

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 1/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

**SECTION 1: Identification of the substance/mixture and of the company/
undertaking**

· **1.1 Product identifier**

· **Trade name:** **N,N-dimethylaniline**

· **CAS Number:**

121-69-7

· **EC number:**

204-493-5

· **Index number:**

612-016-00-0

· **Registration number** 01-2119950342-44-0000

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

· **Sector of Use**

SU0 Other

SU8 Manufacture of bulk, large scale chemicals (including petroleum products)

SU9 Manufacture of fine chemicals

SU 24: Scientific research and development

· **Product category**

PC 8: Biocidal products (e.g. disinfectants, pest control)

PC 12: Fertilisers

PC 21: Laboratory chemicals

PC 27: Plant protection products

PC 29: Pharmaceuticals

PC 32: Polymer preparations and compounds

PC 34: Textile dyes, and impregnating products

PC 19: Intermediate

· **Process category**

PROC 1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

PROC 2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC 3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions

PROC 4 Chemical production where opportunity for exposure arises

PROC 5 Mixing or blending in batch processes

PROC 8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC 8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC 14 Tableting, compression, extrusion, pelletisation, granulation

PROC 15 Use as laboratory reagent

PROC 11 Non industrial spraying

· **Environmental release category**

ERC2 Formulation into mixture

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

ERC8c Widespread use leading to inclusion into/onto article (indoor)

ERC6d Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)

(Contd. on page 2)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 2/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 1)

ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

· **Technical function** Dye

· **Application of the substance / the mixture**

- Used as a fine chemical intermediate.
- Manufacture of Michler's ketone .
- As reagent for methanol, methyl furfural, hydrogen peroxide, nitrate, alcohol, formaldehyde
- Catalytic hardener in certain fiberglass resins.
- Chemical int for vanillin, dyes;
- Activator for polyesters; solvent .
- Unsaturated polyester resin curing accelerator; extraction solvent (sulphur dioxide refining); acylation reagent.
- Production and use in dyes, intermediates, solvents, manufacture of vanillin, stabilizers (acid acceptor), and reagents

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Industrial Solvents And Chemicals Pvt. Ltd.,
101 Atlanta, 209 Nariman Point, Mumbai – 400 021.

OR Details:

Global Product Compliance (Europe) AB
Ideon Science Park, Scheelevägen 17, Beta 5
223 70 Lund, Sweden

· **Further information obtainable from:**

Mr.P.R.Rao/ Email: isclank@iscpl.com
Tel :0091-2646-239549 / 239553 / 239554
Fax:0091-2646-251173

· **1.4 Emergency telephone number:**

Contact details of European importer

Emergency telephone number:

Telephone number of EU importer:

Opening hours:

Other Comments (e.g. language(s) of the phone service): English

IN

(Contd. on page 3)

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 3/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 2)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
Acute Tox. 3 H331 Toxic if inhaled.



health hazard

Carc. 2 H351 Suspected of causing cancer.



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Eye Irrit. 2 H319 Causes serious eye irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS06 GHS08 GHS09

- **Signal word** Danger
- **Hazard statements**
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
P201 Obtain special instructions before use.

(Contd. on page 4)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 4/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 3)

- P280* *Wear protective gloves/protective clothing/eye protection/face protection.*
- P301+P310* *IF SWALLOWED: Immediately call a POISON CENTER/ doctor.*
- P321* *Specific treatment (see on this label).*
- P330* *Rinse mouth.*
- P305+P351+P338* *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
- P361+P364* *Take off immediately all contaminated clothing and wash it before reuse.*
- P403+P233* *Store in a well-ventilated place. Keep container tightly closed.*
- P405* *Store locked up.*
- P501* *Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **2.3 Other hazards**

The substance has no endocrine -disrupting properties according to Regulation (EU) 2017/2100

· **Results of PBT and vPvB assessment**

· **PBT:** *The substance is not PBT.*

· **vPvB:** *The substance is not vPvB.*

SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterisation: Substances**

· **CAS No. Description**

121-69-7 N,N-dimethylaniline

· **Identification number(s)**

· **EC number:** *204-493-5*

· **Index number:** *612-016-00-0*

· **Additional information:**

Chemical Formula : C8H11N

Molecular weight : 121.18 g/mol

% concentration : 99.7 %

Synonyms: Benzenamine, N,N-dimethyl-

· **SVHC** *The substance is not in the SVHC list.*

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

(Contd. on page 5)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 5/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

