

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Reference number: 6350E Issue date: 6/11/2024 Revision date: 6/11/2024 Supersedes version of: 4/9/2015 Version: 1.0

SECTION 1: Identification of the subs	tance/mixture and of the company/undertaking			
1.1. Product identifier				
Product form Trade name EC-No. CAS-No. Product code Type of product Formula Chemical structure	 Substance TRIBUTYLAMINE AR 203-058-7 102-82-9 6350E Alicyclic amine C12H27N H₃C CH₃ 			
Synonyms	: Tri-n-butylamine, N,N-Dibutylbutan-1-amine			
1.2. Relevant identified uses of the substa	ance or mixture and uses advised against			
1.2.1. Relevant identified uses				
Use of the substance/mixture Use of the substance/mixture	: Laboratory chemicals, Manufacture of substances : Solvents			
1.2.2. Uses advised against				
No additional information available				
1.3. Details of the supplier of the safety da	ata sheet			
LOBA CHEMIE PVT.LTD. 107 Wode House Road, Jehangir Villa, Colaba 400005 Mumbai INDIA T +91 22 6663 6663, F +91 22 6663 6699 info@lobachemie.com, www.lobachemie.com				
1.4. Emergency telephone number				
Emergency number	: + 91 22 6663 6663 (9:00am - 6:00 pm)			
SECTION 2: Hazards identification				
2.1. Classification of the substance or mixture				
Classification according to Regulation (EC) No	Classification according to Regulation (EC) No. 1272/2008 [CLP]			

Acute toxicity (oral), Category 4H302Acute toxicity (dermal), Category 1H310Acute toxicity (inhalation:dust,mist) Category 1H330Skin corrosion/irritation, Category 2H315Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Fatal in contact with skin. Fatal if inhaled. Harmful if swallowed. Causes skin irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



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Signal word (CLP) Hazard statements (CLP)	 Danger H302 - Harmful if swallowed. H310+H330 - Fatal in contact with skin or if inhaled. H315 - Causes skin irritation.
Precautionary statements (CLP)	 P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P262 - Do not get in eyes, on skin, or on clothing. P280 - Wear protective clothing, eye protection, face protection, protective gloves. P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell. P304+P340+P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. P302+P352+P310 - IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER or doctor.
Nordic countries regulation Denmark MAL code	: 00-6 (Executive Order No. 301 from 1993)

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances Substance type : Mono-constituent

Name	Product identifier	%
TRIBUTYLAMINE	CAS-No.: 102-82-9 EC-No.: 203-058-7	100

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures	
First-aid measures general First-aid measures after inhalation	 Call a physician immediately. Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice. Call a physician immediately.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash with plenty of water/ Wash skin with plenty of water. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth out with water. If you feel unwell, seek medical advice. Rinse mouth. Call a poison center or a doctor if you feel unwell.
4.2. Most important symptoms and effect	ts, both acute and delayed
Symptoms/effects after inhalation Symptoms/effects after skin contact Symptoms/effects after eye contact Symptoms/effects after ingestion	 Fatal if inhaled. Toxic in contact with skin. Causes skin irritation. Irritation. None under normal conditions. Harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5: Firefighting measures				
5.1. Extinguishing media				
Suitable extinguishing media	: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2). Water spray. Dry powder. Foam. Carbon dioxide.			
Unsuitable extinguishing media	: Do not use a heavy water stream.			
5.2. Special hazards arising from the substance or mixture				
Fire hazard	: No fire hazard.			
Explosion hazard	: No direct explosion hazard.			
Hazardous decomposition products in case of fire	: Toxic fumes may be released.			
5.3. Advice for firefighters				
Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.			
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.			

SECTION 6: Accidental release meas	sures				
6.1. Personal precautions, protective eq	uipment and emergency procedures				
General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.					
6.1.1. For non-emergency personnel					
Protective equipment Emergency procedures	 Wear recommended personal protective equipment. Evacuate unnecessary personnel. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray. 				
6.1.2. For emergency responders					
Protective equipment	: Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".				
Emergency procedures	: Stop release. Evacuate unnecessary personnel. Stop leak if safe to do so.				
6.2. Environmental precautions					

Avoid release to the environment. Toxic to aquatic life with long lasting effects.

