SAFETY DATA SHEET
2,2'-(METHYLIMINO)DIETHANOL

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

1.1. Product identifier

Product name	2,2'-(METHYLIMINO)DIETHANOL
Product number	541
Synonyms; trade names	AMIETOL M12, METHYLDIETHANOLAMINE, N-METHYLDIETHANOLAMINE(MDEA), ADAPT 100, MDEA, METHYLDIETHANOLAMINE (MDEOA)
REACH registration number	01-2119488970-24-XXXX
CAS number	105-59-9
EU index number	603-079-00-5
EC number	203-312-7

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

Identified uses	Chemical Intermediate Chemical Process Additive For further information, see attached Exposure Scenario.

1.3. Details of the supplier of the safety data sheet

Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	541

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Eye Irrit. 2 - H319
Environmental hazards	Not Classified

2.2. Label elements

EC number	203-312-7

2,2'-(METHYLIMINO)DIETHANOL

Hazard pictograms

Signal word	Warning
Hazard statements	H319 Causes serious eye irritation.
Precautionary statements	P264 Wash contaminated skin thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/ attention.

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	2,2'-(METHYLIMINO)DIETHANOL
REACH registration number	01-2119488970-24-XXXX
EU index number	603-079-00-5
CAS number	105-59-9
EC number	203-312-7
Composition comments	The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
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 if any discomfort continues.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
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

Inhalation	Upper respiratory irritation.
Ingestion	Nausea, vomiting. Diarrhoea.
Skin contact	Vapours may irritate throat/respiratory system. Symptoms following overexposure may include the following: Coughing.
Eye contact	May cause severe eye irritation.

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

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

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

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Oxides of the following substances: Carbon. Nitrogen.

5.3. Advice for firefighters

Protective actions during firefighting Contain and collect extinguishing water. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.

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. Avoid contact with skin and eyes. Provide adequate ventilation.

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 Read and follow manufacturer's recommendations. Avoid inhalation of vapours/spray and contact with skin and eyes. Static electricity and formation of sparks must be prevented. Mechanical ventilation or local exhaust ventilation may be required.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a well-ventilated place.

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

8.1. Control parameters

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

DNEL Industry - Inhalation; Long term systemic effects: 26 mg/m³
Industry - Dermal; Long term systemic effects: 19 mg/m³

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PNEC

- Fresh water; 0.1 mg/l
- marine water; 0.0125 mg/l
- Sediment; 0.89 mg/l
- Soil; 0.119 mg/l
- STP; 10 mg/l
- Intermittent release; 1 mg/l
- Sediment (Marinewater); 0.111 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

The following protection should be worn: Chemical splash goggles or face shield.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. The selected gloves should have a breakthrough time of at least 8 hours. Nitrile rubber. glove thickness >0.4mm Polyvinyl chloride (PVC). glove thickness >0.7mm Chloroprene rubber. glove thickness >0.5mm EN 374

Other skin and body protection

Wear rubber apron. Wear rubber footwear.

Hygiene measures

Provide eyewash station and safety shower. Wash at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. Contaminated clothing should be placed in a closed container for disposal or decontamination. Eating, smoking and water fountains prohibited in immediate work area. Provide shower facilities near the workplace.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn.

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 No information available.

pH pH (diluted solution): 11.5 0.1

Melting point -21°C

Initial boiling point and range 243 - 248°C

Flash point 126 - 138°C

Evaporation rate No information available.

Evaporation factor No information available.

Flammability (solid, gas) No information available.

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Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 0.9 Upper flammable/explosive limit: 8.4
Other flammability	No information available.
Vapour pressure	0.026 mbar @ 40°C
Vapour density	4
Relative density	1.04 @ 20°C
Bulk density	No information available.
Solubility(ies)	Soluble in water.
Partition coefficient	log Kow: -1.08 OECD 107
Auto-ignition temperature	265 - 280°C
Decomposition Temperature	No information available.
Viscosity	34.78 mPa s @ 40°C
Explosive properties	No information available.
Explosive under the influence of a flame	No information available.
Oxidising properties	No information available.