- **After inhalation:** (Contd. of page 4)
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- **After skin contact:**
*Get medical aid if irritation develops or persists.
Immediately wash with water and soap and rinse thoroughly.*
- **After eye contact:**
*Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids.
Get medical attention if irritation occurs.*
- **After swallowing:**
If swallowed, wash out mouth with water provided person is conscious. Call a physician.
- **Information for doctor:**
Carefully observe patients for the development of any systemic signs or symptoms and administer symptomatic treatment as necessary
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
*Skin exposure:
If available, best apply polyethylene glycol (e.g. Lutrol, PEG 400) and allow some minutes for it to take effect before rinsing with water.*

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO₂, dry chemical powder, foam or water spray.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
*Emits toxic fumes under fire conditions. Combustible liquid.
Explosion Hazards: Container explosion may occur under fire conditions. Hazardous decomposition products such as Nitrous gases (nitric oxides) may occur*
- **5.3 Advice for firefighters**
Specific method(s) of fire fighting: Cool surrounding containers with water spray. If possible, take container out of dangerous zone.
- **Protective equipment:**
Wear self contained breathing apparatus and protective clothing to prevent contact with skin.
- **Additional information**
Heating causes a rise in pressure, risk of bursting and explosion. Shut off sources of ignition.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.

(Contd. on page 6)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 6/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

Evacuate area. Warn affected surroundings

(Contd. of page 5)

· **6.2 Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Keep in suitable, closed containers for disposal.

Absorb any spilt liquid with an absorbent (e.g. diatomite, vermiculite, sand) and hold for waste disposal. Pump off larger quantities. Afterwards ventilate area and wash spill site.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Wear protective equipment as required.

Avoid splashing.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

· **Information about fire - and explosion protection:**

Keep away from sources of ignition, no smoking.

· **7.2 Conditions for safe storage, including any incompatibilities**

Store only in the original receptacle.

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Store in a cool, dry, well-ventilated area away from incompatible substances.

· **Information about storage in one common storage facility:**

Keep away from heat, sparks and flame.

· **Further information about storage conditions:** Keep container tightly sealed.

· **7.3 Specific end use(s)**

• Used as a fine chemical intermediate.

• Manufacture of Michler's ketone .

• As reagent for methanol, methyl furfural, hydrogen peroxide, nitrate, alcohol, formaldehyde

• Catalytic hardener in certain fiberglass resins.

• Chemical int for vanillin, dyes;

• Activator for polyesters; solvent .

• Unsaturated polyester resin curing accelerator; extraction solvent (sulphur dioxide refining); acylation reagent.

• Production and use in dyes, intermediates, solvents, manufacture of vanillin, stabilizers (acid acceptor), and reagents

IN

(Contd. on page 7)

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 7/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 6)

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:** Not required.

· **DNELs**

Data for WORKERS

INHALATION ExposureThresholdMost sensitive study

Systemic Effects

Long-term:(DNEL) 1.104 mg/m³repeated dose toxicity

Acute /short term:No hazard identified

Local Effects

Long-term:No hazard identified

Acute /short term:No hazard identified

DERMAL ExposureThresholdMost sensitive study

Systemic Effects

Long-term:(DNEL) 626 µg/kg bw/dayrepeated dose toxicity

Acute /short term:No hazard identified

Local Effects

Long-term:No hazard identified

Acute /short term:No hazard identified

EYE Exposure

Hazard unknown (no further information necessary)

Data for the GENERAL POPULATION

INHALATION ExposureThresholdMost sensitive study

Systemic Effects

Long-term:(DNEL) 272.174 µg/m³repeated dose toxicity

Acute /short term:No hazard identified

Local Effects

Long-term:No hazard identified

Acute /short term:No hazard identified

DERMAL ExposureThresholdMost sensitive study

Systemic Effects

Long-term:(DNEL) 313 µg/kg bw/dayrepeated dose toxicity

Acute /short term:No hazard identified

Local Effects

Long-term:No hazard identified

Acute /short term:No hazard identified

ORAL ExposureThresholdMost sensitive study

Systemic Effects

Long-term:(DNEL) 629.13 µg/kg bw/dayrepeated dose toxicity

Acute /short term:No hazard identified

EYE Exposure

Hazard unknown (no further information necessary)

