

SAFETY DATA SHEET

Evercat DMCHA

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

1.1. Product identifier

Product form : Substance
Substance name : Evercat DMCHA
Chemical name : Cyclohexyldimethylamine
EC-No. : 202-715-5
CAS-No. : 98-94-2
REACH registration No : 01-2119533030-60-0001
Synonyms : N,N-Dimethylaminocyclohexane

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

1.2.1. Relevant identified uses

Main use category : Industrial use
Use of the substance/mixture : Used especially as catalyser for polyurethane systems, for production of surface materials, fillers of biding agents, sealing agents, softeners (the overview of exposure scenarios is set out in Annex 1).

Title	Use descriptors
ES2, ES3, ES4, ES5, ES6, ES7	SU2a, SU3, SU10, SU12, SU17, SU18, SU19, SU21, SU22, PC1, PC9a, PC32, PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC14, PROC15, PROC21, ERC2, ERC3, ERC5, ERC8c, ERC8d, ERC8f, ERC10a, ERC11a

Full text of use descriptors: see section 16

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Everchem Specialty Chemicals
Rose Tree Corporate Center, Suite 302
1400 N. Providence Road
Media, PA 19063
Telephone: +1 484-234-5030

1.4. Emergency telephone number

Emergency number 24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 3	H226
Acute toxicity (oral), Category 3	H301
Acute toxicity (dermal), Category 3	H311
Acute toxicity (inhal.), Category 3	H331
Skin corrosion/irritation, Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled. Causes severe skin burns and eye damage. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H226 - Flammable liquid and vapour.
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.
H314 - Causes severe skin burns and eye damage.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

Other hazards not contributing to the classification

: The substance is not identified as persistent, bio-accumulative and toxic (PBT) or very persistent, very bio-accumulative (vPvB) under Annex XIII of Regulation 1907/2006/EC.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type

: Mono-constituent

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Cyclohexyldimethylamine	(CAS-No.) 98-94-2 (EC-No.) 202-715-5 (REACH-no) 01-2119533030-60-0001	> 99	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Chronic 2, H411

Comments

: Impurities: < 1 % w, CMR impurities < 0.1 % w.

Full text of H-statements: see section 16

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3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation

: Remove the affected person to fresh air, release clothing or change clothes if contaminated. If necessary flush oral or nasal cavity with water. Protect the affected person against cold and seek medical attention!.

First-aid measures after skin contact

: Remove contaminated clothing immediately; before washing or during washing, remove any rings, watches, bracelet that are in places of contact of the substance with skin. Rinse affected areas with stream of lukewarm water, if possible, for 10 to 30 minutes; do not use a brush, soap or neutralising agents! Cover burned areas of skin with a sterile dressing, do not use any ointments or other medical and pharmaceutical products. Cover the victim to protect him against cold. Call a physician!.

First-aid measures after eye contact

: Rinse eyes immediately and thoroughly under stream of water for 10 to 30 minutes in the direction from the inner to the outer ocular angle (to prevent running of water in the other, unaffected eye, mouth and nose). Never use any neutralising solutions! If the victim keeps his eyelid tightly closed, use reasonable degree of force to open it. If the victim wears contact lenses, remove them immediately. The victim must always consult an ophthalmologist!.

First-aid measures after ingestion

: **DO NOT INDUCE VOMITING** - higher risk of harm to digestive tract!!! Risk of perforation of oesophagus and stomach!
RINSE MOUTH IMMEDIATELY WITH WATER AND GIVE TO DRINK 2-5 dl of cold water to attenuate thermal effect of the caustic (due to almost immediate effect to mucous membranes, it is suitable to offer immediately tap water than loose time by looking for chilled liquid - each minute of delay causes irreversible harm to mucous membranes! Soda water or mineral waters are not recommended, as they may release gaseous carbon dioxide. It is not recommended to consume a lot of liquid, as it could induce vomiting and possible aspiration of the caustic in lungs). Do not force the victim to drink, especially if he/she feels pain in mouth or throat. In this case, make the victim rinse his/her mouth. **DO NOT ADMINISTER ACTIVATED CARBON!** (blackening will make examination of the mucous membranes of more difficult and activated charcoal has not positive effect in case of acids and lyes). Do not give anything to eat. Do not administer anything by mouth if the victim is unconscious or has convulsions. Get immediate medical attention!.