9.2. Other information

Refractive index	No information available.
Particle size	No information available.
Molecular weight	119.16
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 Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Strong acids. Strong oxidising agents. Isocyanates.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	4,680.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 4680 mg/kg, Oral, Rat

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,990.0
Species	Rabbit
Notes (dermal LD_{50})	LD_{50} 5990 mg/kg, Dermal, Rabbit
ATE dermal (mg/kg)	5,990.0

Skin corrosion/irritation

Skin corrosion/irritation	Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation	Causes eye irritation.

Respiratory sensitisation

Respiratory sensitisation	Not sensitising.

Skin sensitisation

Skin sensitisation	Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	No information available.

Reproductive toxicity

Reproductive toxicity - fertility	No information available.

Specific target organ toxicity - single exposure

STOT - single exposure	No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	No information available.

Aspiration hazard

Aspiration hazard	No information available.

Inhalation	Irritating to respiratory system.
Ingestion	Gastrointestinal symptoms, including upset stomach.
Skin contact	Liquid may irritate skin.

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Eye contact Irritating to eyes.

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.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: 1466 mg/l, Leuciscus idus (Golden orfe)
LC_{50}, 96 hour: 1000 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: 233 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC_{50}, 72 hours: 176 mg/l, Scenedesmus subspicatus

12.2. Persistence and degradability

Persistence and degradability The product is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient log Kow: -1.08 OECD 107

12.4. Mobility in soil

Mobility The product is soluble in water.

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 When handling waste, the safety precautions applying to handling of the product should be considered. Do not puncture or incinerate, even when empty. Waste should be treated as controlled waste.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

No information required.

14.2. UN proper shipping name

No information required.

14.3. Transport hazard class(es)

2,2'-(METHYLIMINO)DIETHANOL

No information required.

14.4. Packing group

No information required.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

No information required.

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) No 2015/830 of 28 May 2015.
Inventory Information	EINECS

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

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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)

Key literature references and sources for data

Supplier's information.

Revision comments

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

Revision date

07/08/2018

Version number

3.000

Supersedes date

23/02/2017

SDS number

541

2,2'-(METHYLIMINO)DIETHANOL

SDS status	Approved.
Hazard statements in full	H319 Causes serious eye irritation.
Signature	Lisa Bland

Exposure scenario
Formulation & (re)packing of substances and mixtures

Identification

Product name	2,2'-(METHYLIMINO)DIETHANOL
REACH registration number	01-2119488970-24-XXXX
CAS number	105-59-9
EC number	203-312-7
EU index number	603-079-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Formulation & (re)packing of substances and mixtures
Main sector	SU3 Industrial uses
Sector of use	SU10 Formulation [mixing] of preparations and/or re-packaging

Environment

Environmental release category	ERC2 Formulation into mixture

Worker

Process category	PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Not regarded as dangerous for the environment. As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

2. Conditions of use affecting exposure (Workers - Health 1)

Formulation & (re)packing of substances and mixtures

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities Provide extract ventilation to points where emissions occur. Local exhaust ventilation - efficiency of at least [%]: 90

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Use suitable eye protection.
Wear chemically-resistant gloves (tested to EN374) in combination with ‘basic’ employee training.
Efficiency of at least 90%

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker; modified version ECETOC TRA modified version: use of gloves has been considered additionally.