(Contd. on page 8)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 8/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 7)

· **PNECs**

Hazard for Aquatic Organisms

*Freshwater*23 - 44 µg/L

*Intermittent releases (freshwater)*23 - 44 µg/L

*Marine water*2.3 - 4.4 µg/L

Intermittent releases (marine water)-

*Sewage treatment plant (STP)*5.948 mg/L

*Sediment (freshwater)*4.942 - 10.957 mg/kg sediment dw

*Sediment (marine water)*4.942 - 10.957 mg/kg sediment dw

Hazard for Air

*Air*No hazard identified

Hazard for Terrestrial Organism

*Soil*1.906 - 4.366 mg/kg soil dw

Hazard for Predators

*Secondary poisoning*No potential for bioaccumulation

· **Additional information:**

Washing facility at the workplace required. Eye bath required.

These locations must be signposted clearly.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:** *Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work.*

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In an emergency (e.g.: unintentional release of the substance, exceeding the occupational exposure limit value) respiratory protection must be worn. Consider the maximum period for wear.

Respiratory protection: Gas filter A, Colour code brown.

Use insulating device for concentrations above the usage limits for filter devices, for oxygen concentrations below 17% volume, or in circumstances which are unclear.

· **Protection of hands:**



Protective gloves

(Contd. on page 9)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 9/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 8)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Fluorocarbon rubber (Viton)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Following materials are unsuitable for protective gloves because of degradation, severe swelling or low permeation time:

Natural rubber/Natural latex - NR;

Polychloroprene - CR;

Nitrile rubber/Nitrile latex - NBR;

Butyl rubber - Butyl;

Polyvinyl chloride - PVC

· **Penetration time of glove material** Permeation time 8 hours

· **Eye protection:**



Tightly sealed goggles

Sufficient eye protection should be worn. Wear glasses with side protection

· **Body protection:**

Depending on the risk, wear a tight, long apron and boots or suitable chemical protection clothing.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Liquid

· **Form:**

Liquid

· **Colour:**

Colourless

· **Odour:**

Unpleasant

· **pH-value at 29 °C:**

6.46 (1% solution)

· **Change in condition**

· **Melting point/freezing point:**

1.5-2.5 °C

· **Initial boiling point and boiling range:**

185 °C (960 hPa)

· **Flash point:**

61 °C (at 960 hPa)

(Contd. on page 10)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 10/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 9)

· Flammability (solid, gas):	Product is not flammable.
· Ignition temperature:	370 °C
· Auto-ignition temperature:	371 °C
· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits:	
· Upper: Oxidising properties	Oxidizing
· Vapour pressure at 20 °C:	0.5 mm Hg
· Density at 35 °C:	0.926 g/cm ³
· Vapour density	4.17 (Air = 1)
· Solubility in / Miscibility with water at 20 °C:	1450 mg/l
· Partition coefficient: n-octanol/water at 35 °C:	1.171 log POW
· Viscosity: Dynamic at 35 °C:	11.00088 mPas
· 9.2 Other information	<p><i>Solubility in organic solvents / fat solubility:</i> <i>Gravimetric method was used to determine the solubility of the substance in organic solvent. The experimental value of solubility of N,N-dimethylaniline in methanol is found to be 1000000 mg/L at 35°C.</i> <i>Using the Soxhlet/Solvent extraction method, solubility of N,N-dimethylaniline in petroleum ether is found to be 1000000 mg/L at 35°C.</i> <i>Surface tension:</i> <i>The surface tension of N,N-dimethylaniline was found to be 35.52 mN/m at 25°C.</i> <i>Dissociation constant:</i> <i>The average experimental pKa value for N,N-dimethylaniline is found to be 0.000000000000142 at 30 °C indicating that it has very low dissociating properties.</i></p>

IN

(Contd. on page 11)

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 11/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 10)

SECTION 10: Stability and reactivity

· **10.1 Reactivity**

Not reactive under recommended conditions of handling, storage, processing and use.

