

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 04/03/2019 Date of issue: 30/11/2017 Supersedes: 30/04/2018 Version: 3.0 DLM-10515

SECTION 1: Identification of the sul	ostance/mixture and of the company/undertaking
1.1. Product identifier	
Product form	: Substance
Substance name	: TERT-BUTYL-D9 ACETATE (D, 99%)
EC Index-No.	: 607-026-00-7 (Unlabeled)
EC-No.	: 208-760-7 (Unlabeled)
CAS-No.	: 358731-03-0
Product code	: DLM-10515
Formula	: CH3COOC(CD3)3
1.2. Relevant identified uses of the sub	stance or mixture and uses advised against
1.2.1. Relevant identified uses	
Main use category	: Professional use
Industrial/Professional use spec	: For professional use only
1.2.2. Uses advised against	
No additional information available	
1.3. Details of the supplier of the safety	data sheet
Cambridge Isotope Laboratories, Inc. 50 Frontage Road	
Andover, MA 01810	
USA	
USA: 1-800-322-1174 Int: 1-978-749-8000 <u>cilsales@isotope.com</u> www.isotope.com	
Emergency telephone number	
Emergency numbers:	
Chemtrec: 1-800-424-9300 (24 hours)	
International: 1-703-741-5970 (24 hours)	
SECTION 2: Hazards identification	
2.1. Classification of the substance or r	nixture
Classification according to Regulation (EC)	No. 1272/2008 [CLP]
Flam. Liq. 2 H225	
Acute Tox. 4 (Inhalation) H332	
Skin Irrit. 2 H315	
Eye Irrit. 2 H319	
Full text of hazard classes and H-statements : see section 16	
Classification according to Directive 67/548/	EEC [DSD] or 1999/45/EC [DPD]
F; R11	

Xi; R36/38 Xn; R20 Full text of R-phrases: see section 16

GHS-US classification

Flam. Liq. 2 H225 Acute Tox. 4 (Inhalation) H332 Skin Irrit. 2 H315 Eye Irrit. 2 H319

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements



SECTION 3: Composition/Information on ingredients

3.1. **Substances**

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
TERT-BUTYL-D9 ACETATE (D, 99%)	(CAS-No.) 358731-03-0 (EC-No.) 208-760-7 (Unlabeled) (EC Index-No.) 607-026-00-7 (Unlabeled)	100	F; R11 Xi; R36/38 Xn; R20
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
TERT-BUTYL-D9 ACETATE (D, 99%)	(CAS-No.) 358731-03-0 (EC-No.) 208-760-7 (Unlabeled) (EC Index-No.) 607-026-00-7 (Unlabeled)	100	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319

Full text of R- and H- phrases: see section 16

Name	Product identifier	%	GHS-US classification
TERT-BUTYL-D9 ACETATE (D, 99%) (Main constituent)	(CAS-No.) 358731-03-0	100	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319

Full text of H-phrases: see section 16

3.2. Mixtures	
Not applicable	
SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.
First-aid measures after inhalation	: When symptoms occur: go into open air and ventilate suspected area. If not breathing, give artificial respiration. Get medical advice/attention.
First-aid measures after skin contact	: Wash with plenty of soap and water. Get immediate medical advice/attention. Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.
4.2. Most important symptoms and effect	cts, both acute and delayed
Symptoms/effects after inhalation	: Harmful if inhaled.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.
4.3. Indication of any immediate medica	I attention and special treatment needed
No additional information available	
SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media	: Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).
5.2. Special hazards arising from the su	
Fire hazard	: Highly flammable liquid and vapor.
Explosion hazard	: May form flammable/explosive vapor-air mixture.
5.3. Advice for firefighters	
Firefighting instructions	: Fight fire with normal precautions from a reasonable distance. Wear a self contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Wear recommended personal protective equipment.
Other information	: Use water spray to cool unopened containers.
SECTION 6: Accidental release mea	sures
6.1. Personal precautions, protective eq	uipment and emergency procedures
General measures	: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

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6.1.1. For non-emergency personnel	
Emergency procedures	: Use personal protective equipment as required. Avoid breathing vapors, mist, gas. Avoid dust formation. Ensure adequate air ventilation. Evacuate unnecessary personnel. Evacuate danger area.
6.1.2. For emergency responders	
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
6.2. Environmental precautions	
Prevent entry to sewers and public waters. Do	not allow to enter drains or water courses. Avoid release to the environment.
6.3. Methods and material for contain	ment and cleaning up
For containment	Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal.
Methods for cleaning up	: This material and its container must be disposed of in a safe way, and as per local legislation.
6.4. Reference to other sections	
For further information refer to section 13.	
SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Additional hazards when processed	: Handle empty containers with care because residual vapors are flammable.
Precautions for safe handling	: Provide adequate ventilation to minimize dust and/or vapor concentrations. No open flames. No smoking. Use only non-sparking tools. Take measures to prevent the build up of electrostatic charge.
Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
7.2. Conditions for safe storage, inclu	ding any incompatibilities
Technical measures	: Store in a well-ventilated place. Keep container tightly closed. Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof ventilating equipment.
Storage conditions	: Store at room temperature away from light and moisture.
Incompatible materials	: Heat sources.
7.3. Specific end use(s)	
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No additional information available

SECTION 8: Exposure controls/personal protection

TERT-BUTYL-D9 ACETATE ((D 99%) (358731-03-0)	
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200.00000000 ppm USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	150 ppm USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	ACGIH Ceiling (ppm)	50 ppm USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Upper Respiratory Tract irritation; Eye irritation; Adopted values or notations enclosed are those for which changes ; are proposed in the NIC; See Notice of Intended Changes (NIC)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	950 mg/m ³ USA. NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (TWA) (ppm)	200 ppm USA. NIOSH Recommended Exposure Limits
USA OSHA	OSHA PEL (TWA) (mg/m³)	950 mg/m ³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants. California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants.California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	Remark (OSHA)	The value in mg/m3 is approximate.

Exposure controls 8.2.

Appropriate engineering controls

: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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Personal protective equipment	: Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.
Materials for protective clothing	: Wear suitable protective clothing and gloves.
Hand protection	: Wear suitable protective clothing and gloves.
Eye protection	: Wear eye protection. Chemical goggles or face shield with safety glasses.
Skin and body protection	: Wear suitable protective clothing, gloves and eye/face protection.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.
Environmental exposure controls	: Avoid release to the environment.