6.3. Methods and material for containment and cleaning up			
For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.		
Methods for cleaning up	: Take up liquid spill into absorbent material. Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.		
Other information	: Dispose of materials or solid residues at an authorized site.		
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 Precautions for safe handling	 Not expected to present a significant hazard under anticipated conditions of normal use. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapours/spray.

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Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse. Always wash hands after handling the product.
7.2. Conditions for safe storage, including a	any incompatibilities
Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Keep container tightly closed. Store in original container. Store in a dry place. Store in a well-ventilated place. Store locked up.
Packaging materials	: Store always product in container of same material as original container.
7.3. Specific end use(s)	

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection: Chemical goggles or safety glasses

8.2.2.2. Skin protection

Skin and body protection: Wear a mask

Hand protection: Protective gloves

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8.2.2.3. Respiratory protection

Respiratory protection:

Wear appropriate mask. [In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Pale yellow.
Appearance	: Clear liquid.
Molecular mass	: 185.36 g/mol
Odour	: amine like.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: -70 °C
Boiling point	: 216 °C
Flammability	: Non flammable.
Lower explosion limit	: 1.4 vol %
Upper explosion limit	: 6 vol %
Flash point	: 63 °C (closed cup)
Auto-ignition temperature	: 210 °C
Decomposition temperature	: Not available
рН	: 10.6 (0.1 g/l at 25 °C)
Viscosity, kinematic	: 1.735 mm²/s
Viscosity, dynamic	: 1.35 cP at 25 °C
Solubility	: Water: 50 mg/l 20 °C - Sparingly miscible in water
	Ethanol: Miscible
	Ether: Miscible
	Acetone: Miscible
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: 4.4 - 4.6
Vapour pressure	: 0.3 mm Hg (at 20°C)
Vapour pressure at 50°C	: Not available
Density	: 0.7782 g/cm³ at 20 °C
Relative density	: Not available
Relative vapour density at 20°C	: 6.39 (Air = 1)
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Refractive index

: 1.4299 at 20 °C/D

SECTION 10: Stability and reactivity	SE	СТ	ON '	10: \$	Stabilit	y and	reactivity
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10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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10.2. Chemical stability
Stable under normal conditions.
10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.
10.4. Conditions to avoid
Direct sunlight. Air contact. Overheating. Heat.
10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information	
11.1. Information on hazard classes as o	defined in Regulation (EC) No 1272/2008
Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Fatal in contact with skin.
Acute toxicity (inhalation)	: Inhalation:dust,mist: Fatal if inhaled.
Skin corrosion/irritation	: Causes skin irritation. pH: 10.6 (0.1 g/l at 25 °C)
Serious eye damage/irritation	: Not classified pH: 10.6 (0.1 g/l at 25 °C)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
TRIBUTYLAMINE AR (102-82-9)	
Viscosity, kinematic	1.735 mm²/s
11.2. Information on other hazards	
11.2.1. Endocrine disrupting properties	
No additional information available	
11.2.2. Other information	
Potential adverse human health effects and symptoms	: Harmful if swallowed,Toxic in contact with skin.

SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

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12.2. Persistence and degradability	
TRIBUTYLAMINE AR (102-82-9)	
Persistence and degradability	Rapidly degradable
12.3. Bioaccumulative potential	
No additional information available	
12.4. Mobility in soil	
No additional information available	
12.5. Results of PBT and vPvB assessment	
No additional information available	
12.6. Endocrine disrupting properties	
No additional information available	
12.7. Other adverse effects	
No additional information available	

SECTION 13: Disposal considerations

13.1. Waste treatment methods	
Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	 Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
Ecological information	: Hazardous waste due to toxicity.

