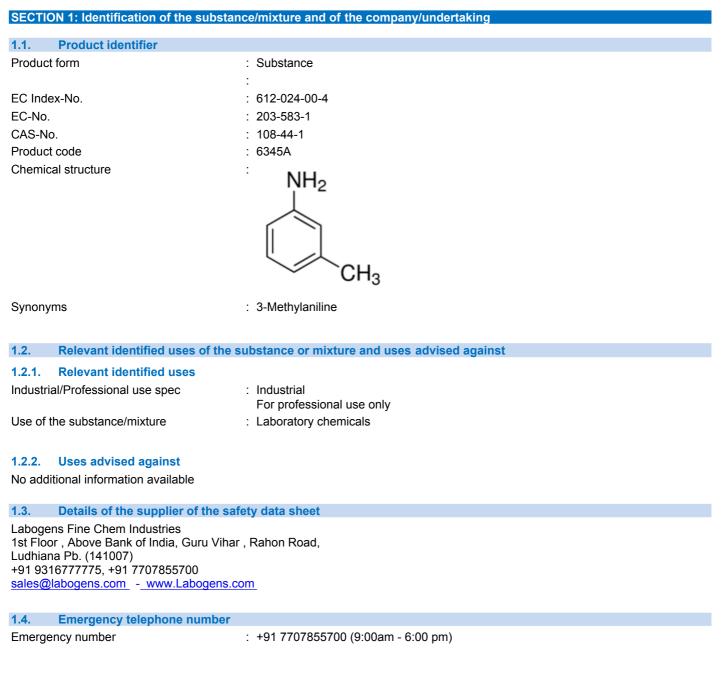
CAS-No.: 108-44-1 MSDS



MATERIAL SAFETY DATA SHEET (MSDS)



SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), H301 Category 3 Acute toxicity (dermal), H311 Category 3

www.Labogens.com

Safety Data Sheet

Acute toxicity (inhal.), H331 Category 3 Specific target organ H373 toxicity — Repeated exposure, Category 2 Hazardous to the aquatic Hazard, Category 1

Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

T; R23/24/25 N; R50 R33 Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements Labelling according to Regulation (EC) No. 1272/2008 [CLP] Hazard pictograms (CLP) GHS06 GHS08 GHS09 Signal word (CLP) : Danger Hazard statements (CLP) : H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled H373 - May cause damage to organs through prolonged or repeated exposure. H400 - Very toxic to aquatic life. Precautionary statements (CLP) : P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor P311 - Call a POISON CENTER/doctor

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients				
3.1.	Substances			
Name		: m-TOLUIDINE FOR SYNTHESIS		
CAS-N	0.	: 108-44-1		
EC-No.		: 203-583-1		

Safety Data Sheet

EC Index-No.

: 612-024-00-4

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

3.2.	Mixtures					
Not ap	plicable					

SECTION 4: First aid measures	
4.1. Description of first aid measures	\$
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
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.
4.2. Most important symptoms and e	ffects, both acute and delayed
Symptoms/effects	: May cause damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation	: Toxic if inhaled.
Symptoms/effects after skin contact	: Toxic in contact with skin.
Symptoms/effects after ingestion	: Toxic if swallowed.
4.3. Indication of any immediate med	lical attention and special treatment needed
Treat symptomatically.	
SECTION 5: Firefighting measures	
SECTION 5: Firengining measures	
5.1. Extinguishing media	
Suitable extinguishing media	: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).
Unsuitable extinguishing media	: Do not use a heavy water stream.
5.2. Special hazards arising from the	substance or mixture
No additional information available	
5.3. Advice for firefighters	
Protection during firefighting	: Do not attempt to take action without suitable protective equipment.
SECTION 6: Accidental release measure	5
6.1. Personal precautions, protective	e equipment and emergency procedures
	· · · · · · · · · · · · · · · · · · ·
6.1.1. For non-emergency personnel	
Emergency procedures	: Evacuate unnecessary personnel.
6.1.2. For emergency responders	
Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Stop release.
6.2. Environmental precautions	
Very toxic to aquatic life.	
6.3. Methods and material for contain	nment and cleaning up
Methods for cleaning up	: 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.

Safety Data Sheet

6.4. Reference to other sections				
No additional information available				
SECTION 7: Handling and storage				
7.1. Precautions for safe handlin	ng			
Precautions for safe handling	: Do not get in eyes, on skin, or on clothing.			
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling.			
7.2. Conditions for safe storage,	, including any incompatibilities			
Storage conditions	: Store in original container. Keep container tightly closed. Store in a dry place. Store in a well-ventilated place.			
7.3. Specific end use(s)				
No additional information available				
SECTION 8: Exposure controls/pers	onal protection			
8.1. Control parameters				
No additional information available				

8.2. Exposure controls					
Hand protection	: protective gloves				
Eye protection	: Chemical goggles or safety glasses				
Skin and body protection	: Wear suitable protective clothing				
Respiratory protection	: [In case of inadequate ventilation] wear respiratory protection.				
SECTION 9: Physical and chemical prop	perties				
9.1. Information on basic physical a	nd chemical properties				
Physical state	: Liquid				
Molecular mass	: 107.16 g/mol				
Colour	: Clear colorless to brownish.				
Odour	: No data available				
Odour threshold	: No data available				
рН	: No data available				
Relative evaporation rate (butylacetate=1)	: No data available				
Melting point	: No data available				
Freezing point	: No data available				
Boiling point	: 203 - 204				
Flash point	: 86 °C				
Auto-ignition temperature	: 482 °C				

Safety Data Sheet

Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: 4.29
Relative density	: No data available
Density Solubility	:0.999 g/cm³ :No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 0.011 - 0.066 vol %