SECTION 9: Ph	ysical and chemical	properties

9.1. Information on basic physical and chemical properties		
Physical state	: Liquid	
Appearance	: Liquid	
Molecular mass	: 125.21 g/mol (Labeled)	
Color	: Colorless	
Odor	: No data available	
Odor threshold	: No data available	
рН	: No data available	
Relative evaporation rate (butyl acetate=1)	: No data available	
Melting point	: <-57.99 °C (<-72.38 °F)	
Freezing point	: No data available	
Boiling point	: 97 - 98 °C (207 - 208 °F) - lit.	
Flash point	: 4 °C (39 °F) - closed cup	
Auto-ignition temperature	: 589 °C (1,092 °F) at 1,015 hPa (761 mmHg)	
Decomposition temperature	: No data available	
Flammability (solid, gas)	: Highly flammable liquid and vapor	
Vapor pressure	: 63 hPa (47 mmHg) at 25 °C (77 °F)	
Relative vapor density at 20 °C	: 4.65 at 20 °C (68 °F)	
Relative density	: No data available	
Specific gravity / density	: 0.866 g/cm ³	
Solubility	: Water: 6.7 g/l at 23 °C (73 °F) - OECD Test Guideline 105 - soluble	
Log Pow	: 1.64 at 21.7 °C (71.1 °F)	
Log Kow	: No data available	
Viscosity, kinematic	: <1 mm²/s at 25 °C (77 °F)	
Viscosity, dynamic	: No data available	
Explosive properties	: No data available	
Oxidizing properties	: No data available	
Explosion limits	: 1.5 - 1.7 vol % (Lower)	
9.2. Other information		
Additional information	: Surface tension 64 mN/m at 20 °C (68 °F)	

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Additional information
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SECTION 10: Stability and reactivity 10.1. Reactivity No additional information available 10.2. **Chemical stability** Stable if stored under recommended conditions. Possibility of hazardous reactions 10.3. Vapors may form explosive mixture with air. 10.4. **Conditions to avoid** Open flame. Direct sunlight. Heat. Sparks. Extremes of temperature and direct sunlight. 10.5. **Incompatible materials** Strong oxidizing agents.

