

SAFETY DATA SHEET



Section 1. Identification

GHS product identifier : CITGO Pacemaker® ST - 32
Synonyms : Synthetic lubricant
Code : 632515001

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

Not applicable.

Supplier's details : CITGO Petroleum Corporation
P.O. Box 4689
Houston, TX 77210
sdsvend@citgo.com

Emergency telephone number (with hours of operation) : Technical Contact: (800) 248-4684
Medical Emergency: (832) 486-4700
CHEMTREC Emergency: (800) 424-9300
(United States Only)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : TOXIC TO REPRODUCTION - Category 2
AQUATIC HAZARD (ACUTE) - Category 2
AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements

Hazard pictograms



Signal word : Warning

Hazard statements : Suspected of damaging fertility or the unborn child.
Toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

General : Keep out of reach of children.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Avoid release to the environment. Do not get in eyes, on skin, or on clothing.

Response : Collect spillage. IF exposed or concerned: Get medical advice or attention. Wash with plenty of soap and water or use a recognized skin cleanser.

Storage : Store in accordance with all local, regional, national and international regulations. Store locked up. Store in a dry place and a closed container. Empty containers may contain material residues which can ignite with explosive force. Misuse of empty containers can be dangerous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers can cause fire, explosion, or release of toxic fumes from residues. Do not pressurize or expose empty containers to open flame, sparks, or heat. Keep container closed and drum bungs in place. All label warnings and precautions must be observed. Return empty drums to a qualified reconditioner. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling, or disposing of empty containers and/or waste residues of this material.

Section 2. Hazards identification

- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations. Don't Pollute. Conserve Resources. Return used oil to collection centers.
- Hazards not otherwise classified** : Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor. Injection of petroleum hydrocarbons requires immediate medical attention.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Synthetic lubricant

CAS number/other identifiers

- CAS number** : Not applicable.

Ingredient name	%	CAS number
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	≥25 - ≤50	163149-28-8
1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	≥10 - ≤25	68649-12-7
1-Dodecene, polymer with 1-decene, hydrogenated	≥10 - ≤25	151006-60-9
Dec-1-ene, homopolymer, hydrogenated	≥10 - ≤25	68037-01-4
triphenyl phosphate	<1	115-86-6
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	≤0.3	68411-46-1

* = Various ** = Mixture *** = Proprietary

Any concentration shown as a range is to protect confidentiality or is due to process variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.

Section 4. First aid measures

- Skin contact** : Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.
- Specific treatments** : Treat symptomatically and supportively.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
phosphorus oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Bulk Storage Conditions: Maintain all storage tanks in accordance with applicable regulations. Use necessary controls to monitor tank inventories. Inspect all storage tanks on a periodic basis. Test tanks and associated piping for tightness. Maintain the automatic leak detection devices to assure proper working condition.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated

1-Dodecene, polymer with 1-decene, hydrogenated

triphenyl phosphate

ACGIH TLV (United States).

Inhalable Fraction: 5 mg/m³ Form: Aerosol.

ACGIH TLV (United States).

Inhalable Fraction: 5 mg/m³ Form: Aerosol.

ACGIH TLV (United States, 1/2023).

TWA: 3 mg/m³ 8 hours.

NIOSH REL (United States, 10/2020).

TWA: 3 mg/m³ 10 hours.

OSHA PEL (United States, 5/2018).

TWA: 3 mg/m³ 8 hours.

Appropriate engineering controls

- : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, vapor controls, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

- : Avoid skin contact with liquid. Chemical-resistant gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Leather gloves are not protective for liquid contact.

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

- : Avoid skin contact with liquid. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Leather boots are not protective for liquid contact.

Respiratory protection

- : Avoid inhalation of gases, vapors, mists or dusts. Use a properly fitted, air-purifying or supplied-air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	: Liquid.
Color	: Light amber
Odor	: Mild.
pH	: Not available.
Boiling point, initial boiling point, and boiling range	: Not available.
Flash point	: Open cup: 252°C (485.6°F) [Cleveland]
Evaporation rate	: <1 (butyl acetate = 1)
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: <0.013 kPa (<0.1 mm Hg)
Relative vapor density	: >1 [Air = 1]
Relative density	: 0.85
Density lbs/gal	: Estimated 7.09 lbs/gal
Density gm/cm³	: Not available.
Gravity, °API	: Estimated 35 @ 60 F
Solubility	: Insoluble in the following materials: cold water.
Auto-ignition temperature	: Lowest known value: 343°C (649.4°F) (1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated).
Viscosity	: Kinematic (40°C (104°F)): 32 mm ² /s (32 cSt)
Viscosity SUS	: Estimated 148 SUS @104 F
Flow time (ISO 2431)	: Not available.
Particle characteristics	
Median particle size	: Not applicable.