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

Symptoms/effects

: At low temperatures, due to low vapour pressure, irritation of eyes and mucous membranes is lighter. With higher temperatures, degree of irritation increases. Airways are irritated and there is a risk of oedema of larynxes and lungs that may develop belatedly only after 2 days. Therefore, medical attention is always necessary in case of inhalation! Contact with eyes may cause disorders of cornea with subsequent fogging, especially in case of penetration of the substance into eye. Contact with the liquid causes severe skin burns. The substance absorbs by skin. It has allergenic effects. Sometimes, it may cause disorders of kidneys.
Contact with the substance manifests itself by severe burning in the nose, rhinopharynx, eyes and skin, severe irritating cough, nausea, breathlessness or even by loss of consciousness.

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

Symptomatic treatment. In case of contact with eyes, immediately rinse the conjunctival sac. Quickly provide treatment by an ophthalmologist! In case of irritation of airways, let inhale each 10 minutes 5 doses from an aerosol dispenser with dexamethasone (Auxison dos. Aerosol) until problems disappear. Beware of lungs oedema that may be latent up to 2 days. Prophylactic treatment even without symptoms, each 10 minutes 5 doses of the aerosol, 3 in total, in case of minor symptoms, each 10 minutes 5 doses until symptoms disappear, at least one pack. Administer Hydrocortison or Prednisolon intravenously, 250 mg immediately, up to 1000 mg the first day, decrease the dose slowly the second and the third day. Strict rest in bed. Infection prophylaxis. Oxygen as needed, human albumin 20%. Codeine in case of irritating cough. Ingestion causes burns, therefore perform gastric lavage in case of ingestion. No emetics. It is more important to dilute contents of the stomach than to try to neutralise. Check function of kidneys and liver for several days in case of severe cases. In case of ingestion, risk of shock. **WARNING!** Savers and helping persons must wear complete protective clothing when giving first aid.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

: Large fire – foam for polar liquids
Small fire – dry powder, powder or snow fire extinguisher.

Unsuitable extinguishing media

: Not specified.

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5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid. In warm days and when heated up, the liquid may form caustic and explosive mixtures with air. The mixtures are heavier than air, they keep at ground and in case of ignition, fire may blaze to big distances. Possibility of release of carbon monoxide and nitrogen oxides.

5.3. Advice for firefighters

Firefighting instructions : Self-contained breathing apparatus, special protective clothing! (Hazchem-Code: 3W).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Protection of air ways, protection of non-protected body parts, protection of eyes. Measure concentration of Cyclohexyldimethylamine (hereinafter only DMCHA) in the environment, provide sufficient ventilation.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent contamination of soil and water, check concentration of DMCHA in the environment in the vicinity of accident.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Dispose in a safe manner in accordance with local/national regulations.

6.4. Reference to other sections

See Section 8 and 13 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Delivered in rail or truck tanks or in steel barrels or in IBC containers in Ex-version. Ventilation provided during emptying.

Handling temperature : The recommended maximum temperature during transport is 50 °C.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in easily ventilated rooms in original packages or in steel tanks, best with nitrogen. The highest allowable storing temperature is 30 °C. Do not store together with foodstuffs, strong oxidising agents and strong inorganic acids.

