated : oral; rat(male/female); 91 days; 0, 100, 500, or 1000 mg/kg/day; The subchronic NOAEL for ethylflo 166 in rats is 1000 mg/kg/day. (OECD TG 408, GLP) (ECHA)
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : oral; rat(male/female); 10 weeks; 0, 50, 250, 1000 mg/kg/day; Based on the lack of systemic toxicity effects observed at this dose level, NOAEL=ca. 1000 mg/kg bw/day (OECD TG 408, GLP) (read across: Alkane 4) (ECHA)
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : rat; The NOAEL was reported to be >1000 mg/kg-bw/day for systemic and reproductive toxicity in the parental generation and for developmental toxicity in the pups. (CESAR)
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : oral; rat(male/female); 0, 200, 500, or 1000 mg/kg/day; 29 days; The test compound did not cause any toxicologically significant or treatment-related results. Therefore, the NOAEL is 1000 mg/kg/day. (OECD TG 407, GLP) (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : oral; rat(male/female); 28 days; Under the experimental conditions of this study, the test substance given to rats at the dose levels of 0, 20, 60 and 200 mg/kg/day did not induce any clinical change. The mortality in the 20 mg/kg/day group (one animal out of ten) cannot be certainly related to the treatment. In laboratory investigations, the slight changes observed at the two higher dose levels have no toxicological significance. At necropsy, drug-related signs were seen in the higher dose group. The NOEL was estimated to be 60

○ **Aspiration hazard : Not classified**

- 1-Decene, homopolymer, : 31.0 mm²/s (40°C) (ECHA) & hydrocarbons hydrogenated
- Trade secret : Not available
- 1-Decene, dimer, : 5.54 mm²/s (40°C) (ECHA) & hydrocarbons hydrogenated
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : 5.1 cSt (40°C) (ASTM D445) (read across) (ECHA) & hydrocarbons
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : 31.9 mm²/s at 40°C & not hydrocarbons

12. ECOLOGICAL INFORMATION

1) Ecotoxicity

- Acute toxicity : Not classified (ATEmix > 1 mg/L)
- Chronic toxicity : Not classified

○ **Acute (short-term) aquatic hazard:**

Fish

- 1-Decene, homopolymer, hydrogenated : Water solubility: < 0.1 mg/L (ECHA), 96h-LL50(*Oncorhynchus mykiss*) > 1000 mg/L (US EPA, GLP) (ECHA); No toxic effects up to the limit of water solubility
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : Water solubility: < 0.1 mg/L (ECHA), 96h-LL50(*Oncorhynchus mykiss*) > 1000 mg/L (OECD TG 203, GLP) (ECHA); No toxic effects up to the limit of water solubility
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : 96h-LC50(*Oncorhynchus mykiss*) > 1000 mg/L (EPA OTS 797.1400, GLP) (HPVIS); no toxic effects within the water solubility (< 0.05 mg/L) (CESAR)
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : No toxic effects occur within the range of water solubility. (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : 96h-LC50(*Danio rerio*) = 1.1 mg/L (OECD TG 203) (ECHA)

Invertebrates

- 1-Decene, homopolymer, hydrogenated : Water solubility: < 0.1 mg/L (ECHA), 48h-EL50(*Daphnia magna*) > 1000 mg/L (OECD TG 202, GLP) (ECHA); No toxic effects up to the limit of water solubility
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : Water solubility: < 0.1 mg/L (ECHA), 48h-EL50(*Daphnia magna*) > 1000 mg/L (OECD TG 202, GLP) (ECHA); No toxic effects up to the limit of water solubility
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available

- Isooctadecanoic acid reaction products with tetraethylenepentamine : 48h-EC50(*Daphnia magna*) = 150 mg/L (EPA OTS 797.1300, GLP) (HPVIS); no toxic effects within the water solubility(<0.05 mg/L) (CESAR)
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : No toxic effects occur within the range of water solubility. (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : 48h-EC50(*Daphnia magna*) = 2.2 mg/L (read across) (EU Method C.2) (ECHA)

