

Revision: 08/09/2019

| | | according to | o Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/8 | 830 and US OSHA HCS | 2015 | | | |
|------------|---|--|---|---|------------------|--|--|--|
| | | according t | - ····g====== -; (= -; ···· = - ··· | | | | | |
| | | Section 1. Ide | entification of the Substance/Mixture and of | the Company/Ur | ndertaking | | | |
| .1 | Product Product Synony | Name: | 26889 1,3-Dioleoyl-2-Stearoyl-rac-glycerol (9Z)-9-octadecenoic acid, 1,1'-[2-[(1-oxooctad | decyl)oxy]-1,3-pro | panediyl] ester; | | | |
| | 1,3-Olein-2-Stearin; TG(18:1/18:0/18:1); | | | | | | | |
| .2 | Relevant identified uses of the substance or mixture and uses advised against: | | | | | | | |
| | Relevant identified uses: For research use only, not for human or veterinary use. | | | | | | | |
| .3 | Details of the Supplier of the Safety Data Sheet: | | | | | | | |
| | Comp | any Name: | Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 | | | | | |
| | Web s | ite address: | www.caymanchem.com | | | | | |
| | Inform | nation: | Cayman Chemical Company | +1 (734 | 4)971-3335 | | | |
| .4 | Emerge | ncy telephone numb | er: | | | | | |
| | Emerg | ency Contact: | CHEMTREC Within USA and Canada: | +1 (80 | 0)424-9300 | | | |
| | | | CHEMTREC Outside USA and Canada: | +1 (70 | 03)527-3887 | | | |
| | | | Section 2. Hazards Identific | cation | | | | |
| | | | | •••••••• | | | | |
| .1 | Classifi | cation of the Substa | | | | | | |
| | | cation of the Substan lements: | | | | | | |
| | Label El GHS S | lements: Signal Word: | | | | | | |
| | Label El GHS S GHS H | lements: Signal Word: Hazard Phrases: | nce or Mixture: None | | poording to GHS | | | |
| | Label El GHS S GHS H Based | lements: Signal Word: Hazard Phrases: I on evaluation of curre | nce or Mixture: | | cording to GHS. | | | |
| | Label El GHS S GHS H Based GHS F | lements: Signal Word: Hazard Phrases: I on evaluation of curre Precaution Phrases: | nce or Mixture: None | | cording to GHS. | | | |
| | Label El GHS S GHS H Based GHS F No phi | lements: Signal Word: Hazard Phrases: I on evaluation of curre Precaution Phrases: rases apply. | nce or Mixture: None | | cording to GHS. | | | |
| | Label El GHS S GHS H Based GHS F No phi GHS F | lements: Signal Word: Hazard Phrases: I on evaluation of curre Precaution Phrases: rases apply. Response Phrases: | nce or Mixture: None | | cording to GHS. | | | |
| | Label El GHS S GHS H Based GHS F No phi GHS F | lements: Signal Word: Hazard Phrases: I on evaluation of curre Precaution Phrases: rases apply. Response Phrases: rases apply. | nce or Mixture: None ently available data this substance or mixture is i | | cording to GHS. | | | |
| | Label El GHS S GHS H Based GHS F No phi GHS S | lements: Signal Word: Hazard Phrases: I on evaluation of curre Precaution Phrases: rases apply. Response Phrases: rases apply. Storage and Disposa | nce or Mixture: None ently available data this substance or mixture is i | not classifiable ac | cording to GHS. | | | |
| 2 | Label El GHS S GHS H Based GHS F No ph GHS S Please | lements: Signal Word: Hazard Phrases: I on evaluation of curre Precaution Phrases: rases apply. Response Phrases: rases apply. Storage and Disposa e refer to Section 7 for | nce or Mixture: None ently available data this substance or mixture is i | not classifiable ac | - | | | |
| 2 | Label El GHS S GHS H Based GHS F No ph GHS S Please Advers | lements: Signal Word: Hazard Phrases: I on evaluation of curre Precaution Phrases: rases apply. Response Phrases: rases apply. Storage and Disposa e refer to Section 7 for e Human Health | nce or Mixture: None ently available data this substance or mixture is a I Phrases: • Storage and Section 13 for Disposal information | not classifiable ac n. nes and upper res | - | | | |
| .2 | Label El GHS S GHS H Based GHS F No ph GHS S Please Advers | lements: Signal Word: Hazard Phrases: I on evaluation of curre Precaution Phrases: rases apply. Response Phrases: rases apply. Storage and Disposa e refer to Section 7 for e Human Health and Symptoms: M | nce or Mixture: None ently available data this substance or mixture is a I Phrases: Storage and Section 13 for Disposal information Material may be irritating to the mucous membrar May be harmful by inhalation, ingestion, or skin a May cause eye, skin, or respiratory system irritati | not classifiable ac n. nes and upper res absorption. | spiratory tract. | | | |
| .2 | Label El GHS S GHS H Based GHS F No ph GHS S Please Advers | lements: Signal Word: Hazard Phrases: I on evaluation of curre Precaution Phrases: rases apply. Response Phrases: rases apply. Storage and Disposa e refer to Section 7 for e Human Health and Symptoms: M | nce or Mixture: None ently available data this substance or mixture is a I Phrases: Storage and Section 13 for Disposal information Material may be irritating to the mucous membrar May be harmful by inhalation, ingestion, or skin a | not classifiable ac n. nes and upper res absorption. | spiratory tract. | | | |
| 2.1 2.2 | Label El GHS S GHS H Based GHS F No ph GHS S Please Advers | lements: Signal Word: Hazard Phrases: I on evaluation of curre Precaution Phrases: rases apply. Response Phrases: rases apply. Storage and Disposa e refer to Section 7 for e Human Health M and Symptoms: M T | nce or Mixture: None ently available data this substance or mixture is a I Phrases: Storage and Section 13 for Disposal information Material may be irritating to the mucous membrar May be harmful by inhalation, ingestion, or skin a May cause eye, skin, or respiratory system irritati | not classifiable ac n. nes and upper res absorption. ion. roperties have not | spiratory tract. | | | |
| 2.2 2.3 | Label El GHS S GHS H Based GHS F No ph GHS S Please Advers Effects | lements: Signal Word: Hazard Phrases: I on evaluation of curre Precaution Phrases: rases apply. Response Phrases: rases apply. Storage and Disposa e refer to Section 7 for e Human Health M and Symptoms: M T Sectio | nce or Mixture: None ently available data this substance or mixture is in I Phrases: Storage and Section 13 for Disposal information Material may be irritating to the mucous membrar May be harmful by inhalation, ingestion, or skin a May cause eye, skin, or respiratory system irritati To the best of our knowledge, the toxicological proposition/Information (Information (Informa | not classifiable ac n. nes and upper res absorption. ion. roperties have not | spiratory tract. | | | |