· **10.2 Chemical stability** Stable under recommended storage conditions.

· **Thermal decomposition / conditions to be avoided:** Decomposition when heated.

· **10.3 Possibility of hazardous reactions**

The substance forms an explosive mixture with air on heating.

· **10.4 Conditions to avoid** Keep away from heat and open flame.

· **10.5 Incompatible materials:**

Oxidizing agents; Acids; Halogens; Acid halides; Anhydrides; Nitrites.

· **10.6 Hazardous decomposition products:**

Carbon monoxide, carbon dioxide, and nitrogen oxides.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity**

Toxic if swallowed, in contact with skin or if inhaled.

· **LD/LC50 values relevant for classification:**

All the values for the route study indicate that the substance N,N-dimethylaniline will qualify for the classification category of Acute tox 4, but since the substance have harmonised classification the same has not been considered for self classification of N,N-dimethylaniline and would like to go ahead with the harmonized classification.

· **Primary irritant effect:**

· **Skin corrosion/irritation**

rabbit (albino)

Coverage: open (clipped)

Vehicle: unchanged (no vehicle)

Five albino rabbits were given 0.1 mL of undiluted N,N-dimethylaniline and primary skin irritation to

uncovered clipped skin of rabbits was measured on a 10 grade ordinal series.

Overall irritation score: 3 of max. 10 (mean) (Time point: 24 hrs)

Result: not irritating

· **Serious eye damage/irritation**

Causes serious eye irritation.

Endpoint: eye irritation: in vivo

Type of information: experimental study

Guideline: OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Species: rabbit

Strain: New Zealand White

Conclusions: Under the experimental conditions tested, eye irritation and reversibility of effects on eyes of rabbits was observed within 7 days.

Hence, "N, N-dimethylaniline (CAS No. - 121-69-7) is "Mildly irritating to eyes" to New

(Contd. on page 12)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 12/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 11)

Zealand White Female rabbit eyes. Thus the substance "N, N-dimethylaniline (CAS No. - 121-69-7) is being classified as an eye irritant in 'category 2' as per CLP regulation.

· **Respiratory or skin sensitisation**

Test animal: mouse

Test type: Local lymph node assay

Stimulation index: EC3: 24.5 %

Result: Weak sensitising

· **Additional toxicological information:**

· **Toxicokinetics, metabolism and distribution**

Toxicokinetics:

Species/Strain: dog (Mongrel)

Route: intravenous

Exposure regime: 48 hrs

Doses/conc.: 40 mg N,N-dimethylaniline per kg body weight

Main ADME results:

Absorption: N,N-Dimethylaniline does not cause local skin irritation but is readily absorbed through the skin.

Metabolism: N-methyl aniline and all the ring-hydroxylated metabolites were detected in the urine within 48 hours, mostly in the form of the glucuronic or sulfuric acid conjugates. The major metabolites were 4-methylaminophenol and 2- aminophenol.

Metabolites identified: yes

Details on metabolites: Metabolism:

N-methyl aniline and all the ring-hydroxylated metabolites were detected in the urine within 48 hours, mostly in the form of the glucuronic or sulfuric acid conjugates. The major metabolites were 4-methylaminophenol and 2- aminophenol.

The major metabolites were 4-methylaminophenol and 2- aminophenol

Evaluation of results: bioaccumulation potential cannot be judged based on study results

· **Repeated dose toxicity**

Repeated dose toxicity (Oral):

Species/Strain/Sex: rat (Fischer 344) male/female

Test type: subchronic (oral: gavage)

Dose: 0, 31.25, 62.5, 125, 250 or 500 mg/kg/day (actual ingested)

Vehicle: corn oil

Exposure: 13 Weeks (Once daily, 5days per week)

Subchronic toxicity study of N,N-dimethylaniline in Fischer 344 rats to determine its toxic effects on

different target organs.

