SAFETY DATA SHEET
1-DIMETHYLAMINOPROPAN -2-OL

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

1.1. Product identifier

Product name	1-DIMETHYLAMINOPROPAN -2-OL
Product number	539
Synonyms; trade names	N,N-DIMETHYLISOPROPANOLAMINE
REACH registration number	01-2119977067-27-XXXX
CAS number	108-16-7
EU index number	603-077-00-4
EC number	203-556-4

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

Identified uses	Chemical Intermediate

1.3. Details of the supplier of the safety data sheet

Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 sds@univar.com +44 1274 267306

1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	539

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC/1272/2008)

Physical hazards	Flam. Liq. 3 - H226
Health hazards	Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 3 - H331 Skin Corr. 1B - H314 Eye Dam. 1 - H318
Environmental hazards	Not Classified
Classification (67/548/EEC or 1999/45/EC)	R10 C;R34 Xn;R22

2.2. Label elements

EC number	203-556-4

1-DIMETHYLAMINOPROPAN -2-OL

Pictogram

Signal word	Danger
Hazard statements	H226 Flammable liquid and vapour. H302+H312 Harmful if swallowed or in contact with skin. H314 Causes severe skin burns and eye damage. H331 Toxic if inhaled.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing vapour/ spray. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria. Solvent vapours may form explosive mixtures with air.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	1-DIMETHYLAMINOPROPAN -2-OL
REACH registration number	01-2119977067-27-XXXX
EU index number	603-077-00-4
CAS number	108-16-7
EC number	203-556-4

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Get medical attention immediately. Inhale Corticosteroid dose aerosol
Ingestion	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention immediately.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

4.2. Most important symptoms and effects, both acute and delayed

Ingestion	May cause stomach pain or vomiting.
Skin contact	Reddened skin if chemical is not removed by washing. Later, white and wrinkled skin without pain, often with delayed skin burns.

1-DIMETHYLAMINOPROPAN -2-OL

Eye contact Causes burns. May cause permanent damage if eye is not immediately irrigated.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

5.2. Special hazards arising from the substance or mixture

Specific hazards The product is flammable. Solvent vapours may form explosive mixtures with air.

Hazardous combustion products Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Nitrous gases (NOx).

5.3. Advice for firefighters

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage. Avoid inhalation of spray mist and contact with skin and eyes. Provide adequate ventilation. Wear self-contained breathing apparatus.

6.2. Environmental precautions

Environmental precautions Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Keep away from heat, sparks and open flame. Avoid inhalation of vapours/spray and contact with skin and eyes. Provide adequate ventilation. Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a well-ventilated place. Keep away from heat, sparks and open flame. Store away from the following materials: Acids.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

1-DIMETHYLAMINOPROPAN -2-OL

8.1. Control parameters

Ingredient comments No exposure limits known for ingredient(s).

DNEL Industry - Inhalation; Long term systemic effects: 3.41 mg/m³
Consumer - Inhalation; Long term systemic effects: 0.84 mg/m³
Consumer - Oral; Long term systemic effects: 0.48 mg/kg/day

PNEC
- Fresh water; 0.0774 mg/l
- Marine water; 0.00774 mg/l
- Intermittent release; 0.774 mg/l
- STP; 10 mg/l
- Sediment (Freshwater); 0.728 mg/kg
- Sediment (Marinewater); 0.0728 mg/kg
- Soil; 0.0998 mg/kg

8.2. Exposure controls

Protective equipment

Eye/face protection The following protection should be worn: Chemical splash goggles. EN 166

Hand protection Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Polyvinylchloride, Nitrile rubber, Neoprene, Butyl rubber (>0,7mm), Fluoroelastomer (>0,7mm). Breakthrough time for gloves >480 min. EN 374

Other skin and body protection Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection If ventilation is inadequate, suitable respiratory protection must be worn. Respirator with ABEK filter EN 136/140/145/143/149

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Liquid.

Colour Colourless to pale yellow.

Odour Amine.

Odour threshold Data lacking.

pH pH (diluted solution): 12.1 0.1

Melting point -85°C

Initial boiling point and range 126°C @

Flash point 26°C

Evaporation rate Data lacking.

Evaporation factor No information available.

Flammability (solid, gas) No information available.

Upper/lower flammability or explosive limits Lower flammable/explosive limit: 2.7 Upper flammable/explosive limit: 11.1

1-DIMETHYLAMINOPROPAN -2-OL

Other flammability	No information available.
Vapour pressure	14.53 mbar @ °C
Vapour density	Data lacking.
Relative density	0.85 @ @ 20°C
Bulk density	No information available.
Solubility(ies)	Miscible with water.
Partition coefficient	: -0.12
Auto-ignition temperature	225°C
Decomposition Temperature	Data lacking.
Viscosity	4.9 mPa s @ 50°C
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No information available.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	Not determined.
Refractive index	No information available.
Particle size	No information available.
Molecular weight	103.16
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Exothermic reaction with acids

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not determined.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Strong acids. Acid Chlorides Strong oxidising agents.