Formulation & (re)packing of substances and mixtures

Exposure

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - dermal, long-term - systemic: Exposure 0 mg/m³, DNEL 19 mg/m³, RCR 0
Worker - inhalation: Exposure 14.9 mg/m³, DNEL 26 mg/m³, RCR 0.57
PROC5 Mixing or blending in batch processes
Worker - dermal, long-term - systemic: Exposure 0.7 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.04
Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - dermal, long-term - systemic: Exposure 1.4 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.07
Worker - inhalation: Exposure 5 mg/m³, DNEL 26 mg/m³, RCR 0.19
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - dermal, long-term - systemic: Exposure 0.7 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.04
Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
Worker - dermal, long-term - systemic: Exposure 0.7 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.04
Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95

4. Guidance to check compliance with the exposure scenario (Health 1)

For scaling see http://www.ecetoc.org/tra

Exposure scenario
Use as an intermediate

Identification

Product name	2,2'-(METHYLIMINO)DIETHANOL
REACH registration number	01-2119488970-24-XXXX
CAS number	105-59-9
EC number	203-312-7
EU index number	603-079-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use as an intermediate
Product category	PC19 Intermediate.
Main sector	SU3 Industrial uses
Sector of use	SU9 Manufacture of fine chemicals

Environment

Environmental release category	ERC6a Use of intermediate

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

2. Conditions of use affecting exposure (Industrial - Environment 1)

Use as an intermediate

Product characteristics

Not regarded as dangerous for the environment. As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities Provide extract ventilation to points where emissions occur. Local exhaust ventilation - efficiency of at least [%]: 90

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Use suitable eye protection.
Wear chemically-resistant gloves (tested to EN374) in combination with ‘basic’ employee training.
Efficiency of at least 90%

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker; modified version ECETOC TRA modified version: use of gloves has been considered additionally.

Use as an intermediate

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 0 mg/m³, DNEL 26 mg/m³, RCR 0
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 5.0 mg/m³, DNEL 26 mg/m³, RCR 0.19
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 14.9 mg/m³, DNEL 26 mg/m³, RCR 0.57
PROC4 Chemical production where opportunity for exposure arises
Worker - dermal, long-term - systemic: Exposure 0.7 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - dermal, long-term - systemic: Exposure 1.4 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.07
Worker - inhalation: Exposure 5 mg/m³, DNEL 26 mg/m³, RCR 0.19
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - dermal, long-term - systemic: Exposure 0.7 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.04
Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
Worker - dermal, long-term - systemic: Exposure 0.7 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.04
Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95

4. Guidance to check compliance with the exposure scenario (Health 1)

For scaling see http://www.ecetoc.org/tra

Exposure scenario
Use as laboratory reagent/agent

Identification

Product name	2,2'-(METHYLIMINO)DIETHANOL
REACH registration number	01-2119488970-24-XXXX
CAS number	105-59-9
EC number	203-312-7
EU index number	603-079-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use as laboratory reagent/agent
Product category	PC21 Laboratory chemicals.
Main sector	SU3 Industrial uses SU22 Professional uses

Environment

Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC6a Use of intermediate

Worker

Process category	PROC15 Use as laboratory reagent.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Not regarded as dangerous for the environment. As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

Use as laboratory reagent/agent

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures No specific risk management measure identified beyond those operational conditions stated.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Use suitable eye protection.
Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.
Efficiency of at least 90%

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker; modified version ECETOC TRA modified version: use of gloves has been considered additionally.

Exposure Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 0 mg/m³, DNEL 26 mg/m³, RCR 0

4. Guidance to check compliance with the exposure scenario (Health 1)

For scaling see http://www.ecetoc.org/tra

Exposure scenario
Use in gas treatment

Identification

Product name	2,2'-(METHYLIMINO)DIETHANOL
REACH registration number	01-2119488970-24-XXXX
CAS number	105-59-9
EC number	203-312-7
EU index number	603-079-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use in gas treatment
Product category	PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
Main sector	SU3 Industrial uses
Sector of use	SU8 Manufacture of bulk, large-scale chemicals (including petroleum products)

Environment

Environmental release category	ERC7 Use of functional fluid at industrial site

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Not regarded as dangerous for the environment. As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

2. Conditions of use affecting exposure (Workers - Health 1)

Use in gas treatment

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Provide extract ventilation to points where emissions occur. Local exhaust ventilation - efficiency of at least [%]: 90

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Use suitable eye protection.
Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.
Efficiency of at least 90%

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker; modified version ECETOC TRA modified version: use of gloves has been considered additionally.