Aquatic algae

- 1-Decene, homopolymer, hydrogenated : Water solubility:< 0.1 mg/L (ECHA), 72h-ErL50(*Scenedesmus capricornutum*) > 1000 mg/L (OECD TG 201, GLP) (ECHA); No toxic effects up to the limit of water solubility
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : Water solubility:< 0.1 mg/L (ECHA), 72h-ErL50(*Scenedesmus capricornutum*) > 1000 mg/L (OECD TG 201, GLP) (ECHA); No toxic effects up to the limit of water solubility
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : 72h-ErC50(*Selenastrum capricornutum*) = 1.3 mg/L (OECD TG 201, GLP) (HPVIS); no toxic effects within the water solubility(<0.05 mg/L) (CESAR)
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : No toxic effects occur within the range of water solubility. (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : 72h-ErC50(*Desmodesmus subspicatus*) > 1 mg/L (OECD TG 201, GLP) (ECHA)

○ Chronic (Long-term) aquatic hazard:

Fish

- 1-Decene, homopolymer, hydrogenated : Not available
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : Not available
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not available
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : 28d-NOEC > 100 mg/L (OECD TG 215) (ECHA)

Invertebrates

- 1-Decene, homopolymer, hydrogenated : 21d-NOELR(*Daphnia magna*) = 125 mg/L (OECD TG 211, GLP) (ECHA)
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : 21d-NOELR(*Daphnia magna*) = 125 mg/L (OECD TG 211, GLP) (ECHA)
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : No toxic effects occur within the range of water solubility. (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : 21d-NOEC(*Daphnia magna*) = 0.069 mg/L (read across) (OECD TG 211, GLP) (ECHA)

Aquatic algae

- 1-Decene, homopolymer, hydrogenated : 72h-NOErLR(*Scenedesmus capricornutum*) = 1000 mg/L (OECD TG 201, GLP) (ECHA)
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : 72h-NOErLR(*Scenedesmus capricornutum*) = 1000 mg/L (OECD TG 201,

GLP) (ECHA)

- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : No toxic effects occur within the range of water solubility. (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : 72h-NOErC(Desmodesmus subspicatus) = 0.32 mg/L (OECD DTG 201, GLP) (ECHA)

2) Persistence and degradability

○ Persistence

- 1-Decene, homopolymer, hydrogenated : log Kow > 6.5 (20 °C; pH:7) (OECD TG 117, GLP) (ECHA)
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : log Kow > 6.5 (20 °C; pH:7) (OECD TG 117, GLP) (ECHA)
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : log Kow = 4.79 - 18.38 (CESAR)
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : log Kow > 6.5 (20 °C; pH:7) (OECD TG 117, GLP) (read across: NEXBASE 2002) (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : log Kow = 5.72 (estimated) (EPISUITE)

○ Degradability

- 1-Decene, homopolymer, hydrogenated : Not available
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : Not available
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not available
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Test substance is hydrolytically unstable. (ECHA)

3) Bioaccumulative potential

○ Bioaccumulation

- 1-Decene, homopolymer, hydrogenated : Members of this category are not expected to be bioaccumulative. (ECHA)
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : Members of this category are not expected to be bioaccumulative. (ECHA)
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not available
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : BCF = 116.7 (estimated) (EPISUITE)

○ Biodegradation

- 1-Decene, homopolymer, hydrogenated : 2 % degradation after 28d; Not readily biodegradable (OECD TG 301D, GLP) (ECHA)
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : 15 % degradation after 28d; Not readily biodegradable (OECD TG 301D, GLP) (ECHA)
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : 5.0 +/- 1.6 % in 29days; Not readily biodegradable (OECD TG 301B, GLP) (HPVIS)

- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : 15% degradation after 28d; not readily biodegradable (OECD TG 301D, GLP) (read across: Oronite Synfield PAO 2cSt) (ECHA)
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : 9 % degradation after 28 days; not biodegradable (OECD TG 301B) (ECHA)

4) Mobility in soil

- 1-Decene, homopolymer, hydrogenated : Not available
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : Koc = 571100000 (EPISUITE)
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not available
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Koc = 12490 (EPISUITE)

5) Hazard to the ozone layer

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

6) Other adverse effects

- 1-Decene, homopolymer, hydrogenated : Not available
- Trade secret : Not available
- 1-Decene, dimer, hydrogenated : Not available
- 1-Dodecene polymer with 1-octene, hydrogenated : Not available
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not available
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not available
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not available

13. DISPOSAL CONSIDERATIONS

1) Disposal methods

- Waste must be disposed of in accordance with federal, state and local environmental control regulation.