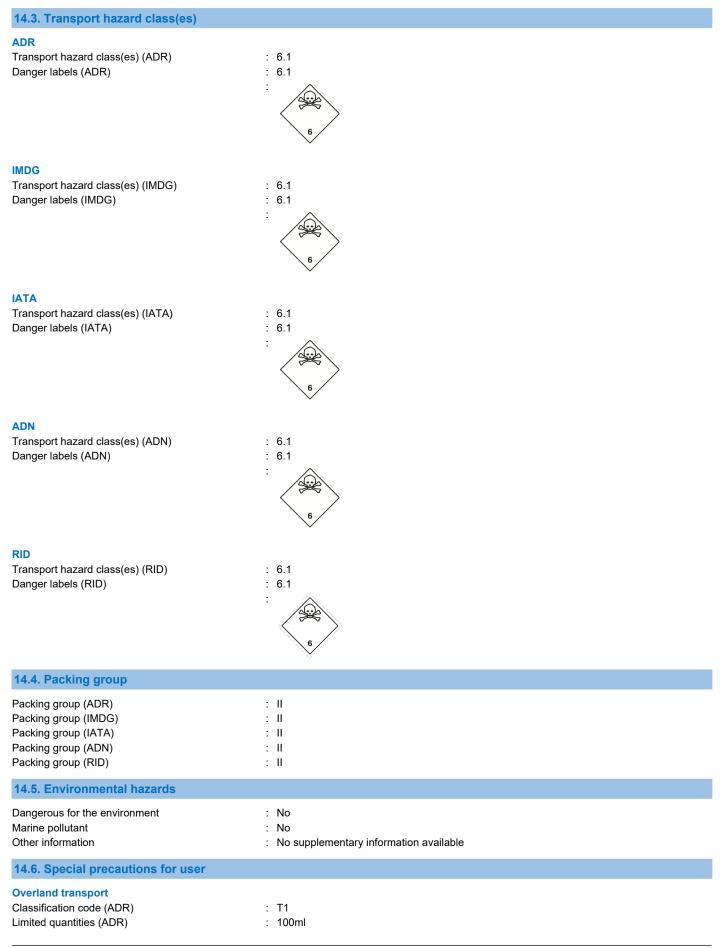
SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number	
UN-No. (ADR) UN-No. (IMDG)	: UN 2542 : UN 2542
UN-No. (IATA)	: UN 2542
UN-No. (ADN)	: UN 2542
UN-No. (RID)	: UN 2542
14.2. UN proper shipping name	
Proper Shipping Name (ADR)	: TRIBUTYLAMINE
Proper Shipping Name (IMDG)	: TRIBUTYLAMINE
Proper Shipping Name (IATA)	: Tributylamine
Proper Shipping Name (ADN)	: TRIBUTYLAMINE
Proper Shipping Name (RID)	: TRIBUTYLAMINE
Transport document description (ADR)	: UN 2542 TRIBUTYLAMINE, 6.1, II, (D/E)
Transport document description (IMDG)	: UN 2542 TRIBUTYLAMINE, 6.1, II
Transport document description (IATA)	: UN 2542 Tributylamine, 6.1, II
Transport document description (ADN)	: UN 2542 TRIBUTYLAMINE, 6.1, II
Transport document description (RID)	: UN 2542 TRIBUTYLAMINE, 6.1, II