9.2. Other information			
No additional information available			
SECTION 10: Stability and reactivity			
10.1. Reactivity			
No additional information available			
10.2. Chemical stability			
Stable under normal conditions.			
10.3. Possibility of hazardous reactions			
No additional information available			
10.4. Conditions to avoid			
Direct sunlight. Heat.			
10.5. Incompatible materials			
No additional information available			
10.6. Hazardous decomposition produc	ts		
No additional information available			
SECTION 11: Toxicological information			
11.1. Information on toxicological effect			
· · · · · · · · · · · · · · · · · · ·	Oral: Toxic if swallowed. Dermal: Toxic in contact with skin. Inhalation: Toxic if		
Acute toxicity :	inhaled.		
Skin corrosion/irritation :	Not classified		
Serious eye damage/irritation :	: Not classified		
Respiratory or skin sensitisation :	Not classified		

Safety Data Sheet

Reproductive toxicity STOT-single exposure	: Not classified : Not classified
STOT-repeated exposure Additional information	May cause damage to organs through prolonged or repeated exposure.There are potential chronic health effects to consider
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Toxic if swallowed. Toxic in contact with skin.

SECTION 12: Ecological information				
12.1. Toxicity				
Ecology - water	: Very toxic to aquatic life.			

No additional information available 12.3. Bioaccumulative potential No additional information available
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. Other adverse effects
No additional information available
SECTION 13: Disposal considerations
13.1. Waste treatment methods
Product/Packaging disposal : Dispose of contents/container to hazardous or special waste collection point, in
recommendations accordance with local, regional, national and/or international regulation.
Ecology - waste materials : Hazardous waste due to toxicity.
SECTION 14: Transport information
In accordance with ADR / RID / IMDG / IATA / ADN
14.1. UN number

UN-No. (ADR)	: 1708	
UN-No. (IMDG)	: 1708	

Safety Data Sheet

UN-No. (IATA)	: 1708
UN-No. (ADN)	: 1708
UN-No. (RID)	: 1708

14.2. UN proper shipping name	
Proper Shipping Name (ADR)	: TOLUIDINES, LIQUID
Proper Shipping Name (IMDG)	: TOLUIDINES, LIQUID
Proper Shipping Name (IATA)	: Toluidines, liquid
Proper Shipping Name (ADN)	: TOLUIDINES, LIQUID
Proper Shipping Name (RID)	: TOLUIDINES, LIQUID
Transport document description (ADR)	: UN 1708 TOLUIDINES, LIQUID, 6.1, II, (D/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 1708 TOLUIDINES, LIQUID, 6.1, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 1708 Toluidines, liquid, 6.1, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 1708 TOLUIDINES, LIQUID, 6.1, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 1708 TOLUIDINES, LIQUID, 6.1, II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) Danger labels (ADR)

: 6.1 : 6.1



IMDG

Transport hazard class(es) (IMDG)	
Danger labels (IMDG)	

: 6.1 : 6.1



ΙΑΤΑ

Transport hazard class(es) (IATA) Hazard labels (IATA)





ADN

Transport hazard class(es) (ADN)	
Danger labels (ADN)	



Safety Data Sheet

RID Transport hazard class(es) (RID) Danger labels (RID)	: 6.1 : 6.1
14.4. Packing group	
Packing group (ADR)	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: II
Packing group (RID)	: II
14.5. Environmental hazards	
Dangerous for the environment	: Yes
Marine pollutant	: Yes
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport	
Classification code (ADR)	: T1
Special provisions (ADR)	: 279
Limited quantities (ADR)	: 100ml
Excepted quantities (ADR)	: E4
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP2
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 and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S9, S19
Hazard identification number (Kemler No.)	: 60
Orange plates	· 60
	1708
Tunnel restriction code (ADR)	: D/E
EAC code	: •3X
- Transport by sea	
Special provisions (IMDG)	: 279
Limited quantities (IMDG)	: 100 ml
Excepted quantities (IMDG)	: E4

Safety Data Sheet

, , , , , , , , , , , , , , , , , , ,	
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
MFAG-No	: 153
A in transport	
- Air transport	: E4
PCA Excepted quantities (IATA)	
PCA Limited quantities (IATA)	: Y641
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 654
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 662
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A113
ERG code (IATA)	: 6L
- Inland waterway transport	
Classification code (ADN)	: T1
Special provisions (ADN)	: 279, 802
Limited quantities (ADN)	: 100 ml
Excepted quantities (ADN)	: E4
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, TOX, A
Ventilation (ADN)	: VE02
Number of blue cones/lights (ADN)	: 2
- Rail transport	
Classification code (RID)	: T1
Special provisions (RID)	: 279
Limited quantities (RID)	: 100ml
Excepted quantities (RID)	: E4
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP15
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special	: TP2
provisions (RID)	
Tank codes for RID tanks (RID)	: L4BH : TU15
Special provisions for RID tanks (RID)	
Transport category (RID)	: 2
Special provisions for carriage - Loading, unloading and handling (RID)	
Colis express (express parcels) (RID)	: CE5
Hazard identification number (RID)	: 60

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

Not applicable

Safety Data Sheet

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

m-TOLUIDINE FOR SYNTHESIS is not on the REACH Candidate List m-TOLUIDINE FOR SYNTHESIS is not on the REACH Annex XIV List

15.1.2. National regulations

: Water hazard class (WGK) 3, severe hazard to water (Classification according to AwSV; ID No. 453)
: Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)
: The substance is not listed
: Class III-1
: 50 liter
Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed
: 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 additional information available

SECTION 16: Other information

Safety Data Sheet

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R33	Danger of cumulative effects
R50	Very toxic to aquatic organisms
N	Dangerous for the environment
Т	Toxic

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