Exposure PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 0 mg/m³, DNEL 26 mg/m³, RCR 0
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 5.0 mg/m³, DNEL 26 mg/m³, RCR 0.19
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 14.9 mg/m³, DNEL 26 mg/m³, RCR 0.57
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - dermal, long-term - systemic: Exposure 0.7 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.04
Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95

4. Guidance to check compliance with the exposure scenario (Health 1)

For scaling see http://www.ecetoc.org/tra

Exposure scenario
Use in Lubricants, Use in Metal working fluids / rolling oils, Use in Hydraulic fluids

Identification

Product name	2,2'-(METHYLIMINO)DIETHANOL
REACH registration number	01-2119488970-24-XXXX
CAS number	105-59-9
EC number	203-312-7
EU index number	603-079-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use in Lubricants, Use in Metal working fluids / rolling oils, Use in Hydraulic fluids
Product category	PC24 Lubricants, greases and release products. PC25 Metal working fluids.
Main sector	SU3 Industrial uses SU22 Professional uses

Environment

Environmental release category	ERC4 Use of non-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)

Worker

Process category	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC17 Lubrication at high energy conditions in metal working operations PROC18 General greasing/lubrication at high kinetic energy conditions

Use in Lubricants, Use in Metal working fluids / rolling oils, Use in Hydraulic fluids

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Not regarded as dangerous for the environment. As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 10 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures No specific risk management measure identified beyond those operational conditions stated.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Use suitable eye protection.
Wear chemically-resistant gloves (tested to EN374) in combination with ‘basic’ employee training.
Efficiency of at least 90%

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker; modified version ECETOC TRA modified version: use of gloves has been considered additionally. ECETOC TRA modified version: the concentration of the substance has been considered using a linear approach.

Use in Lubricants, Use in Metal working fluids / rolling oils, Use in Hydraulic fluids

Exposure	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0 SU3 Industrial uses PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Worker - inhalation: Exposure 0.5 mg/m³, DNEL 26 mg/m³, RCR 0.02 SU22 Professional uses PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Worker - inhalation: Exposure 2.5 mg/m³, DNEL 26 mg/m³, RCR 0.1 PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0 Worker - inhalation: Exposure 1.5 mg/m³, DNEL 26 mg/m³, RCR 0.06 PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Worker - dermal, long-term - systemic: Exposure 1.4 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.07 Worker - inhalation: Exposure 5 mg/m³, DNEL 26 mg/m³, RCR 0.19 PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0 Worker - inhalation: Exposure 2.5 mg/m³, DNEL 26 mg/m³, RCR 0.1 PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0 Worker - inhalation: Exposure 2.5 mg/m³, DNEL 26 mg/m³, RCR 0.1 PROC17 Lubrication at high energy conditions in metal working operations Worker - dermal, long-term - systemic: Exposure 0.3 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.01 Worker - inhalation: Exposure 10 mg/m³, DNEL 26 mg/m³, RCR 0.38 PROC18 General greasing/lubrication at high kinetic energy conditions Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0 Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95

4. Guidance to check compliance with the exposure scenario (Health 1)

For scaling see http://www.ecetoc.org/tra

Exposure scenario
Use as a catalyst in polymerisation - Industrial

Identification

Product name	2,2'-(METHYLIMINO)DIETHANOL
REACH registration number	01-2119488970-24-XXXX
CAS number	105-59-9
EC number	203-312-7
EU index number	603-079-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use as a catalyst in polymerisation - Industrial
Product category	PC32 Polymer preparations and compounds.
Main sector	SU3 Industrial uses

Environment

Environmental release category	ERC3 Formulation into solid matrix ERC5 Use at industrial site leading to inclusion into/onto article