Multi-region format



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| | | Section 4. First Aid Measures |
|-----|------------------------------------|---|
| 4.1 | Description of First Aid | |
| | Measures: | |
| | In Case of Inhalation: | Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention. |
| | In Case of Skin Contact: | Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse. |
| | In Case of Eye Contact: | Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by medical personnel. |
| | In Case of Ingestion: | Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel. |
| | | Section 5. Fire Fighting Measures |
| 5.1 | Suitable Extinguishing | Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. |
| | Media: | Use water spray to cool fire-exposed containers. |
| | Unsuitable Extinguishing Media: | a A solid water stream may be inefficient. |
| 5.2 | Flammable Properties an | dNo data available. |
| | Hazards: | |
| | | No data available. |
| | Flash Pt: | No data. |
| | Explosive Limits: | LEL: No data. UEL: No data. |
| | Autoignition Pt: | No data. |
| 5.3 | Fire Fighting Instructions | s: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes. |
| | | Section 6. Accidental Release Measures |
| 6.1 | Protective Precautions, | Avoid raising and breathing dust, and provide adequate ventilation. |
| | Protective Equipment an | d As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, |
| | Emergency Procedures: | and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). |
| 6.2 | Environmental Precautions: | Take steps to avoid release into the environment, if safe to do so. |
| 6.3 | | r Contain spill and collect, as appropriate. |
| | | ng Transfer to a chemical waste container for disposal in accordance with local regulations. |
| | Up: | |
| | | Section 7. Handling and Storage |
| 7.1 | Precautions To Be Taker | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| | in Handling: | Avoid prolonged or repeated exposure. |
| 7.2 | Precautions To Be Taker | Keep container tightly closed. |
| | in Storing: | Store in accordance with information listed on the product insert. |
| | Sec | tion 8. Exposure Controls/Personal Protection |
| 8.1 | Exposure Parameters: | |
| | | |