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Carbon oxides (C0, C02). SECTION 11: Toxicological information 11.1. Information on toxicological effects Acute toxicity Inhalation: Harmful if inhaled. TERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0) LD50 oral rat 4100 - male - 4,100 mg/kg LD50 dermal rabbit > 2000 mg/kg - male and female LC50 inhalation rat (mg/l) > 2230 mg/m 2 - 4 h ATE CLP (oral) 4100.000 mg/kg body weight ATE CLP (quases) 4500.000 pm/V4h ATE CLP (dust, mist) 1.500 mg/V4h ATE CLP (dust, mist) 1.500 mg/V4h ATE CLP (dust, mist) 1.500 mg/V4h Skin corrosion/irritation S Skin - Rabbit Result: Mild skin irritation Seguratory of skin sensitization E byes - Rabbit Result: Mild skin irritation Seguratory of skin sensitization E byes - Rabbit Result: Mild skin irritation Germ cell mutagenicity Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Carcinogenicity Not classified Specific target organ toxicity - single exposure Not classified Specific target organ toxicity - single exposure Not cl	10.6. Hazardous decomposition products	
SECTION 11: Toxicological information 11.1 Information on toxicological effects Acute toxicity : Inhalation: Harmful if inhaled. TERBUTYL-D9 ACETATE (D, 99%) (358731-03-0) LD50 oral rat LD50 oral rat <td></td> <td></td>		
11.1 Information on toxicological effects Acute toxicity : Inhalation: Harmful if inhaled. TET-BUTYL-D9 ACETATE (D, 99%) (358731-03-0) ID50 dermal rabbit > 2000 mg/kg - male and female LD50 inhalation rat (mg/l) > 2230 mg/m³ - 4 h Inhalation: Tat (mg/l) > 2230 mg/m³ - 4 h ATE CLP (ral) 4100 000 mg/kg body weight ATE CLP (ral) A100 000 mg/kg body weight ATE CLP (ral) 4100 000 mg/kg body weight ATE CLP (ral) A100 000 mg/kg body weight ATE CLP (qases) 15.00 mg/k4 h ATE CLP (raus) Inhom mg/kg body weight ATE CLP (dust, mist) 1.500 mg/k4 h ATE CLP (raus) Inhom mg/kg body weight ATE CLP (dust, mist) 1.500 mg/k4 h ATE CLP (raus) Respiratory or skin sensitization Serious eye damage/irritation : Eyes - Rabbit Result: Mild eye irritation Respiratory or skin sensitization Germ cell mutagenicity : Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Approach : Not classified Specific target organ toxicity - repeated : Not classified Specific target organ toxicity - repeated : Not classified : Not classified Appration hazard <t< td=""><td>SECTION 11, Toxicological informati</td><td>07</td></t<>	SECTION 11, Toxicological informati	07
Acute toxicity Inhalation: Harmful if inhaled. TERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0) 4100 - male - 4,100 mg/kg LD50 dermal rabbit > 2000 mg/kg - male and female LC50 inhalation rat (mg/l) > 2230 mg/m ³ - 4 h ATE CLP (oral) 4100.000 mg/kg body weight ATE CLP (qases) 4500.000 ppW/4h ATE CLP (dust, mist) 1.500 mg/l/4h ATE CLP (dust, mist) 1.500 mg/l/4h ATE CLP (dust, mist) 1.500 mg/l/4h Skin corrosion/irritation : Eyes - Rabbit Result: Mild skin irritation Serious eye damage/irritation : Eyes - Rabbit Result: Mild skin irritation Respiratory or skin sensitization : Buehler Test. Guinea pig Result: Did not cause sensitisation on laboratory animals. Germ cell mutagenicity : Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Specific target organ toxicity – single exposure : Not classified Specific target organ toxicity – repeated : Not classified Specific target organ toxicity – single exposure : Not classified MOAEC (Inhalation,rat, vapour,90 (days) 0.48 mg/l/6h/day - Mouse - male and female Aspiration hazard : Not classified Sym		
TERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0) LD50 oral rat 4100 - male - 4,100 mg/kg LD50 dermal rabbit > 2000 mg/kg - male and female LC50 inhalation rat (mg/l) > 2230 mg/m ² - 4 h ATE CLP (oral) 4100.000 mg/kg body weight ATE CLP (oral) 4100.000 mg/kg body weight ATE CLP (oras) 11.000 ng//4h ATE CLP (uapors) 11.000 mg//4h Skin corrosion/irritation : Skin - Rabbit Result: Mild skin irritation Serious eye damage/irritation : Eyes - Rabbit Result: Mild eye irritation Respiratory or skin sensitization : Buehler Test. Guinea pig Result: Did not cause sensitisation on laboratory animals. Germ cell mutagenicity : Reverse Mutation Assays S. typhimrum Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Carcinogenicity : Not classified Specific target organ toxicity – single exposure : Not classified Specific target organ toxicity – repeated exposure : Not classified Specific target organ toxicity – repeated exposure : Not classified Potential Adverse human health effects and exploration is based on our current knowledge and is intended to describe the product for this purposes of health, safety and envinonmental requirements only. It sh		
LD50 oral rat 4100 - male - 4,100 mg/kg LD50 dermal rabbit > 2000 mg/kg - male and female LC50 inhalation rat (mg/l) > 2230 mg/m³ - 4 h ATE CLP (oral) 4100.000 mg/kg body weight ATE CLP (gases) 4500.000 pgmV/4h ATE CLP (dust, mist) 1.500 mg/k4h Skin corrosion/irritation : Skin - Rabbit Result: Mild eye irritation Serious eye damage/irritation : Eyes - Rabbit Result: Mild eye irritation Respiratory or skin sensitization : Buehler Test. Guinea pig Result: Did not cause sensitisation on laboratory animals. Germ cell mutagenicity : Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Carcinogenicity : Not classified Specific target organ toxicity - repeated : Not classified Specific target organ toxicity - repeated : Not classified exposure : Not classified Potential Adverse human health effects and symptoms : Not classified Symptoms/effects after inhalation : Harmful if inhaled. Symptoms/effects after inhalation : Harmful if inhaled. Symptoms/effects after eye contact : Causes serious eye irritation.	•	
LD50 dermal rabbit > 2000 mg/kg - male and female LD50 inhalation rat (mg/l) > 2230 mg/m³ - 4 h ATE CLP (gal) 4100.000 mg/kg body weight ATE CLP (gases) 4500.000 ppm/V4h ATE CLP (dust, mist) 1.500 mg/l/4h ATE CLP (dust, mist) 1.500 mg/l/4h ATE CLP (dust, mist) 1.500 mg/l/4h Skin corrosion/irritation : Skin - Rabbit Result: Mild skin irritation Serious eye damage/irritation : Eyes - Rabbit Result: Mild skin irritation Germ cell mutagenicity : Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Carcinogenicity : Not classified Specific target organ toxicity - single exposure : Not classified Specific target organ toxicity - repeated : Not classified Specific target organ toxicity - repeated : Not classified NOAEC (inhalation, rat, vapour, 90 days) 0.48 mg/l/bh/day - Mouse - male and female Aspiration hazard : Not classified Symptoms/effects after inhalation : Harmful if inhaled. Symptoms/effects after inhalation : Harmful if inhaled. Symptoms/effects after skin contact	TERT-BUTYL-D9 ACETATE (D, 99%) (358731	-
LC50 inhalation rat (mg/l) > 2230 mg/m³ - 4 h ATE CLP (oral) 4100.000 mg/kg body weight ATE CLP (gases) 4500.000 ppmV/4h ATE CLP (uspors) 11.000 mg/l/4h ATE CLP (dust, mist) 1.500 mg/l/4h ATE CLP (dust, mist) 1.500 mg/l/4h Skin corrosion/irritation : Skin - Rabbit Result: Mild skin irritation Serious eye damage/irritation : Eyes - Rabbit Result: Mild eye irritation Respiratory or skin sensitization : Buehler Test. Guinea pig Result: Did not cause sensitisation on laboratory animals. Germ cell mutagenicity : Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Carcinogenicity : Not classified Specific target organ toxicity – single exposure : Not classified Specific target organ toxicity – repeated : Not classified Specific target organ toxicity – repeated : Not classified Spiration hazard : Not classified Potential Adverse human health effects and symptoms : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Symptoms/effects after s		
ATE CLP (oral) 4100.000 mg/kg body weight ATE CLP (gases) 4500.000 ppmV/4h ATE CLP (gases) 11.000 mg/l/4h ATE CLP (dust, mist) 1.500 mg/l/4h Skin corrosion/irritation Skin - Rabbit Result: Mild skin irritation Serious eye damage/irritation Eyes - Rabbit Result: Mild eye irritation Respiratory or skin sensitization Eyes - Rabbit Result: Mild eye irritation Germ cell mutagenicity Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Carcinogenicity Not classified Specific target organ toxicity – single exposure Not classified Specific target organ toxicity – repeated exposure Not classified MOAEC (inhalation, rat, vapour, 90 days) 0.48 mg/l/6h/day - Mouse - male and female Aspiration hazard This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Symptoms/effects after inhalation Harmful if inhaled. Symptoms/effects after eye contact Causes serious eye irritation.		
ATE CLP (gases) 4500.000 ppmV/4h ATE CLP (vapors) 11.000 mg/l/4h ATE CLP (dust, mist) 1.500 mg/l/4h Skin corrosion/irritation : Skin - Rabbit Result: Mild skin irritation Serious eye damage/irritation : Eyes - Rabbit Result: Mild eye irritation Respiratory or skin sensitization : Buehler Test. Guinea pig Result: Did not cause sensitisation on laboratory animals. Germ cell mutagenicity : Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Carcinogenicity : Not classified Reproductive toxicity - single exposure : Not classified Specific target organ toxicity – repeated exposure : Not classified MOAEC (inhalation, rat, vapour, 90 days) 0.48 mg/l/6h/day - Mouse - male and female Aspiration hazard : Not classified Potential Adverse human health effects and symptoms : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construced as guaranteeing any specific property of the product. Symptoms/effects after wincontact : Causes serious eye irritation.	(3 /	v
ATE CLP (vapors) 11.000 mg/l/4h ATE CLP (dust, mist) 1.500 mg/l/4h Skin corrosion/irritation : Skin - Rabbit Result: Mild skin irritation Serious eye damage/irritation : Eyes - Rabbit Result: Mild eye irritation Respiratory or skin sensitization : Buehler Test. Guinea pig Result: Did not cause sensitisation on laboratory animals. Germ cell mutagenicity : Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Carcinogenicity : Not classified Specific target organ toxicity – single exposure : Not classified Specific target organ toxicity – repeated exposure : Not classified Spiration hazard : Not classified Potential Adverse human health effects and symptoms : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Symptoms/effects after skin contact : Causes skin irritation.		