Worker

Process category	PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC14 Tabletting, compression, extrusion, pelletisation, granulation PROC21 Low energy manipulation and handling of substances bound in/on materials or articles PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Not regarded as dangerous for the environment. As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Use as a catalyst in polymerisation - Industrial

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid Unless otherwise stated. PROC21 Low energy manipulation and handling of substances bound in/on materials or articles PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles Solid, high dustiness

Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities Provide extract ventilation to points where emissions occur. Local exhaust ventilation - efficiency of at least [%]: 90

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Use suitable eye protection.
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC10 Roller application or brushing
PROC14 Tabletting, compression, extrusion, pelletisation, granulation
PROC21 Low energy manipulation and handling of substances bound in/on materials or articles
Wear chemically-resistant gloves (tested to EN374) in combination with ‘basic’ employee training.
Efficiency of at least 90%
PROC7 Industrial spraying
Wear chemically-resistant gloves (tested to EN374) in combination with intensive management supervision controls.
Efficiency of at least 98%
Wear suitable coveralls to prevent exposure to the skin.

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker; modified version ECETOC TRA modified version: use of gloves has been considered additionally. ECETOC TRA modified version: reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.

Use as a catalyst in polymerisation - Industrial

Exposure

PROC7 Industrial spraying
Worker - dermal, long-term - systemic: Exposure 0.9 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.05
Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - dermal, long-term - systemic: Exposure 1.4 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.07
Worker - inhalation: Exposure 5 mg/m³, DNEL 26 mg/m³, RCR 0.19
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - dermal, long-term - systemic: Exposure 0.7 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.04
Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95
PROC10 Roller application or brushing
Worker - dermal, long-term - systemic: Exposure 1.4 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.07
Worker - inhalation: Exposure 5.0 mg/m³, DNEL 26 mg/m³, RCR 0.19
PROC14 Tabletting, compression, extrusion, pelletisation, granulation
Worker - dermal, long-term - systemic: Exposure 3 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.02
Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95
PROC21 Low energy manipulation and handling of substances bound in/on materials or articles
PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles
Worker - dermal, long-term - systemic: Exposure 0.3 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.02
Worker - inhalation: Exposure 10.0 mg/m³, DNEL 26 mg/m³, RCR 0.38

4. Guidance to check compliance with the exposure scenario (Health 1)

For scaling see http://www.ecetoc.org/tra

Exposure scenario
Use as a catalyst in polymerisation - Professional

Identification

Product name	2,2'-(METHYLIMINO)DIETHANOL
REACH registration number	01-2119488970-24-XXXX
CAS number	105-59-9
EC number	203-312-7
EU index number	603-079-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use as a catalyst in polymerisation - Professional
Product category	PC32 Polymer preparations and compounds.
Main sector	SU22 Professional uses
Sector of use	SU12 Manufacture of plastics products, including compounding and conversion SU19 Building and construction work

Environment

Environmental release category	ERC8c Widespread use leading to inclusion into/onto article (indoor) ERC8f Widespread use leading to inclusion into/onto article (outdoor)

Worker

Process category	PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC14 Tabletting, compression, extrusion, pelletisation, granulation

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Not regarded as dangerous for the environment. As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Use as a catalyst in polymerisation - Professional

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 5 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Limit the substance content in the product to 5%.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

PROC11 Non industrial spraying
Wear chemically-resistant gloves (tested to EN374) in combination with ‘basic’ employee training.
Efficiency of at least 90%

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker; modified version ECETOC TRA modified version: the concentration of the substance has been considered using a linear approach.