Multi-region format



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| | HEMICAL | | | | | | |
|---------|---|--|--|--|--|--|--|
| 8.2 | Exposure Controls: | | | | | | |
| 8.2.1 | | se process enclosures, local exhaust ventilation, or other engineering controls to control airborne | | | | | |
| | (Ventilation etc.): le | vels below recommended exposure limits. | | | | | |
| 8.2.2 | Personal protection equipm | ent: | | | | | |
| | Eye Protection: S | afety glasses | | | | | |
| | Protective Gloves: C | ompatible chemical-resistant gloves | | | | | |
| | Other Protective Clothing:La | ab coat | | | | | |
| | Respiratory Equipment N | IOSH approved respirator, as conditions warrant. | | | | | |
| | (Specify Type): | | | | | | |
| | Work/Hygienic/Maintenan Do not take internally. | | | | | | |
| | | acilities storing or utilizing this material should be equipped with an eyewash and a safety shower. | | | | | |
| | | /ash thoroughly after handling. | | | | | |
| | | o data available. | | | | | |
| | | | | | | | |
| | | tion 9. Physical and Chemical Properties | | | | | |
| 9.1 | Information on Basic Physic | - | | | | | |
| | Physical States: | []Gas []Liquid [X]Solid | | | | | |
| | Appearance and Odor: | A solid | | | | | |
| | pH: | No data. | | | | | |
| | Melting Point: | No data. | | | | | |
| | Boiling Point: | No data. | | | | | |
| | Flash Pt: | No data. | | | | | |
| | Evaporation Rate: | No data. | | | | | |
| | Flammability (solid, gas): | No data available. | | | | | |
| | Explosive Limits: | LEL: No data. UEL: No data. | | | | | |
| | Vapor Pressure (vs. Air or m | Im No data. | | | | | |
| | Hg): | | | | | | |
| | Vapor Density (vs. Air = 1): | No data. | | | | | |
| | Specific Gravity (Water = 1): | No data. | | | | | |
| | Solubility in Water: | No data. | | | | | |
| | Solubility Notes: | Soluble (slightly) in: chloroform; MeOH; | | | | | |
| | Octanol/Water Partition | No data. | | | | | |
| | Coefficient: | | | | | | |
| | Autoignition Pt: | No data. | | | | | |
| | Decomposition Temperature | | | | | | |
| | Viscosity: | No data. | | | | | |
| 9.2 | Other Information | | | | | | |
| 5.2 | Percent Volatile: | No data. | | | | | |
| | | | | | | | |
| | Molecular Formula & Weigh | t: C57H106O6 887.5 | | | | | |
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| | | | | Ind Reactiv | | | | |
|---|--|--|---|--|------------------|--------|------|--|
| 10.1 | Reactivi | ty: | No data available. | | | | | |
| 10.2 | Stability | : | Unstable [] Stable [X] | | | | | |
| 10.3 Stability Note(s): | | | Stable if stored in accordance with information listed on the product insert. | | | | | |
| | Polymer | ization: | Will occur [] Will not occur [X] | | | | | |
| 10.4 | Conditio | ons To Avoid: | No data available. | | | | | |
| 10.5 Incompatibility - Materials oxidizing agents To Avoid: | | | | | | | | |
| 10.6 | Hazardous Decomposition or | | carbon dioxide | | | | | |
| | | | carbon monoxide | | | | | |
| | Byprodu | icts: | | | | | | |
| | | | Section 11. Toxicologi | cal Informa | ation | | | |
| 11.1 | Informat | ion on | The toxicological effects of this produ | ct have not beer | n thoroughly st | udied. | | |
| | Toxicolo | gical Effects: | | | | | | |
| CAS | # | Hazardous Com | ponents (Chemical Name) | NTP | IARC | ACGIH | OSHA | |
| 044 | | · · | · · · · · | | | | | |
| 2410-29-9 2-(Stearoyloxy)pr | | 2-(Stearovloxy)pr | opane-1.3-divl dioleate | n.a. | n.a. | n.a. | n.a. | |
| 241 | 0-29-9 | 2-(Stearoyloxy)pr | opane-1,3-diyl dioleate | n.a. | n.a. | n.a. | n.a. | |
| | | | Section 12. Ecologic | | | n.a. | n.a. | |
| 12.1 | 0-29-9 Toxicity | | Section 12. Ecologic Avoid release into the environment. | al Informat | ion | n.a. | n.a. | |