Result: LOAEL: 31.25 mg/kg bw/day (actual dose received)

Repeated dose toxicity (Inhalation):

Species/Strain/Sex: rat (Sprague-Dawley) male/female

Test type: chronic (inhalation: vapour) (whole body)

Vehicle: air

Exposure: 91 days (5 days/week for up to 13 weeks)

Result: study NOEL: 51.290027618 mg/kg bw/day (actual dose received)

(Contd. on page 13)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 13/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 12)

Repeated dose toxicity (Dermal):

In accordance with column 1 of Annex IX, this end point was considered for waiver since the details for acute toxicity by the dermal route have already been provided as part of the Annex VII requirements of the REACH regulation in section 7.2.3 of this dossier

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity**

Endpoint: in vitro gene mutation study in bacteria

Type of information: experimental study

Positive control substance: sodium azide

Positive control substance: other: 2-aminoanthracene

Conclusions:

Interpretation of results (migrated information):

negative

N,N-dimethylaniline gives negative result for genetic toxicity in Ames test conducted on to S. typhimurium TA 100 and TA1535 with and without metabolic activation by 10% HLI/RLI S9 system.

· **Carcinogenicity**

Suspected of causing cancer.

rat (Fischer 344) male/female

oral: gavage

0, 3, or 30 mg/kg/day

Exposure: 2 yrs. (5 day per week)

Result:

dose level: (carcinogenicity): 3 - 30 mg/kg bw/day (male)

based on: test mat. (There was some evidence of carcinogenicity for male rats as indicated by increased

incidence of sarcomas or osteosarcomas (combined) of the spleen)

NOAEL (carcinogenicity): 3 - 30 mg/kg bw/day (female)

based on: test mat. (There was no evidence of carcinogenicity in female rats)

· **Reproductive toxicity**

Toxicity for reproduction

rat (CD (Sprague-Dawley origin))

male/female

fertility

oral: gavage

100, 300 or 1000 mg/kg bw/day (nominal conc.)

Vehicle: maize oil

Exposure: Dosing was for 15 days before pairing. Treatment was continued throughout mating, gestation and lactation to Day 3 of lactation for females and to termination after approximately six weeks of treatment for males. (Daily)

Result:

LOAEL (P): 274.666656494 mg/kg bw/day (nominal) (male/female)

(Contd. on page 14)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 14/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 13)

Effects: kidney enlargement, histopath: basophilic cortical tubular changes; Liver enlargement (histopath equivocal))

Developmental toxicity

rat (CD-1)

oral: gavage

0, 50, 250 and 500 mg/kg/day (nominal in diet)

Vehicle: corn oil

Exposure: (daily)

Result:

LOAEL (maternal toxicity): 50 mg/kg bw/day

Effects: Weight gain, food consumption and uterine implantation.

LOAEL (teratogenicity): 500 mg/kg bw/day

Effects: Reduced fetal weight and retarded sternebral ossification.)

- **STOT-single exposure** No data available
- **STOT-repeated exposure** No data available
- **Aspiration hazard** No further information is available
- **11.2 Information on other hazards**
 - **11.2.1 Endocrine -disrupting properties:** The substance has no endocrine-disrupting properties according to Regulation (EU) 2017/2100.
 - **11.2.2 Information on other hazards :** No further information is available

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability**

Biodegradation in water:

Test type: ready biodegradability

% Degradation of test substance: 50 after 38 d (Half-life)

Biodegradation in water and sediment:

% Degradation of test substance at 25 °C:

50 after 37.5 d (Half-life in water)

50 after 337.5 d (half-life in sediment)

Biodegradation in soil:

% Degradation of test substance:

50 after 75 d (half-life in soil)

- **Other information:**

Hydrolysis:

Half-life (DT50):

t_{1/2} : 0.634 h at 25 °C;

(OVERALL OH Rate Constant = 202.5296E-12 (0.0000000002025296) cm³/molecule-sec) ;

(Contd. on page 15)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 15/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

Type: estimation

(Contd. of page 14)

· **12.3 Bioaccumulative potential**

Species/Strain: *Cyprinus carpio*

aqueous (freshwater)

flow-through

Total uptake duration: 42 d

Bioaccumulation test of a chemical substance in fish or shellfish

Result:

BCF: 10.1 L/kg (whole body w.w.)

BCF: 13.6 L/kg (whole body w.w.)

· **12.4 Mobility in soil**

Adsorption:

Study type: adsorption (soil)

MCI method

Adsorption coefficient: Koc: 78.67 at 25 °C

· **Ecotoxicological effects:**

· **Remark:** Toxic for fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** The substance is not PBT.