ATE CLP (dust, mist) 1.500 mg//4h Skin corrosion/irritation : Skin - Rabbit Result: Mild skin irritation Serious eye damage/irritation : Eyes - Rabbit Result: Mild eye irritation Respiratory or skin sensitization : Buehler Test. Guinea pig Result: Did not cause sensitisation on laboratory animals. Germ cell mutagenicity : Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Carcinogenicity : Not classified Specific target organ toxicity – single exposure : Not classified Specific target organ toxicity – repeated exposure : Not classified MOAEC (inhalation,rat,vapour,90 days) 0.48 mg//6h/day - Mouse - male and female Aspiration hazard : Not classified Potential Adverse human health effects and symptoms : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construct as guaranteeing any specific property of the product. Symptoms/effects after inhalation : Harmful if inhaled. Symptoms/effects after eye contact : Causes serious eye irritation.		
Skin corrosion/irritation : Skin - Rabbit Result: Mild skin irritation Serious eye damage/irritation : Eyes - Rabbit Result: Mild eye irritation Respiratory or skin sensitization : Buehler Test. Guinea pig Result: Did not cause sensitisation on laboratory animals. Germ cell mutagenicity : Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negative Carcinogenicity : Not classified Reproductive toxicity : Not classified Specific target organ toxicity - repeated exposure : Not classified TERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0) NOAEC (inhalation,rat,vapour,90 days) 0.48 mg//6h/day - Mouse - male and female Aspiration hazard : Not classified : Potential Adverse human health effects and symptoms : Not classified Symptoms/effects after inhalation : Harmful if inhaled. Symptoms/effects after skin contact : Causes serious eye irritation.		5
Serious eye damage/irritation: Eyes - Rabbit Result: Mild eye irritationRespiratory or skin sensitization: Buehler Test. Guinea pig Result: Did not cause sensitisation on laboratory animals.Germ cell mutagenicity: Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negativeCarcinogenicity: Not classifiedReproductive toxicity: Not classifiedSpecific target organ toxicity - single exposure: Not classifiedSpecific target organ toxicity - repeated exposure: Not classifiedMOAEC (inhalation, rat, vapour, 90 days)0.48 mg//6h/day - Mouse - male and femaleAspiration hazard: Not classifiedPotential Adverse human health effects and symptoms: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construct as guaranteeing any specific property of the product.Symptoms/effects after skin contact: Causes skin irritation.Symptoms/effects after skin contact: Causes serious eye irritation.	ATE CLP (dust, mist)	1.500 mg/l/4h
Respiratory or skin sensitization: Buehler Test. Guinea pig Result: Did not cause sensitisation on laboratory animals.Germ cell mutagenicity: Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negativeCarcinogenicity: Not classifiedReproductive toxicity: Not classifiedSpecific target organ toxicity – single exposure: Not classifiedSpecific target organ toxicity – repeated exposure: Not classifiedTERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0)NOAEC (inhalation, rat, vapour, 90 days)0.48 mg/l/6h/day - Mouse - male and femaleAspiration hazard: Not classifiedPotential Adverse human health effects and symptoms: Not classifiedSymptoms/effects after inhalation: Harmful if inhaled.Symptoms/effects after skin contact: Causes serious eye irritation.Symptoms/effects after skin contact: Causes serious eye irritation.	Skin corrosion/irritation	: Skin - Rabbit Result: Mild skin irritation
Germ cell mutagenicity:Reverse Mutation Assays S. typhimurium Result: negative. Mutagenicity (micronucleus test) - Mouse - male and female - Result: negativeCarcinogenicity:Not classifiedReproductive toxicity:Not classifiedSpecific target organ toxicity - single exposure:Not classifiedSpecific target organ toxicity - repeated exposure:Not classified TERT-BUTYL-D9 ACETATE (D, 99%) (358731-0-0) NOAEC (inhalation,rat,vapour,90 days)0.48 mg/l/6h/day - Mouse - male and femaleAspiration hazard:Not classifiedPotential Adverse human health effects and symptoms:This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.Symptoms/effects after inhalation:Harmful if inhaled.Symptoms/effects after eye contact:Causes serious eye irritation.	Serious eye damage/irritation	: Eyes - Rabbit Result: Mild eye irritation
Mutagenicity (micronucleus test) - Mouse - male and female - Result: negativeCarcinogenicity: Not classifiedReproductive toxicity: Not classifiedSpecific target organ toxicity - single exposure: Not classifiedSpecific target organ toxicity - repeated exposure: Not classifiedTERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0)NOAEC (inhalation, rat, vapour, 90 days)0.48 mg/l/6h/day - Mouse - male and femaleAspiration hazard: Not classifiedPotential Adverse human health effects and symptoms: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.Symptoms/effects after inhalation: Harmful if inhaled.Symptoms/effects after eye contact: Causes serious eye irritation.Symptoms/effects after eye contact: Causes serious eye irritation.	Respiratory or skin sensitization	: Buehler Test. Guinea pig Result: Did not cause sensitisation on laboratory animals.
Reproductive toxicity: Not classifiedSpecific target organ toxicity – single exposure: Not classifiedSpecific target organ toxicity – repeated exposure: Not classifiedTERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0)NOAEC (inhalation,rat,vapour,90 days)0.48 mg/l/6h/day - Mouse - male and femaleAspiration hazard: Not classifiedPotential Adverse human health effects and symptoms: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.Symptoms/effects after inhalation: Harmful if inhaled.Symptoms/effects after skin contact: Causes skin irritation.Symptoms/effects after eye contact: Causes serious eye irritation.	Germ cell mutagenicity	
Specific target organ toxicity – single exposure: Not classifiedSpecific target organ toxicity – repeated exposure: Not classifiedTERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0)NOAEC (inhalation,rat,vapour,90 days)0.48 mg//6h/day - Mouse - male and femaleAspiration hazard: Not classifiedPotential Adverse human health effects and symptoms: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.Symptoms/effects after inhalation: Harmful if inhaled.Symptoms/effects after eye contact: Causes serious eye irritation.Symptoms/effects after eye contact: Causes serious eye irritation.	Carcinogenicity	: Not classified
Specific target organ toxicity – repeated exposure : Not classified TERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0) 0.48 mg/l/6h/day - Mouse - male and female NOAEC (inhalation,rat,vapour,90 days) 0.48 mg/l/6h/day - Mouse - male and female Aspiration hazard : Not classified Potential Adverse human health effects and symptoms : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Symptoms/effects after inhalation : Harmful if inhaled. Symptoms/effects after eye contact : Causes serious eye irritation.	Reproductive toxicity	: Not classified
exposure TERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0) NOAEC (inhalation,rat,vapour,90 days) 0.48 mg/l/6h/day - Mouse - male and female Aspiration hazard : Not classified Potential Adverse human health effects and symptoms : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Symptoms/effects after inhalation : Harmful if inhaled. Symptoms/effects after skin contact : Causes skin irritation. Symptoms/effects after eye contact : Causes serious eye irritation.	Specific target organ toxicity – single exposure	: Not classified
NOAEC (inhalation,rat,vapour,90 days)0.48 mg/l/6h/day - Mouse - male and femaleAspiration hazard: Not classifiedPotential Adverse human health effects and symptoms: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.Symptoms/effects after inhalation: Harmful if inhaled.Symptoms/effects after skin contact: Causes skin irritation.Symptoms/effects after eye contact: Causes serious eye irritation.		: Not classified
Aspiration hazard : Not classified Potential Adverse human health effects and symptoms : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Symptoms/effects after inhalation : Harmful if inhaled. Symptoms/effects after skin contact : Causes skin irritation. Symptoms/effects after eye contact : Causes serious eye irritation.	TERT-BUTYL-D9 ACETATE (D, 99%) (358731	-03-0)
Potential Adverse human health effects and symptoms: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.Symptoms/effects after inhalation: Harmful if inhaled.Symptoms/effects after skin contact: Causes skin irritation.Symptoms/effects after eye contact: Causes serious eye irritation.	NOAEC (inhalation,rat,vapour,90 days)	0.48 mg/l/6h/day - Mouse - male and female
symptomsthe purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.Symptoms/effects after inhalation: Harmful if inhaled.Symptoms/effects after skin contact: Causes skin irritation.Symptoms/effects after eye contact: Causes serious eye irritation.	Aspiration hazard	: Not classified
Symptoms/effects after skin contact : Causes skin irritation. Symptoms/effects after eye contact : Causes serious eye irritation.		the purposes of health, safety and environmental requirements only. It should not therefore be
Symptoms/effects after eye contact : Causes serious eye irritation.	Symptoms/effects after inhalation	: Harmful if inhaled.
	Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after ingestion : May be harmful if swallowed.	Symptoms/effects after eye contact	: Causes serious eye irritation.
	Symptoms/effects after ingestion	: May be harmful if swallowed.