| 12.1 | Toxicity | <u> </u> | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa | al Informat | ion | n.a. | n.a. | |
| | Toxicity Persiste | nce and | Section 12. Ecologic Avoid release into the environment. | al Informat | ion | n.a. | n.a. | |
| 12.1 12.2 | Toxicity Persiste Degrada | nce and bility: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. | al Informat | ion | n.a. | n.a. | |
| 12.1 | Toxicity Persiste Degrada Bioaccu | nce and bility: mulative | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa | al Informat | ion | n.a. | n.a. | |
| 12.1 12.2 12.3 | Toxicity Persiste Degrada Bioaccu Potentia | nce and bility: mulative I: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. | al Informat | ion | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 | Toxicity Persiste Degrada Bioaccu Potentia Mobility | nce and bility: mulative I: in Soil: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. | al Informat | ion | n.a. | n.a. | |
| 12.1 12.2 12.3 | Toxicity Persiste Degrada Bioaccu Potentia Mobility | nce and bility: mulative I: in Soil: of PBT and vPvB | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. | al Informat | ion | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 | Toxicity Persiste Degrada Bioaccu Potentia Mobility Results assessm | nce and bility: mulative I: in Soil: of PBT and vPvB | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. | al Informat | ion | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 12.5 | Toxicity Persiste Degrada Bioaccu Potentia Mobility Results assessm | nce and bility: mulative I: in Soil: of PBT and vPvB nent: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. No data available. | al Informati | ion ollution. | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 12.5 | Toxicity Persiste Degrada Bioaccu Potentia Mobility Results assessn Other ac | nce and bility: mulative I: in Soil: of PBT and vPvB nent: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. No data available. No data available. | al Informati er may cause po Considerati | ion ollution. | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 12.5 12.6 | Toxicity Persiste Degrada Bioaccu Potentia Mobility Results assessn Other ac | nce and bility: mulative l: in Soil: of PBT and vPvB nent: lverse effects: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. No data available. No data available. Section 13. Disposal (| al Information er may cause po consideration re, and federal re | ion ollution. | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 12.5 12.6 | Toxicity Persiste Degrada Bioaccu Potentia Mobility Results assessn Other ac | nce and bility: mulative l: in Soil: of PBT and vPvB nent: lverse effects: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. No data available. No data available. Section 13. Disposal (Dispose in accordance with local, state Section 14. Transport | al Information er may cause po consideration re, and federal re | ion ollution. | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1 | Toxicity Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ac Waste D | nce and bility: mulative l: in Soil: of PBT and vPvB nent: lverse effects: isposal Method: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. No data available. No data available. No data available. Section 13. Disposal (Dispose in accordance with local, sta Section 14. Transpo | al Information er may cause po consideration re, and federal re | ion ollution. | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1 D | Toxicity Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ac Waste D | nce and bility: mulative l: in Soil: of PBT and vPvB hent: lverse effects: isposal Method: RANSPORT (US I r Shipping Name: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. No data available. No data available. No