7.3. Specific end use(s)

Use only in industry under strictly controlled conditions or while observing conditions stated in the exposure scenario.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cyclohexyldimethylamine (98-94-2)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	35 mg/m ³
Long-term - local effects, inhalation	35 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0.002 mg/l
PNEC aqua (marine water)	0.0002 mg/l
PNEC aqua (intermittent, freshwater)	0.02 mg/l

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Cyclohexyldimethylamine (98-94-2)	
PNEC (Sediment)	
PNEC sediment (freshwater)	0.0211 mg/kg dwt
PNEC sediment (marine water)	0.00211 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.00305 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	20.6 mg/l

8.2. Exposure controls

Appropriate engineering controls:

When used in a closed circuit or with sufficient vapour exhaust, it is necessary to use standard personal protective equipment. When used in an open facility and insufficient vapour exhaust (DMCHA concentration > DNEL inhalation), it is necessary to use respiratory protection. Engineering controls: Ensure ventilation. Check measurement of DMCHA concentration in the working environment.

Materials for protective clothing:
Wear suitable protective clothing
Hand protection:
Protective gloves. EN 374
Eye protection:
Chemical goggles or safety glasses. EN 166
Respiratory protection:
protective mask or half mask with filter (EN 140) against organic vapours - type A/P2

Environmental exposure controls:

Use in a closed circuit, waste gases burnt in a fire crack or cleaned by adsorption (activated carbon), wastewater treated biologically.

Other information:

Do not eat, drink or smoke when using this product. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: Amine-like.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: < -77
Boiling point	: 162.3 °C (at 1013,25 hPa)
Flash point	: 41 °C (at 1013,25 hPa)
Auto-ignition temperature	: > 200 °C (at 1013,25 hPa)
Decomposition temperature	: No data available
Flammability (solid, gas)	: the product is liquid
Vapour pressure	: 3.17 hPa (21,5 °C)
Relative vapour density at 20 °C	: No data available
Relative density	: 0.85 (20 °C)
Solubility	: Water: 13.4 g/l (20 °C)
Partition coefficient n-octanol/water (Log Pow)	: 2.31 (at 25 °C and pH 7.5)
Viscosity, kinematic	: 1.49 mm²/s (20 °C)

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Viscosity, dynamic : No data available
Explosive properties : None.
It does not have oxidising properties : None.
Lower explosive limit (LEL) : 3.6 vol %
Upper explosive limit (UEL) : 19 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Possibility of reaction at temperatures higher than 30 °C.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reacts vigorously with strong oxidising agents and inorganic acids. Avoid contact with food.

10.4. Conditions to avoid

In case of heating up formation of irritating and explosive mixtures. Thermal decomposition with formation of nitrogen oxides and carbon monoxide occurs at higher temperatures. Ignition in contact with hot surfaces, sparks or open fire.

10.5. Incompatible materials

Reacts vigorously with strong oxidising agents and inorganic acids. Avoid contact with food.

10.6. Hazardous decomposition products

Combustion may produce toxic carbon monoxide and nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Toxic if swallowed or in contact with skin.
Acute toxicity (dermal) : Toxic in contact with skin or if inhaled.
Acute toxicity (inhalation) : Toxic if inhaled.

Cyclohexyldimethylamine (98-94-2)	
LD50 oral rat	272 – 289 mg/kg
LD50 dermal rat	380 mg/kg bodyweight
LC50 inhalation rat (mg/l)	1.7 – 5.5 mg/l /6 hours; 9 mg/l/1 hour

Skin corrosion/irritation : Causes severe skin burns.
Serious eye damage/irritation : Causes serious eye damage.
Respiratory or skin sensitisation : No sensitizing potential
Germ cell mutagenicity : No mutagenic effect
Carcinogenicity : following a sub-acute test, no subsequent tests performed
Reproductive toxicity : not toxic for reproduction
Additional information : NOAEL > 1500 ppm
STOT-single exposure : Based on available data, the classification criteria are not met.
STOT-repeated exposure : Based on available data, the classification criteria are not met.

Cyclohexyldimethylamine (98-94-2)	
NOAEC (inhalation, rat, vapour, 90 days)	0.104 mg/l air ; > 1500 ppm

Aspiration hazard : Based on available data, the classification criteria are not met.

Cyclohexyldimethylamine (98-94-2)	
Viscosity, kinematic	1.49 mm ² /s (20 °C)

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SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Based on available data, the classification criteria are not met.

Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

Cyclohexyldimethylamine (98-94-2)	
LC50 fish 1	31.58 mg/l (Leuciscus idus)
LC50 fish 2	28 mg/l (Oncorhynchus mykiss)
EC50 Daphnia 1	75 mg/l (Daphnia magna)
EC50 72h algae (1)	> 2 mg/l (Scenedesmus subspicatus, static test)
EC50 72h algae (2)	0.79 mg/l (Scenedesmus subspicatus)
NOErC chronic algae	(72 h) = 0.078 mg/l

12.2. Persistence and degradability

Biodegradation	Evaluation: The product is not a high bioaccumulation potential substance. Evaluation: Readily degradable in aqueous environment (in accordance with OECD criteria).
Persistence and degradability	Readily biodegradable.
Biodegradation	90 – 100 %

12.3. Bioaccumulative potential

BCF fish 1	< 50 (estimate based on log Pow)
Partition coefficient n-octanol/water (Log Pow)	2.31 (at 25 °C and pH 7.5)
Bioconcentration factor (BCF REACH)	50

12.4. Mobility in soil

Mobility in soil	May enter the environment from waste water. Stability: Soluble in water Adsorption: possible in soil, adsorption coefficient value: log Koc = 1.84 at 20 °C
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12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	The substance is not identified as persistent, bio-accumulative and toxic (PBT) or very persistent, very bio-accumulative (vPvB) under Annex XIII of Regulation 1907/2006/EC.
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12.6. Other adverse effects

Other adverse effects : Not specified.

WGK (Water-endangerment class) : 3

SECTION 13: Disposal considerations

13.1. Waste treatment methods






- Waste treatment methods : Incineration in a hazardous waste incineration plant in accordance with Act on Wastes under the catalogue numbers 160305, 160508 or 150202.
- Product/Packaging disposal recommendations : It is recommended to incinerate contaminated packaging listed under catalogue number 150110 according to the Waste Act in a hazardous waste incineration plant.
- European List of Waste (LoW) code : 16 03 05* - organic wastes containing dangerous substances
16 05 08* - discarded organic chemicals consisting of or containing dangerous substances
15 02 02* - absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances
15 01 10* - packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

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

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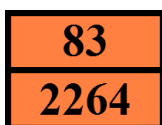
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ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 2264	UN 2264	UN 2264	UN 2264	UN 2264
14.2. UN proper shipping name				
N,N-DIMETHYLCYCLOHEXYLAMINE	N,N-DIMETHYLCYCLOHEXYLAMINE	N,N-Dimethylcyclohexylamine	N,N-DIMETHYLCYCLOHEXYLAMINE	N,N-DIMETHYLCYCLOHEXYLAMINE
Transport document description (ADR)				
UN 2264 N,N-DIMETHYLCYCLOHEXYLAMINE, 8 (3), II, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 2264 N,N-DIMETHYLCYCLOHEXYLAMINE, 8 (3), II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 2264 N,N-Dimethylcyclohexylamine, 8 (3), II, ENVIRONMENTALLY HAZARDOUS	UN 2264 N,N-DIMETHYLCYCLOHEXYLAMINE, 8 (3), II, ENVIRONMENTALLY HAZARDOUS	UN 2264 N,N-DIMETHYLCYCLOHEXYLAMINE, 8 (3), II, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
8 (3)	8 (3)	8 (3)	8 (3)	8 (3)
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : CF1
 Limited quantities (ADR) : 1I
 Excepted quantities (ADR) : E2
 Hazard identification number (Kemler No.) : 83
 Orange plates :



Tunnel restriction code (ADR) : D/E

Transport by sea

EmS-No. (Fire) : F-E
 EmS-No. (Spillage) : S-C
 Segregation (IMDG) : SG35
 Properties and observations (IMDG) : Colourless, flammable liquid. Flashpoint: 43°C c.c. Partially miscible with water. Causes burns to skin, eyes and mucous membranes.