Section 10. Stability and reactivity

Reactivity	: Not expected to be Explosive, Self-Reactive, Self-Heating, or an Organic Peroxide under US GHS Definition(s).
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	LC50 Inhalation Dusts and mists	Rat - Male, Female	1.17 mg/l	4 hours
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
1-Dodecene, polymer with 1-decene, hydrogenated	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5 mg/l	4 hours
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
triphenyl phosphate	LD50 Dermal	Rabbit	>7900 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : **Dec-1-ene, homopolymer, hydrogenated**: Practically non-irritating to eyes. Practically non-irritating to the skin.
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich: Practically non-toxic by inhalation (LC₅₀ >5mg/L) based on testing of similar products in rats.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	Eyes - Redness of the conjunctivae	Rabbit	1	24 hours 0.5 ml	72 hours
	Skin - Edema	Rabbit	0.7	4 hours 0.5ml	7 days
1-Dodecene, polymer with 1-decene, hydrogenated	Eyes - Redness of the conjunctivae	Rabbit	1	24 hours 0.5 ml	72 hours
	Skin - Edema	Rabbit	0.7	4 hours 0.5ml	7 days

Skin : **1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated**: This product can cause mild skin irritation and inflammation.
1-Dodecene, polymer with 1-decene, hydrogenated: This product can cause mild skin irritation and inflammation.

Eyes : **1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated**: Practically non-irritating to eyes.
1-Dodecene, polymer with 1-decene, hydrogenated: Practically non-irritating to eyes.
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich: Practically non-irritating to eyes.

Respiratory : No additional information.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	skin	Guinea pig	Not sensitizing
1-Dodecene, polymer with 1-decene, hydrogenated	skin	Guinea pig	Not sensitizing

Skin : **1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated**: Non-sensitizer to skin.
1-Dodecene, polymer with 1-decene, hydrogenated: Non-sensitizer to skin.

Respiratory : No additional information.

Section 11. Toxicological information

Mutagenicity

Product/ingredient name	Test	Experiment	Result
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	EU	Experiment: In vitro Subject: Bacteria	Negative
	EU	Experiment: In vivo Subject: Mammalian-Animal	Negative
1-Dodecene, polymer with 1-decene, hydrogenated	EU	Experiment: In vitro Subject: Bacteria	Negative
	EU	Experiment: In vivo Subject: Mammalian-Animal	Negative

Conclusion/Summary : **1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated**: No mutagenic effect.
1-Dodecene, polymer with 1-decene, hydrogenated: No mutagenic effect.

Carcinogenicity

Not available.

Conclusion/Summary : No additional information.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	Negative	Negative	Negative	Rat - Male, Female	Oral: 1000 mg/kg	-
1-Dodecene, polymer with 1-decene, hydrogenated	Negative	Negative	Negative	Rat - Male, Female	Oral: 1000 mg/kg	-

Conclusion/Summary : **1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated**: No known significant effects or critical hazards.
1-Dodecene, polymer with 1-decene, hydrogenated: No known significant effects or critical hazards.
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich: A 2-generation reproductive toxicity study conducted on this material did not identify any effects on reproductive parameters. However, the study did identify a small increase in early offspring mortality at the high oral dose level. Based on studies with laboratory animals, oral maternal exposure to this component can result in developmental toxicity to the conceptus. The NOAELs established from these studies were 38 to 44 mg/kg-bw/day during pregnancy and 52 to 114 mg/kg-bw/day during lactation.

Teratogenicity

Not available.

Conclusion/Summary : No additional information.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	ASPIRATION HAZARD - Category 1
1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	ASPIRATION HAZARD - Category 1
1-Dodecene, polymer with 1-decene, hydrogenated	ASPIRATION HAZARD - Category 1
Dec-1-ene, homopolymer, hydrogenated	ASPIRATION HAZARD - Category 1

Section 11. Toxicological information

Information on the likely routes of exposure : Routes of entry anticipated: Dermal.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : No specific data.