The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
03-0)
240 mg/l - Oncorhynchus mykiss (rainbow trout) - 96 h (OECD Test Guideline 203)

E650 han i	240 mg/r - Oncomynends mykiss (rambow flour) - 50 m (OEOD Test Oddeline 200)
EC50 Daphnia 1	350 mg/l - Daphnia magna (Water flea)- 48 h (OECD Test Guideline 202)
LC50 fish 2	296 - 362 mg/l - Pimephales promelas (fathead minnow) - 96 h

12.2.	Persistence and degradability				
TERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0)					
Biodegradation		50 % - Inherently biodegradable. (OECD Test Guideline 301D) aerobic - Exposure time 28 d			
12.3.	Bioaccumulative potential				
TERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0)					
Log Pow		1.64 at 21.7 °C (71.1 °F)			
12.4.	Mobility in soil				
No additional information available					
12.5.	Results of PBT and vPvB assessmen	t			
No additional information available					

No additional information available

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

No. Additional information available SECTION 13: Disposal considerations A.M. West treatment methods Regional legislation (waste) Yest entended should be disposed of under conditions which meet Federal, State, and local aerivation methods Product/Packaging disposal recommendations Yest entended should be disposed of under conditions which meet Federal, State, and local aerivation dispose of this material. Ecology - waste materials : Dispose of as unused product. SECTION 14: transport information In accordance with ABR /RID /MOG /MTA /ADN 14. UN number UN-No.(DOT) : 11.23 DOT Na.no. UN1123 12.24 UP progr Shipping Name (DOT) 12.35 - Class 3 - Filammable and condustible liquid 49 CFR 173.120 Hazard labels (DOT) : 12.35 - Class 3 - Filammable and some ontoustible liquid 49 CFR 173.120 Hazard labels (DOT) : 12.45 - Composite (F172.102) 12.45 - Composite (F172.102) 12.45 - Composite (F172.102) 13.6 - Class 3 - Filammable and contoustible liquid 49 CFR 173.120 14.25 - Composite (F172.102) 13.6 - Class 3 - Filammable and contexed the degree of filing d	12.6 Other adverse offects				
SECTION 13: Disposal considerations 13.1 Vasies treatment methods Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and local environmentations. Product/Packaging disposal recommendations : Dispose of as unused product. SECTION 14: Transport information : Dispose of as unused product. SECTION 14: Transport information : Dispose of as unused product. SECTION 14: Transport information : UNALOG / NATA A NAN 14.1 UN humber : UNALOG / NATA A NAN 14.2 UN proper shipping name : Proper Shipping Name (DOT) : Butyl acetates Cisas (DOT) : Butyl acetates : Cisas 3 - Finamable and combustible liquid 49 CFR 173.120 Hazard labels (DOT) : Bityl-Autorized (ECS: Method (1ATA 31 B and 31 N); Rigid plastics (31 H1 and 31 H2); Composite (bar at 122 F) or 130 MPa at 55 (13 M1 and 31 H2); Composite (bar at 122 F) or 130 MPa at 55 (13 M1 and 31 H2); Composite (bar at 122 F) or 130 MPa at 55 (13 M1 and 31 H2); Composite (bar at 02 F) or 130 MPa at 56 (13 M1 and 31 H2); Composite (bar at 02 F) or 130 MPa at 55 (13 M1 and 31 H2); Composite (bar at 02 F) or 130 MPa at 55 (13 M1 and 31 H2); Composite (bar at 02 F) or 130 MPa at 55 (13 M1 and 31 H2); Composite (bar at 02 F) or 130 MPa at 55 (13 M1 and 31 H2); Composite (bar at 02 F) or 130 MPa at 55 (13 M1 and 31 H2); Composite (bar at 02 F) or 130 MPa at 55 (13 M2 at 131 F) are authorized. DOT Special Provisions (49 CFR 172.	12.6. Other adverse effects				
1.1. Wate trainent methods Regional legislation (waste) : Wate materials should be disposed of under conditions with meet Federal, State, and local environmental control regulations. Product/Packaging disposal recommendation: : Ohres unplus and non-recycluble solutions to a licensed disposal company. Contact a licensed professional wate disposal service to dispose of this material. Ecology - waste materials : Dispose of as unused product. SECTION 14.1 Transport Information : Il 123 UN number : UN1123 1.2.2. UN proper shipping Name (DOT) : Il 123 Class (DOT) : Solution is a disposal company. Contact a licensed product. Packing group (DOT) : Il 2.3. Class 3.7. Flammable and contrustible liquid 48 CFR 173.120 Hazard labels (DOT) : Il - Medium Danger DOT Special Provisions (49 CFR 172.102) : Ill - Medium Danger DOT Special Provisions (49 CFR 173.xxx) : Ill - Medium Danger DOT Packaging Exceptions (49 CFR 173.xxx) : Ill - Medium Danger DOT Packaging Broop Note: : Ill - Medium Danger DOT Packaging Note: : Ill - Medium Danger					
Regional legislation (waste): Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.Product/Packaging disposal recommendation: Olfer surplus and non-recyclable solutions to a lisensed disposal company. Contact a licensed disposal tervice to dispose of this material.Ecology - waste materials: Dispose of as unused product.SECTION 14.1 Transport informationInteraction waste disposal service to dispose of this material.In accordance with ADP (RID / IMDG / IATA / ADN14.1 UN numberIIIIUNNo.UN132315.2 UN proper shipping nameIIIII (Saiss 3 - Fiammable and combustible liquid 49 CFR 173.12016.3 (DOT): 3 - Class 3 - Fiammable inquid16.3 (DOT): 9 - Class 3 - Fiammable inquid17.2 UN proper shipping name: III. Modum Danger10.3 (DOT): III. Modum Danger10.5 Special Provisions (48 CFR 172.102): III. Modum Danger10.5 Special Provisions (48 CFR 172.102): III. Additional Requirement. Only liquid with a vacor pressure loss than or equal to 11017.4 2.6 (172.102): III. Z27.10(2) Normation IIII. (200.1000)17.4 2.6 (172.102): III. Z27.10(2) Normation IIII. (200.1000)17.4 2.6 (172.102): III. Additional Requirement. Only liquid with a vacor pressure loss than or equal to 11018.7 Unique pressure loss of the invariant manager: III. IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		ns			
Biology Product/Packaging disposal recommendations Professional waste disposal solutions to a licensed disposal company. Contact a licensed professional waste disposal solution to a licensed disposal company. Contact a licensed disposal acompany. Contact a licensed disposal company. Contact a lice					