Air transport

No data available

Inland waterway transport

Classification code (ADN) : CF1

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Rail transport

Classification code (RID) : CF1

Hazard identification number (RID) : 83

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Cyclohexyldimethylamine is not on the REACH Candidate List

Cyclohexyldimethylamine is not on the REACH Annex XIV List

Cyclohexyldimethylamine is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Cyclohexyldimethylamine is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

EU regulations concerning safety, health and environment/specific legislation concerning substances or mixtures, 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;
- 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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives;
- Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances.

15.1.2. National regulations

No data available.

15.2. Chemical safety assessment

Chemical safety assessment is part of the report on chemical safety of Cyclohexyldimethylamine -- The overview of risk management measures is provided in Annex 1.

Detailed information on exposure scenarios will be contained in Annex 2 available at the customer's request.

SECTION 16: Other information

Indication of changes:	
1.0 Preparation of the safety data sheet according to Regulation (EC) No 1907/2006 of the European Parliament and of the Council (30 November 2010)	
2.0 Additional information from the registration dossier (10 October 2011)	
3.0 Overall revision of all sections of the safety data sheet according to Regulation (EC) No 453/2010 of the European Parliament and of the Council (30 April 2012)	
4.0 Complementation of the overview of exposure scenarios, update of classification (use of a combination of H-phrases), update of the regulations valid in the Czech Republic, and revisions according to Regulation (EC) No 286/2011 of the European Parliament and of the Council (1 November 2012)	
5.0 Modification of Section 2 (deletion of classification under DSD) and other sections according to regulations 2015/830/EU (1 June 2015)	
6.0 Revision according to Commission Regulation (EU) no. 918/2016 (12 December 2016)	
6.1 Modification of Section 12 (WGK) (24 August 2018)	
7.0 Preparation of safety data sheet in new format (11.05.2020).	
Abbreviations and acronyms:	
CAS-No.	Chemical Abstract Service number
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

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DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Data sources : Registration dossier for Evercat DMCHA
Chemical safety report for Evercat DMCHA (PURAMCAT Consortium) of 10/2010.
Material safety data sheet – Evercat DMCHA, BC MCHZ, [version 6.1 from 08/2018](#).

Training advice : Provide SDS to employees. Follow general rules on handling chemical substances and/or mixtures.

Other information : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
[Prepared by: ENVIGATE Consulting s.r.o. | Rubeška 393/7, Prague 9 | www.envigate.com.](#)

Full text of H- and EUH-statements:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H411	Toxic to aquatic life with long lasting effects.
Full text of use descriptors	
ERC10a	Widespread use of articles with low release (outdoor)

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ERC11a	Widespread use of articles with low release (indoor)
ERC2	Formulation into mixture
ERC3	Formulation into solid matrix
ERC5	Use at industrial site leading to inclusion into/onto article
ERC8c	Widespread use leading to inclusion into/onto article (indoor)
ERC8d	Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
ERC8f	Widespread use leading to inclusion into/onto article (outdoor)
PC1	Adhesives, sealants
PC32	Polymer preparations and compounds
PC9a	Coatings and paints, thinners, paint removers
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC10	Roller application or brushing
PROC11	Non-industrial spraying
PROC13	Treatment of articles by dipping and pouring
PROC14	Tabletting, compression, extrusion, pelettisation, granulation
PROC15	Use as laboratory reagent
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC21	Low energy manipulation and handling of substances bound in/on materials or articles
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
PROC5	Mixing or blending in batch processes
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)
SU10	Formulation [mixing] of preparations and/or re-packaging
SU12	Manufacture of plastics products, including compounding and conversion
SU17	General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU18	Manufacture of furniture
SU19	Building and construction work
SU21	Consumer uses
SU22	Professional uses
SU2a	Mining (without offshore industries)
SU3	Industrial uses

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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Annex No. 1