10.6. Hazardous decomposition products

1-DIMETHYLAMINOPROPAN -2-OL

Hazardous decomposition products	Oxides of the following substances: Carbon. Nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	1,360.0
Species	Rat
ATE oral (mg/kg)	1,360.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	1,232.0
Species	Rat
ATE dermal (mg/kg)	1,232.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	3.0
Species	Rat
ATE inhalation (vapours mg/l)	3.0

Skin corrosion/irritation

Animal data	No information available.

Serious eye damage/irritation

Serious eye damage/irritation	Prolonged contact may cause burns.

Respiratory sensitisation

Respiratory sensitisation	No information available.

Skin sensitisation

Skin sensitisation	No information available.

Germ cell mutagenicity

Genotoxicity - in vitro	This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity	Data lacking.

Reproductive toxicity

Reproductive toxicity - fertility	Data lacking.

Specific target organ toxicity - single exposure

STOT - single exposure	Data lacking.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Data lacking.

Aspiration hazard

Aspiration hazard	No information available.

1-DIMETHYLAMINOPROPAN -2-OL

Inhalation	Toxic if inhaled.
Ingestion	Harmful if swallowed. May cause chemical burns in mouth, oesophagus and stomach.
Skin contact	Harmful in contact with skin. May cause serious chemical burns to the skin.
Eye contact	May cause chemical eye burns.

SECTION 12: Ecological Information

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment. The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

12.1. Toxicity

Toxicity	Not considered toxic to fish.
Acute toxicity - fish	LC50, 96 hours: 148.32 mg/l, Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 79 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: 77.4 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC20, 30 minutes: > 1000 mg/l, Activated sludge

12.2. Persistence and degradability

Persistence and degradability	The substance is readily biodegradable.
Biodegradation	- Degradation (%) 90 - 100: 28 days OECD 301A

12.3. Bioaccumulative potential

Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.
Partition coefficient	: -0.12

12.4. Mobility in soil

Mobility	The product is soluble in water.
Adsorption/desorption coefficient	- log Koc: 1.76 @ °C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste should be treated as controlled waste. Do not puncture or incinerate, even when empty.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

1-DIMETHYLAMINOPROPAN -2-OL

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	2927
UN No. (IMDG)	2927
UN No. (ICAO)	2927
UN No. (ADN)	2927

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (1-DIMETHYLAMINOPROPAN -2-OL)
Proper shipping name (IMDG)	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (1-DIMETHYLAMINOPROPAN -2-OL)
Proper shipping name (ICAO)	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (1-DIMETHYLAMINOPROPAN -2-OL)
Proper shipping name (ADN)	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (1-DIMETHYLAMINOPROPAN -2-OL)

14.3. Transport hazard class(es)

ADR/RID class	6.1
ADR/RID subsidiary risk	8
ADR/RID classification code	TC1
ADR/RID label	6.1
IMDG class	6.1
IMDG subsidiary risk	8
ICAO class/division	6.1
ICAO subsidiary risk	8
ADN class	6.1
ADN subsidiary risk	8

Transport labels

14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ADN packing group	II
ICAO packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-A, S-B

1-DIMETHYLAMINOPROPAN -2-OL

ADR transport category	2
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	68
Tunnel restriction code	(D/E)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information required.

SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.
This product may impact SEVESO storage regulations.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

SECTION 16: Other information

1-DIMETHYLAMINOPROPAN -2-OL

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
Kow: Octanol-water partition coefficient.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
vPvB: Very Persistent and Very Bioaccumulative.
IARC: International Agency for Research on Cancer.
MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
cATpE: Converted Acute Toxicity Point Estimate.
BCF: Bioconcentration Factor.
BOD: Biochemical Oxygen Demand.
EC_{50}: 50% of maximal Effective Concentration.
LOAEC: Lowest Observed Adverse Effect Concentration.
LOAEL: Lowest Observed Adverse Effect Level.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
NOEC: No Observed Effect Concentration.
LOEC: Lowest Observed Effect Concentration.
DMEL: Derived Minimal Effect Level.
EL50: Exposure Limit 50
hPa: Hectopascal
LL50: Lethal Loading fifty
OECD: Organisation for Economic Co-operation and Development
POW: Octanol-water partition coefficient
SCBA: self-contained breathing apparatus
STP: Sewage Treatment Plant
VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
Aquatic Acute = Hazardous to the aquatic environment (acute)
Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

20/06/2014

Revision

02

SDS number

539

Version number

1.000

SDS status

Approved.

1-DIMETHYLAMINOPROPAN -2-OL

Signature	Jitendra Panchal
Risk phrases in full	R10 Flammable. R22 Harmful if swallowed. R34 Causes burns.
Hazard statements in full	H226 Flammable liquid and vapour. H302 Harmful if swallowed. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H331 Toxic if inhaled.