· **vPvB:** The substance is not vPvB.

12.6 Endocrine-disrupting properties: The substance has no endocrine-disrupting properties according to Regulation (EU) 2017/2100.

12.7 Other adverse effects : No further relevant information available

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

(Contd. on page 16)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 16/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

- **Uncleaned packaging:**
- **Recommendation:** Do not re-use empty containers.

(Contd. of page 15)

SECTION 14: Transport information

· **14.1 UN-Number**
 · **ADR, IMDG, IATA** UN2253

· **14.2 UN proper shipping name**
 · **ADR** 2 2 5 3 N, N-DIMETHYLANILINE, ENVIRONMENTALLY HAZARDOUS
 · **IMDG** N, N-DIMETHYLANILINE, MARINE POLLUTANT
 · **IATA** N, N-DIMETHYLANILINE

· **14.3 Transport hazard class(es)**
 · **ADR, IMDG**



· **Class** 6.1 Toxic substances.
 · **Label** 6.1

· **IATA**



· **Class** 6.1 Toxic substances.
 · **Label** 6.1

· **14.4 Packing group**
 · **ADR, IMDG, IATA** II

· **14.5 Environmental hazards:** Environmentally hazardous substance, liquid;
 Marine Pollutant
 · **Marine pollutant:** Yes
 Symbol (fish and tree)
 · **Special marking (ADR):** Symbol (fish and tree)

· **14.6 Special precautions for user** Warning: Toxic substances.
 · **Hazard identification number (Kemler code):** 60

(Contd. on page 17)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 17/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 16)

· EMS Number:	F-A,S-A
· Stowage Category	A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	100 ml
· Excepted quantities (EQ)	Code: E4 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	100 ml
· Excepted quantities (EQ)	Code: E4 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 2253 N,N-DIMETHYLANILINE, 6.1, II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS06 GHS08 GHS09

- **Signal word** Danger
- **Hazard statements**
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.

(Contd. on page 18)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 18/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

(Contd. of page 17)

- H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
- P201 Obtain special instructions before use.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P321 Specific treatment (see on this label).
P330 Rinse mouth.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category**
H2 ACUTE TOXIC
E2 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **Other regulations, limitations and prohibitive regulations**
International inventories :
New Zealand - Inventory of Chemicals (NZIoC)-listed
Australian Inventory of Industrial Chemicals (AIIC)-listed
Mexico - National Inventory of Chemical Substances-listed
Philippine Inventory of Chemicals and Chemical Substances (PICCS)-listed
Taiwan Chemical Substance Inventory (TCSI)-listed
- **Substances of very high concern (SVHC) according to REACH, Article 57**
The substance is not listed as SVHC.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Product safety department.

(Contd. on page 19)

IN

Safety data sheet
COMMISSION REGULATION (EU) 2020/878 of 18 June
2020 amending Annex II to Regulation (EC) No
1907/2006

Page 19/19

Printing date 28.11.2022

Version number 1

Revision: 28.11.2022

Trade name: N,N-dimethylaniline

· **Contact:**

Ravi Acharya

Tel: +91-22-22841180/1178

(Contd. of page 18)

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Carc. 2: Carcinogenicity – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· **Sources**

REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on classification, labelling and packaging of substances and mixtures, amending and repealing COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No. 1907/2006

· ECHA Dessimination dossier: <https://echa.europa.eu/registration-dossier/-/registered-dossier/5396/1>

· Toxplanet: <https://chemical-search.toxplanet.com/#/product-search/chem-id/ei-fts-search/21603def-66f9-468b-85b3-6934f6d5e3d8>

· * **Data compared to the previous version altered.**

- Section 1: Identification of the substance /preparation & of the company/ undertaking.
- Section 3: Composition /Information on Ingredients
- Section 4: First-aid measures.
- Section 5: Fire-fighting measures
- Section 6: Accidental Release measures
- Section 7: Handling and storage.
- Section 8: Exposure Controls/Personal protection.
- Section 9: Physical and Chemical properties.
- Section 10: Stability and Reactivity.
- Section 11: Toxicological Information.
- Section 12: Ecological Information.