Use as a catalyst in polymerisation - Professional

Exposure

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - dermal, long-term - systemic: Exposure 0.7 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.04
Worker - inhalation: Exposure 6.2 mg/m³, DNEL 26 mg/m³, RCR 0.24
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - dermal, long-term - systemic: Exposure 0.3 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.02
Worker - inhalation: Exposure 2.5 mg/m³, DNEL 26 mg/m³, RCR 0.1
PROC10 Roller application or brushing
Worker - dermal, long-term - systemic: Exposure 1.4 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.07
Worker - inhalation: Exposure 6.2 mg/m³, DNEL 26 mg/m³, RCR 0.24
PROC11 Non industrial spraying
Worker - dermal, long-term - systemic: Exposure 0.5 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.03
Worker - inhalation: Exposure 24.8 mg/m³, DNEL 26 mg/m³, RCR 0.95
PROC13 Treatment of articles by dipping and pouring.
Worker - dermal, long-term - systemic: Exposure 0.7 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.04
Worker - inhalation: Exposure 2.5 mg/m³, DNEL 26 mg/m³, RCR 0.1
PROC14 Tabletting, compression, extrusion, pelletisation, granulation
Worker - dermal, long-term - systemic: Exposure 0.2 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.01
Worker - inhalation: Exposure 2.5 mg/m³, DNEL 26 mg/m³, RCR 0.1

4. Guidance to check compliance with the exposure scenario (Health 1)

For scaling see http://www.ecetoc.org/tra

Exposure scenario
Use in coatings - Industrial

Identification

Product name	2,2'-(METHYLIMINO)DIETHANOL
REACH registration number	01-2119488970-24-XXXX
CAS number	105-59-9
EC number	203-312-7
EU index number	603-079-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use in coatings - Industrial
Product category	PC9a Coatings and paints, thinners, paint removers.
Main sector	SU3 Industrial uses

Environment

Environmental release category	ERC5 Use at industrial site leading to inclusion into/onto article

Worker

Process category	PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Not regarded as dangerous for the environment. As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

2. Conditions of use affecting exposure (Workers - Health 1)

Use in coatings - Industrial

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 10 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Limit the substance in product to 10%. PROC7 Industrial spraying Provide extract ventilation to points where emissions occur. Local exhaust ventilation - efficiency of at least [%]: 95

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Use suitable eye protection.
Efficiency of at least 90%
Wear chemically-resistant gloves (tested to EN374) in combination with ‘basic’ employee training.
PROC7 Industrial spraying
Wear suitable coveralls to prevent exposure to the skin.

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker; modified version ECETOC TRA modified version: use of gloves has been considered additionally. ECETOC TRA modified version: the concentration of the substance has been considered using a linear approach. ECETOC TRA modified version: reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.

Use in coatings - Industrial

Exposure	PROC7 Industrial spraying Worker - dermal, long-term - systemic: Exposure 1.4 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.07 Worker - inhalation: Exposure 5.0 mg/m³, DNEL 26 mg/m³, RCR 0.19 PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0 Worker - inhalation: Exposure 5 mg/m³, DNEL 26 mg/m³, RCR 0.19 PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0 Worker - inhalation: Exposure 2.5 mg/m³, DNEL 26 mg/m³, RCR 0.1 PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.02 Worker - inhalation: Exposure 2.5 mg/m³, DNEL 26 mg/m³, RCR 0.1 PROC10 Roller application or brushing Worker - dermal, long-term - systemic: Exposure 0.3 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.01 Worker - inhalation: Exposure 5.0 mg/m³, DNEL 26 mg/m³, RCR 0.19 PROC13 Treatment of articles by dipping and pouring. Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0 Worker - inhalation: Exposure 0 mg/m³, DNEL 26 mg/m³, RCR 0

4. Guidance to check compliance with the exposure scenario (Health 1)

For scaling see http://www.ecetoc.org/tra

Exposure scenario
Use in coatings - Professional

Identification

Product name	2,2'-(METHYLIMINO)DIETHANOL
REACH registration number	01-2119488970-24-XXXX
CAS number	105-59-9
EC number	203-312-7
EU index number	603-079-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use in coatings - Professional
Product category	PC9a Coatings and paints, thinners, paint removers.
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8c Widespread use leading to inclusion into/onto article (indoor) ERC8f Widespread use leading to inclusion into/onto article (outdoor)

Worker

Process category	PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Not regarded as dangerous for the environment. As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid

Use in coatings - Professional

Concentration details Covers concentrations up to 10 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Limit the substance in product to 10%. PROC11 Non industrial spraying Provide extract ventilation to points where emissions occur. Local exhaust ventilation - efficiency of at least [%]: 80

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.
Efficiency of at least 90%
Use suitable eye protection.