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Excepted quantities (ADR)	: E4
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	
Portable tank and bulk container special provisions	
(ADR)	
Tank code (ADR)	: L4BH
Tank special provisions (ADR)	: TU15, TE19
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Loading, unloading	
	. 6715, 6725
and handling (ADR) Special provisions for carriage - Operation (ADR)	: S9, S19
Hazard identification number (Kemler No.)	: 60
Orange plates	
Orange plates	60
	2542
Tunnel restriction code (ADR)	: D/E
EAC code	: 3X
Transport by sea	
Limited quantities (IMDG)	: 100 ml
Excepted quantities (IMDG)	: E4
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-A
Stowage category (IMDG)	: A
Stowage category (IMDG) Properties and observations (IMDG)	: Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in
Properties and observations (IMDG)	: Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation.
	: Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in
Properties and observations (IMDG) MFAG-No	: Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation.
Properties and observations (IMDG) MFAG-No Air transport	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) ERG code (IATA)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) ERG code (IATA) Inland waterway transport	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L 6L
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) ERG code (IATA) Inland waterway transport Classification code (ADN)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L 6L
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) CAO max net quantity (IATA) ERG code (IATA) Inland waterway transport Classification code (ADN) Special provisions (ADN)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L 6L
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) CAO max net quantity (IATA) ERG code (IATA) Inland waterway transport Classification code (ADN) Special provisions (ADN) Limited quantities (ADN)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L 6L
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) CAO max net quantity (IATA) ERG code (IATA) Inland waterway transport Classification code (ADN) Special provisions (ADN) Limited quantities (ADN) Excepted quantities (ADN)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L 6L
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) CAO max net quantity (IATA) ERG code (IATA) Inland waterway transport Classification code (ADN) Special provisions (ADN) Limited quantities (ADN) Excepted quantities (ADN) Equipment required (ADN)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L 6L T1 802 100 ml E4 PP, EP, TOX, A
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) CAO max net quantity (IATA) ERG code (IATA) Inland waterway transport Classification code (ADN) Special provisions (ADN) Limited quantities (ADN) Equipment required (ADN) Ventilation (ADN)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L 6L T1 802 100 ml E4 PP, EP, TOX, A VE02
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) CAO max net quantity (IATA) ERG code (IATA) Inland waterway transport Classification code (ADN) Special provisions (ADN) Limited quantities (ADN) Excepted quantities (ADN) Equipment required (ADN)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L 6L T1 802 100 ml E4 PP, EP, TOX, A
Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) CAO max net quantity (IATA) ERG code (IATA) Inland waterway transport Classification code (ADN) Special provisions (ADN) Limited quantities (ADN) Excepted quantities (ADN) Equipment required (ADN) Ventilation (ADN) Number of blue cones/lights (ADN)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L 6L T1 802 100 ml E4 PP, EP, TOX, A VE02
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Properties and observations (IMDG) MFAG-No Air transport PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) CAO max net quantity (IATA) CAO max net quantity (IATA) CAO max net quantity (IATA) ERG code (IATA) Inland waterway transport Classification code (ADN) Special provisions (ADN) Limited quantities (ADN) Equipment required (ADN) Ventilation (ADN) Number of blue cones/lights (ADN) Rail transport Classification code (RID)	 Colourless, combustible liquid with an amine odour. Immiscible with water. When involved in a fire, evolves toxic gases. Toxic if swallowed, by skin contact or by inhalation. 153 E4 Y641 1L 654 5L 662 60L 6L T1 802 100 ml E4 P, EP, TOX, A VE02 2 2 T1
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Safety Data Sheet

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Portable tank and bulk container special provisions (RID)	:	TP2
Tank codes for RID tanks (RID)	:	L4BH
Special provisions for RID tanks (RID)	:	TU15
Transport category (RID)	:	2
Special provisions for carriage - Loading, unloading	:	CW13, CW28, CW31
and handling (RID)		
Colis express (express parcels) (RID)	:	CE5
Hazard identification number (RID)	:	60

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code Applicable on	
3(b)	TRIBUTYLAMINE AR

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Water hazard class (WGK) Chemicals Prohibition Ordinance (ChemVerbotsV)	 WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 594). This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route (according to § 10).
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

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Netherlands

SZW-lijst van kankerverwekkende stoffen SZW-lijst van mutagene stoffen SZW-lijst van reprotoxische stoffen – Borstvoeding SZW-lijst van reprotoxische stoffen – Vruchtbaarheid SZW-lijst van reprotoxische stoffen – Ontwikkeling	 The substance is not listed
Denmark	
MAL code	: 00-6 (Executive Order No. 301 from 1993)
Class for fire hazard	: Class III-1
Store unit	: 50 liter
Classification remarks	: Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
ΙΑΤΑ	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:	
РВТ	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
Acute Tox. 1 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 1
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H330	Fatal if inhaled.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Safety Data Sheet (SDS), EU

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.