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

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : Suspected of damaging the unborn child.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
CITGO Pacemaker® ST - 32	N/A	2984.0	N/A	N/A	N/A
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	N/A	2500	N/A	N/A	N/A
1-Dodecene, polymer with 1-decene, hydrogenated	N/A	2500	N/A	N/A	N/A
triphenyl phosphate	3500	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	Acute EC50 1000 mg/l Fresh water	Crustaceans - Daphnia magna	48 hours
	Acute LC50 >1000 mg/l Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
1-Dodecene, polymer with 1-decene, hydrogenated	Chronic NOEL 125 mg/l Fresh water	Crustaceans - Daphnia magna	21 days
	Acute EC50 1000 mg/l Fresh water	Crustaceans - Daphnia magna	48 hours
	Acute LC50 >1000 mg/l Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
triphenyl phosphate	Chronic NOEL 125 mg/l Fresh water	Crustaceans - Daphnia magna	21 days
	Acute EC50 225 µg/l Fresh water	Fish - Oncorhynchus mykiss - Fingerling	96 hours
	Acute LC50 320 to 560 µg/l Marine water	Crustaceans - Americamysis bahia	48 hours
	Acute LC50 0.09 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Chronic NOEC 0.01 mg/l	Algae - Chlorella vulgaris	3 days
	Chronic NOEC 50 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 131 ng/L Fresh water	Fish - Oryzias latipes - Larvae	103 days

Conclusion/Summary

: **1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated**: No known significant effects or critical hazards.
1-Dodecene, polymer with 1-decene, hydrogenated: No known significant effects or critical hazards.

Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Dec-1-ene, homopolymer, hydrogenated	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	>6.5	-	high
1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	5	-	high
1-Dodecene, polymer with 1-decene, hydrogenated	>6.5	-	high
Dec-1-ene, homopolymer, hydrogenated	>6.5	-	high
triphenyl phosphate	4.63	144	low
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	5.1	1730	high

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Section 12. Ecological information

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b):** All components are active or exempted.
Clean Water Act (CWA) 307: naphthalene; ethylbenzene
Clean Water Act (CWA) 311: naphthalene; xylene; ethylbenzene; propylene oxide
 This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

SARA 302/304

Composition/information on ingredients

Section 15. Regulatory information

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
ethylene oxide	trace	Yes.	1000	-	10	-
propylene oxide	trace	Yes.	10000	1444.3	100	14.4

SARA 304 RQ : 39947588763.5 lbs / 18136205298.6 kg [5636563022.6 gal / 21336712116.1 L]

SARA 311/312

Classification : TOXIC TO REPRODUCTION - Category 2
HNOC - Injection Hazards


Composition/information on ingredients

Name	%	Classification
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	≥25 - ≤50	ASPIRATION HAZARD - Category 1 HNOC - Injection Hazards
1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	≥10 - ≤25	ASPIRATION HAZARD - Category 1 HNOC - Injection Hazards
1-Dodecene, polymer with 1-decene, hydrogenated	≥10 - ≤25	ASPIRATION HAZARD - Category 1 HNOC - Injection Hazards
Dec-1-ene, homopolymer, hydrogenated	≥10 - ≤25	ASPIRATION HAZARD - Category 1 HNOC - Injection Hazards
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	≤0.3	TOXIC TO REPRODUCTION - Category 2 HNOC - Injection Hazards

State regulations

Massachusetts : None of the components are listed.
New York : None of the components are listed.
New Jersey : None of the components are listed.
Pennsylvania : The following components are listed: 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich

California Prop. 65 Clear and Reasonable Warnings (2018)

 **WARNING:** This product can expose you to chemicals including cumene, which is known to the State of California to cause cancer, and Di-isodecyl phthalate, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	%	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	<20	No.	Yes.	-	Yes.
cumene	<0.001	Yes.	No.	-	-
naphthalene	<0.001	Yes.	No.	Yes.	-
ethylbenzene	<0.001	Yes.	No.	Yes.	-
ethyl acrylate	trace	Yes.	No.	-	-
ethylene oxide	trace	Yes.	Yes.	Yes.	Yes.
propylene oxide	trace	Yes.	No.	-	-
1,4-dioxane	trace	Yes.	No.	Yes.	-

International regulations

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

Inventory list

United States : All components are active or exempted.
Australia : Not determined.

Section 15. Regulatory information

Canada	: All components are listed or exempted.
China	: Not determined.
Japan	: Japan inventory (CSCL) : Not determined. Japan inventory (ISHL) : Not determined.
Malaysia	: Not determined
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
Viet Nam	: Not determined.

Section 16. Other information

National Fire Protection Association (U.S.A.)



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Procedure used to derive the classification

Classification	Justification
TOXIC TO REPRODUCTION - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 2	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method

History

Date of printing	: 1/16/2025
Date of issue/Date of revision	: 1/16/2025
Date of previous issue	: 9/25/2024
Version	: 9.02
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Section 16. Other information

Notice to reader

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