Cockogy - water materials : Dispace of as unused product. SECTION 14: Transport Information Dispace of as unused product. Machine Cockogy - water materials : Dispace of as unused product. Section 14: Transport Information UNI123 14: UN number UNI123 Id.2. UN proper shipping name Proper Shipping Name (DOT) Proper Shipping Name (DOT) : Buryl acetates Class (DOT) : 3 - Class 3 - Flammable liquid Facard labels (DOT) : 3 - Class 3 - Flammable liquid Packing group (DOT) : Buryl acetates Class (DOT) : 3 - Flammable liquid Packing group (DOT) : II- Medium Danger DOT Special Provisions (49 CFR 172.102) : IIE - Authorized IBC:- Medi (31A, 31B and 31N); Rojd plastics (31H1 and 31H2). Composite (31H21). Additional Requirement: Only liquids with a way on pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. IT + 2.6 5 H37.4 (2)(2) Norall		environmental control regulations.			
Section 14: Transport Information In accordance with ADR / RID / IMDG / IATA / ADN 14.1. UN number UNNo.(DOT) : 1123 DOT NA no. UN1123 14.2. UN proper shipping name Proper Shipping Name (DOT) Proper Shipping Name (DOT) : 3 · Class 3 - Flammable and combustible liquid 49 CFR 173.120 Hazard labels (DOT) : 3 · Class 3 - Flammable liquid Packing group (DOT) : II · Medium Danger DOT Special Provisions (49 CFR 172.102) : IBC - Authorized IBCe: Med (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31H21). Additional Requirement: Only liquids with avgorp pressure less than or equal to 110 kPa at 50 C (1:1 bar at 122 F), or 130 kPa at 55 C (1:3 bar at 131 F) are authorized. T+ 2 d5 T182.74(2)(2) Normal		professional waste disposal service to dispose of this material.			
In accordance with ADR / RID / IMDG / IATA / ADN IA1. UN number IA1. UN number UN-No.(DOT) i IA2. UN proper shipping name Proper Shipping Name (DOT) i BLS a - Class 3 - Flammable and combustible liquid 49 CFR 173.120 Hazard labels (DOT) i Flammable liquid intermable and combustible liquid 49 CFR 173.120 Hazard labels (DOT) i II - Medium Danger DOT Special Provisions (49 CFR 172.102) i: II - Medium Danger DOT Special Provisions (49 CFR 172.102) i: II - Medium Danger DOT Packaging Exceptions (49 CFR 172.102) i: II - Medium Danger DOT Packaging Exceptions (49 CFR 173.002) i: II - The maximum digres of thiling must not exceed the digree of filing determined by the fallowing Tainsport, and this the temperature in digress classica (15 ab art 13 T F) are at 100000000000000000000000000000000000	Ecology - waste materials	: Dispose of as unused product.			
In accordance with ADR / RID / IMDG / IATA / ADN IA1. UN number IA1. UN number UN-No.(DOT) i IA2. UN proper shipping name Proper Shipping Name (DOT) i BLS a - Class 3 - Flammable and combustible liquid 49 CFR 173.120 Hazard labels (DOT) i Flammable liquid intermable and combustible liquid 49 CFR 173.120 Hazard labels (DOT) i II - Medium Danger DOT Special Provisions (49 CFR 172.102) i: II - Medium Danger DOT Special Provisions (49 CFR 172.102) i: II - Medium Danger DOT Packaging Exceptions (49 CFR 172.102) i: II - Medium Danger DOT Packaging Exceptions (49 CFR 173.002) i: II - The maximum digres of thiling must not exceed the digree of filing determined by the fallowing Tainsport, and this the temperature in digress classica (15 ab art 13 T F) are at 100000000000000000000000000000000000	SECTION 14: Transport information				
UN-No.(DOT) I: 1123 DOT Na no. UN1123 II.2. UN proper shipping name (DOT) I: Butyl acetates Class (DOT) I: Butyl acetates Class (DOT) I: II-Medium Danger Packing group (DOT) I: II-Medium Danger DOT Special Provisions (49 CFR 172.102) III-Medium Danger DOT Special Provisions (49 CFR 172.102) III-Medium Danger DOT Special Provisions (49 CFR 172.102) III Medium Danger DOT Packaging Exceptions (49 CFR 173.axx) IIII Medium Danger DOT Packaging Exceptions (49 CFR 173.axx) IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII					
DOT NA no. UN1123 14.2. UN proper shipping name Image: Shipping Name (DOT) Image: Shipping Name (DOT) Class (DOT) Image: Shipping Name (DOT) Image: Shipping Name (DOT) Hazard labels (DOT) Image: Shipping Name (DOT) Image: Shipping Name (DOT) Hazard labels (DOT) Image: Shipping Name (DOT) Image: Shipping Name (DOT) Packing group (DOT) Image: Shipping Name (DOT) Image: Shipping Name (DOT) Packing group (DOT) Image: Shipping Name (DOT) Image: Shipping Name (DOT) Packing group (DOT) Image: Shipping Name (DOT) Image: Shipping Name (DOT) Packing group (DOT) Image: Shipping Name (DOT) Image: Shipping Name (DOT) DOT Special Provisions (49 CFR 172.102) Image: Shipping Name (DOT) Image: Shipping Name (DOT) DOT Packaging Exceptions (49 CFR 173.xxx) Image: Shipping Ymae (DOT) Image: Shipping Ymae (DOT) DOT Packaging Non Bulk (49 CFR 173.xxx) Image: Shipping Ymae (DOT) Image: Shipping Ymae (DOT) DOT Packaging Non Bulk (49 CFR 173.xxx) Image: Shipping Ymae (DOT) Image: Shipping Ymae (DOT) Motification Number Image: Shipping Ymae (DOT) Image: Shipping Ymae (DOT) Image: Shipping Ymae (DOT) Meriad Tansport <	14.1. UN number				
14.2 UN proper shipping Name (DOT) : Buyl acetates Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 Hazard labels (DOT) : 3 - Class 3 - Flammable liquid Version 11	UN-No.(DOT)	: 1123			
Proper Shipping Name (DOT) : Butyl acetates Class (DOT) : : -Class 3 - Flammable and combustible liquid 49 CFR 173.120 Hazard labels (DOT) : : : -Class 3 - Flammable liquid Packing group (DOT) : : II - Medium Danger DOT Special Provisions (49 CFR 172.102) : II - Medium Danger DOT Special Provisions (49 CFR 173.202) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plassics (31H1 and 31H2); Composite (31H21). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 (1.1 bar at 125 p. or 130 kPa at 55 (1.3 bar at 131 F) are authorized. T 14 - 2.65 178.274(d)(2) Normal	DOT NA no.	UN1123			