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker; modified version ECETOC TRA modified version: the concentration of the substance has been considered using a linear approach.

Exposure PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 12.4 mg/m³, DNEL 26 mg/m³, RCR 0.48
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 5.0 mg/m³, DNEL 26 mg/m³, RCR 0.19
PROC10 Roller application or brushing
Worker - dermal, long-term - systemic: Exposure 0.3 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.01
Worker - inhalation: Exposure 12.4 mg/m³, DNEL 26 mg/m³, RCR 0.48
PROC11 Non industrial spraying
Worker - dermal, long-term - systemic: Exposure 1.1 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.06
Worker - inhalation: Exposure 10.0 mg/m³, DNEL 26 mg/m³, RCR 0.38
PROC13 Treatment of articles by dipping and pouring.
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 5.0 mg/m³, DNEL 26 mg/m³, RCR 0.19

4. Guidance to check compliance with the exposure scenario (Health 1)

For scaling see http://www.ecetoc.org/tra

Exposure scenario
Use in concrete and cement

Identification

Product name	2,2'-(METHYLIMINO)DIETHANOL
REACH registration number	01-2119488970-24-XXXX
CAS number	105-59-9
EC number	203-312-7
EU index number	603-079-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use in concrete and cement
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8f Widespread use leading to inclusion into/onto article (outdoor)

Worker

Process category	PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC19 Manual activities involving hand contact PROC21 Low energy manipulation and handling of substances bound in/on materials or articles PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Not regarded as dangerous for the environment. As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

2. Conditions of use affecting exposure (Workers - Health 1)

Use in concrete and cement

Product characteristics

Physical state Liquid Unless otherwise stated. PROC21 Low energy manipulation and handling of substances bound in/on materials or articles PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles Solid, high dustiness

Concentration details Covers concentrations up to 10 %. Unless otherwise stated. PROC21 Low energy manipulation and handling of substances bound in/on materials or articles PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. Limit the substance in product to 10%.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Wear chemically-resistant gloves (tested to EN374) in combination with ‘basic’ employee training.
Efficiency of at least 90%

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker; modified version ECETOC TRA modified version: the concentration of the substance has been considered using a linear approach. ECETOC TRA modified version: use of gloves has been considered additionally.

Use in concrete and cement

Exposure

PROC5 Mixing or blending in batch processes
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 5.0 mg/m³, DNEL 26 mg/m³, RCR 0.19
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 12.4 mg/m³, DNEL 26 mg/m³, RCR 0.48
PROC10 Roller application or brushing
Worker - dermal, long-term - systemic: Exposure 0.3 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.01
Worker - inhalation: Exposure 12.4 mg/m³, DNEL 26 mg/m³, RCR 0.48
PROC13 Treatment of articles by dipping and pouring.
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 5.0 mg/m³, DNEL 26 mg/m³, RCR 0.19
PROC19 Manual activities involving hand contact
Worker - dermal, long-term - systemic: Exposure 1.4 mg/kg/day, DNEL 19 mg/kg/day, RCR 0.07
Worker - inhalation: Exposure 12.4 mg/m³, DNEL 26 mg/m³, RCR 0.48
PROC21 Low energy manipulation and handling of substances bound in/on materials or articles
PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles
Worker - dermal, long-term - systemic: Exposure 0 mg/kg/day, DNEL 19 mg/kg/day, RCR 0
Worker - inhalation: Exposure 2.0 mg/m³, DNEL 26 mg/m³, RCR 0.08

4. Guidance to check compliance with the exposure scenario (Health 1)

For scaling see http://www.ecetoc.org/tra