2) Special precaution for disposal

- Consider the required attentions in accordance with waste treatment management regulation.

14. TRANSPORT INFORMATION

1) UN No.

- Not applicable

2) Proper shipping name

- Not applicable

3) Transport hazard class(es)

- Not applicable

4) Packing group

- Not applicable

5) Marine pollutant

- Not applicable

6) Special safety response for transportation or transportation measure

- Types of Emergency Measures in Case of Fire : Not applicable
- Types of Emergency Measures in Leakage : Not applicable
- Transport regulations according to ADR/RID, AND, IMDG and ICAO/IATA : Not applicable

15. REGULATORY INFORMATION

EINECS(or ELINCS)

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : European EINECS phase-in substance
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

EU CLP (CLASSIFICATION) - PRODUCT : Not applicable

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

Substances restricted under REACH

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

Substances subject to authorization under REACH

REACH SVHC List

Korea

○ Occupational Safety and Health Act

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable

- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

○ **K-REACH**

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

○ **Chemical Control Act in Korea**

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Toxic substance

○ **Safety Control of Dangerous Substances Act**

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

U.S.A

○ **US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

○ **CERCLA Designation of hazardous substances (40 CFR 302.4)**

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

○ **CERCLA Section 302 regulation**

- 1-Decene, homopolymer, hydrogenated : Not applicable

- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

○ **CERCLA Section 304 regulation**

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

○ **CERCLA Section 313 regulation**

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

International Convention on Environment

○ **Rotterdam Convention list**

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

○ **Stockholm Convention list**

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

○ **Montreal Protocol list**

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable

- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

National Inventory

○ Korea

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Not applicable

○ U.S.A

- 1-Decene, homopolymer, hydrogenated : US TSCA phase-in substance
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : US TSCA phase-in substance
- 1-Dodecene polymer with 1-octene, hydrogenated : US TSCA phase-in substance
- Isooctadecanoic acid reaction products with tetraethylenepentamine : US TSCA phase-in substance
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : US TSCA phase-in substance
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : US TSCA phase-in substance

○ China

- 1-Decene, homopolymer, hydrogenated : China phase-in substance
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : China phase-in substance
- 1-Dodecene polymer with 1-octene, hydrogenated : China phase-in substance
- Isooctadecanoic acid reaction products with tetraethylenepentamine : China phase-in substance
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : China phase-in substance
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : China phase-in substance

○ Japan

- 1-Decene, homopolymer, hydrogenated : Not applicable
- Trade secret : Not applicable
- 1-Decene, dimer, hydrogenated : Not applicable
- 1-Dodecene polymer with 1-octene, hydrogenated : Not applicable
- Isooctadecanoic acid reaction products with tetraethylenepentamine : Not applicable
- Reaction products of 1-decene and 1-dodecene, dimer, hydrogenated : Not applicable
- N,N-Bis(2-ethyl hexyl)-[(1,2,4-triazol-1-yl)methyl]amine : Japan ENCS phase-in substance

16. OTHER INFORMATION

1) Reference

- Sources of information used in preparing this SDS included one or more of the following: Internal technical data, data from OECD eChemPortal, ECHA, NITE, TOXNET, IPCS and KOSHA search results.

2) Issue Date

- 2017-06-19

3) Revision number and Last date revised

☐ **Number of revised**

- 8

☐ **Date of last revision**

- 2023-08-17

☐ **Last Revision History**

- MSDS Update

4) Other

- The information contained in the Safety Data Sheet is at the date of its issuance to the best of our knowledge correct according to the data available to us. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.