Proper Shipping Name (DOT) : Butyl acetates Class (DOT) : : -Class 3 - Flammable and combustible liquid 49 CFR 173.120 Hazard labels (DOT) : : : -Class 3 - Flammable liquid Packing group (DOT) : : II - Medium Danger DOT Special Provisions (49 CFR 172.102) : II - Medium Danger DOT Special Provisions (49 CFR 173.202) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plassics (31H1 and 31H2); Composite (31H21). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 (1.1 bar at 125 p. or 130 kPa at 55 (1.3 bar at 131 F) are authorized. T 14 - 2.65 178.274(d)(2) Normal	14.2 LIN proper shipping name				
Class (DOT) : 3 - Class 3 - Flammable liquid Hazard labels (DOT) : 3 - Flammable liquid Packing group (DOT) : 11 - Medium Danger DOT Special Provisions (49 CFR 172.102) : 112 - Authorized 1BCS: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31H21). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. 1T 4 - 2.65 TR 2274(g)(2) Normal		: Butyl acetates			
Hazard labels (DOT): 3 - Flammable liquidPacking group (DOT): II - Medium DangerDOT Special Provisions (49 CFR 172.102): IB2 - Authorized IBCS: Metal (31A, 31B and 31N); Rigid plastics (31H and 31H2); Composite (31H 21). Additional Requirement: Only land 31M); Rigid plastics (31H and 31H2); Composite (31H 21). Additional Requirement: Only land 31M); Rigid plastics (31H and 31H2); Composite (31H 21). Additional Requirement: Only land 31M); Rigid plastics (31H and 31H2); Composite (31H 21). Additional Requirement: Only land 25 C(1.13 bar at 131 F) are authorized. IT - 2.65 T/ 2.274(2) Normal					
Packing group (DOT) : II - Medium Danger DOT Special Provisions (49 CFR 172.102) : II - Medium Danger DOT Special Provisions (49 CFR 172.102) : II - Medium Danger DOT Packaging Exceptions (49 CFR 173.xxx) : II - Medium Danger DOT Packaging Exceptions (49 CFR 173.xxx) : : II - Medium Danger DOT Packaging Succeptions (49 CFR 173.xxx) : : : : Packaging Succeptions (49 CFR 173.xxx) : : : : : DOT Packaging Succeptions (49 CFR 173.xxx) :					
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31H21). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal					
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Matal (31A, 31B and 31W): Rigid plastics (31H1 and 31H2): Composite (31H21). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal	Packing group (DOT)	: II - Medium Danger			
DOT Packaging Exceptions (49 CFR 173.xxx) : 150 DOT Packaging Non Bulk (49 CFR 173.xxx) : 202 DOT Packaging Bulk (49 CFR 173.xxx) : 242 14.3. Additional information : 242 14.3. Additional information : 129 Other information : No supplementary information available. Special transport precautions : Not classified as dangerous in the meaning of transport regulations. Overland transport : II Class (ADR) : II Classification number (Kemler No.) : 3 - Flammable liquid Hazard identification number (Kemler No.) : F1 Hazard labels (ADR) : S - Flammable liquids Orange plates : 3 - Flammable liquids Tunnel restriction code (ADR) : D/E		 IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal			
Emergency Response Guide (ERG) Number : 129 Other information : No supplementary information available. Special transport precautions : Not classified as dangerous in the meaning of transport regulations. Overland transport Packing group (ADR) : II Class (ADR) : 3 - Flammable liquid Hazard identification number (Kemler No.) : 33 Classification code (ADR) : F1 Hazard labels (ADR) : 3 - Flammable liquids Orange plates : 33 Tunnel restriction code (ADR) : D/E	DOT Packaging Non Bulk (49 CFR 173.xxx)	: 150 : 202			
Other information : No supplementary information available. Special transport precautions : Not classified as dangerous in the meaning of transport regulations. Overland transport : Not classified as dangerous in the meaning of transport regulations. Overland transport : II Packing group (ADR) : II Class (ADR) : 3 - Flammable liquid Hazard identification number (Kemler No.) : 33 Classified as dangerous : F1 Hazard labels (ADR) : 3 - Flammable liquids Orange plates : 33 Tunnel restriction code (ADR) : D/E	14.3. Additional information				
Special transport precautions : Not classified as dangerous in the meaning of transport regulations. Overland transport Packing group (ADR) : I Class (ADR) : 3 - Flammable liquid Hazard identification number (Kemler No.) : 33 Classification code (ADR) : F1 Hazard labels (ADR) : 3 - Flammable liquids	Emergency Response Guide (ERG) Number	: 129			
Overland transport : I Packing group (ADR) : 3 - Flammable liquid Class (ADR) : 3 - Flammable liquid Hazard identification number (Kemler No.) : 33 Classification code (ADR) : F1 Hazard labels (ADR) : 3 - Flammable liquids Orange plates : 33 Tunnel restriction code (ADR) : D/E	Other information	: No supplementary information available.			
Overland transport : I Packing group (ADR) : 3 - Flammable liquid Class (ADR) : 3 - Flammable liquid Hazard identification number (Kemler No.) : 33 Classification code (ADR) : F1 Hazard labels (ADR) : 3 - Flammable liquids Orange plates : 33 Tunnel restriction code (ADR) : D/E	Special transport precautions	Not classified as dangerous in the meaning of transport regulations.			
Packing group (ADR):IClass (ADR):3 - Flammable liquidHazard identification number (Kemler No.)::Classification code (ADR):F1Hazard labels (ADR):::::Orange plates::					
Packing group (ADR):IClass (ADR):3 - Flammable liquidHazard identification number (Kemler No.)::Classification code (ADR):F1Hazard labels (ADR):::::Orange plates::	Overland transport				
Hazard identification number (Kemler No.): 33Classification code (ADR): F1Hazard labels (ADR): 3 - Flammable liquidsOrange plates: 33Tunnel restriction code (ADR): D/E		: 11			
Classification code (ADR) : F1 Hazard labels (ADR) : 3 - Flammable liquids Orange plates : 33 Tunnel restriction code (ADR) : D/E	Class (ADR)	: 3 - Flammable liquid			
Hazard labels (ADR) : 3 - Flammable liquids Orange plates : 33 Tunnel restriction code (ADR) : D/E	Hazard identification number (Kemler No.)	: 33			
Orange plates : 33 Tunnel restriction code (ADR) : D/E	Classification code (ADR)	: F1			
33 1123	Hazard labels (ADR)	: 3 - Flammable liquids			
33 1123					
	Orange plates				