data available. Section 13. Disposal (Dispose in accordance with local, sta Section 14. Transpo | al Information er may cause po consideration re, and federal re | ion ollution. | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1 D | Toxicity Persiste Degrada Bioaccu Potentia Mobility Results assessn Other ac Waste D LAND T | nce and bility: mulative l: in Soil: of PBT and vPvB hent: lverse effects: isposal Method: RANSPORT (US I r Shipping Name: d Class: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. No data available. No data available. No data available. Section 13. Disposal (Dispose in accordance with local, sta Section 14. Transpo | al Information er may cause po consideration re, and federal re | ion ollution. | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1 D | Toxicity Persiste Degrada Bioaccu Potentia Mobility Results assessn Other ac Waste D LAND T OT Prope OT Hazard | nce and bility: mulative l: in Soil: of PBT and vPvB hent: lverse effects: isposal Method: RANSPORT (US I r Shipping Name: d Class: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. No data available. No data available. No data available. Section 13. Disposal (Dispose in accordance with local, sta Section 14. Transpo | al Information er may cause po consideration re, and federal re | ion ollution. | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1 D U 14.1 | Toxicity Persiste Degrada Bioaccu Potentia Mobility Results assessn Other ac Waste D LAND T OT Prope OT Hazard | nce and bility: mulative l: in Soil: of PBT and vPvB hent: lverse effects: isposal Method: RANSPORT (US I r Shipping Name: d Class: hber: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. No data available. No data available. No data available. Section 13. Disposal (Dispose in accordance with local, sta Section 14. Transpo | al Information er may cause po consideration re, and federal re | ion ollution. | n.a. | n.a. | |
| 12.1 12.2 12.3 12.4 12.5 12.6 13.1 14.1 D U 14.1 A | Toxicity Persiste Degrada Bioaccu Potentia Mobility Results assessn Other ac Waste D LAND T OT Prope OT Hazard | nce and bility: mulative l: in Soil: of PBT and vPvB hent: lverse effects: isposal Method: RANSPORT (US I r Shipping Name: d Class: hber: RANSPORT (Euro hipping Name: | Section 12. Ecologic Avoid release into the environment. Runoff from fire control or dilution wa No data available. No data available. No data available. No data available. No data available. No data available. Section 13. Disposal (Dispose in accordance with local, sta Section 14. Transpo DOT): Not dangerous goods. | al Information er may cause po consideration re, and federal re | ion ollution. | n.a. | n.a. | |



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ICAO/IATA Shipping Name:

: Not dangerous goods.

Additional Transport Information:

Section 15. Regulatory Information

Transport in accordance with local, state, and federal regulations.

| CAS # | Hazardous Components (Chemical Name) | | S. 302 (EHS) | S. 304 RQ | S. 313 (TRI) | |
|-------------------------------|--|--|---|-----------|--------------|--|
| 2410-29-9 | 2-(Stearoyloxy)propane-1,3-diyl dioleate | | No | No | No | |
| CAS # | Hazardous Components (Chemical Name) | | Other US EPA or State Lists | | | |
| 2410-29-9 | 2-(Stearoyloxy)propane-1,3-diyl dioleate | | CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No | | | |
| Regulatory Inf Statement: | ormation | This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008. | | | | |
| | | Section 16. Ot | her Informatio | n | | |
| Revision Date: | | 08/09/2019 | | | | |
| Additional Information About | | No data available. | | | | |
| This Product: | | | | | | |
| Company Policy or Disclaimer: | | DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. | | | | |