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

EAC	: 3YE
Excepted quantities (ADR)	: E2
Transport by sea	
DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
MFAG-No	: 129
Air transport	
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	2 : 60 L
Civil Aeronautics Law	: Flammable liquids
14.4. Environmental hazards	
Other information	: No supplementary information available.
14.5. Special precautions for user	
Special transport precautions	: Not classified as dangerous in the meaning of transport regulations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code 14.6.

Not applicable

SECTION 15: Regulatory information				
15.1. US Federal regulations				
TERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0)				
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.			
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard			
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.			

15.2. International regulations

CANADA

TERT-BUTYL-D9 ACETATE (D, 99%) (358731-03-0)
Listed on the Canadian DSL (Domestic Substances List)

15.2.1. **National regulations**

No additional information available

15.3. US State regulations

TERT-BUTYL-D9 ACETATE (D, 99%)(358731-03-0)		
U.S California - Proposition 65 - Carcinogens List	No	
U.S California - Proposition 65 - Developmental Toxicity	No	
U.S California - Proposition 65 - Reproductive Toxicity - Female	No	
U.S California - Proposition 65 - Reproductive Toxicity - Male	No	
State or local regulations	U.S Massachusetts - Right To Know List U.S New Jersey - Right to Know Hazardous Substance List U.S Pennsylvania - RTK (Right to Know) List	

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 16: Other information

Other information

: This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
H225	Highly flammable liquid and vapor
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
R11	Highly flammable
R20	Harmful by inhalation
R36/38	Irritating to eyes and skin
F	Highly flammable
Xi	Irritant
Xn	Harmful

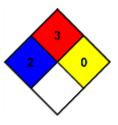
NFPA health hazard

NFPA fire hazard

NFPA reactivity

: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

- : 3 Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.
- : 0 Material that in themselves are normally stable, even under fire conditions.



treatment is

Hazard Rating	
Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical t given
Flammability	: 3 Serious Hazard
Physical	: 0 Minimal Hazard

CIL Substance SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product