OVERVIEW OF EXPOSURE SCENARIOS

Number of exposure scenario	Volume (t/r)	Production	Identified use			Stage of life cycle		Areas of application (SU)	Chemical products (PC)	Processes (PROC)	Release to the environment (ERC)	Items (AC)
			Formulation	End use	Consumers	Period of use (for items)	Stage of waste					
ES2 Formulation and (re)packing of substances and mixtures	N/A		X					SU3, 10, 22	PC1, 9a, 9a	PROC1, 3, 4, 5, 8a, 8b, 9, 15	ERC2	NR
ES3 Flexible foam	N/A			X				SU3, 12, 17, 18, 21	PC32	PROC1, 2, 3, 4, 5, 8a, 8b, 9, 14, 15, 21	ERC3, 5, 10a, 11a	Taric code 3909509090
ES4 Rigid foam	N/A			X				SU2a, 3, 12, 17, 19, 21, 22	PC32	PROC1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 11, 15, 21	ERC3, 5, 8c, 8f, 10a, 11a	Taric code 3909509090
ES5 Coatings	N/A			X				SU3, 21, 22	PC32	PROC1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 11, 13, 14, 15	ERC3, 5	Taric code 3909509090
ES6 Adhesive/sealant	N/A			X				SU3, 21, 22	PC32	PROC1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 11, 13, 14, 15	ERC3, 8c, 8f	Taric code 3909509090
ES7 Elastomers	N/A			X				SU3, 21, 22	PC32	PROC1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 14, 15	ERC8 c, 8d, 8f, 10a, 11a	Taric code 3909509090

N/A – not available (confidential information)

NR – not relevant

SUMMARY OF RISK MANAGEMENT MEASURES

Title	Manufacture or use of Cyclohexyldimethylamine (DMCHA)
Sector of Use	SU2a, SU3, SU9, SU10, SU12, SU17, SU18, SU19, SU21, SU22
Process Category	PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC14, PROC15, PROC21
Product Category	PC1, PC9a, PC9b, PC32
Article Category	n/a
Environmental release Category	ERC1, ERC2, ERC3, ERC5, ERC8c, ERC8d, ERC8f, ERC10a, ERC11a
Specific environmental release category	n/a

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Processes, tasks, activities covered	<p>Covers the manufacture and use of DMCHA in closed/open processes where exposure to DMCHA is contained, or where exposure (inhalation or dermal) to DMCHA may occur during sampling, maintenance or equipment breakage.</p> <p>Covers further processing (use) of DMCHA to form a number of different products such as polymer preparations and compounds during which <u>DMCHA predominantly contained</u> but there may be some exposure during sampling, maintenance and equipment breakage.</p> <p>Covers the same processing (use) of DMCHA in batch or other processes where, due to the nature of the process design opportunity for exposure to DMCHA may occur but with <u>exposure to DMCHA controlled by operational conditions or risk management measures</u>.</p> <p>Covers the transfer of DMCHA by charging/discharging from/to small or large containers at dedicated or non-dedicated facilities, <u>with exposure to DMCHA controlled by operational conditions or risk management measures</u>.</p> <p>Covers use of DMCHA as laboratory reagent at small scale laboratories with quantities of 1 L or 1 kg DMCHA or less present in the workplace with <u>exposure to DMCHA controlled by operational conditions or risk management measures</u>.</p>
	Operational conditions and risk management measures
	Control of worker exposure
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [OC1]
Other Operational Conditions affecting worker exposure	<p>The procedures in the manufacture or use of DMCHA are not designed to contain emissions, workers exposure to DMCHA must be prevented by use of local exhaust ventilation and good work practices. These may include:</p> <ul style="list-style-type: none"> • keeping equipment under slightly increased pressure, • control of staff entry to work area, • ensuring all equipment is well maintained, • permits to work for maintenance work, • regular cleaning of equipment and work area, • systems in place to ensure correct use of RMMs and that OCs are being followed, training for staff on good practice, • procedures and training for emergency decontamination and disposal, • good standards of personal hygiene, • recording of any 'near miss' situations.
Process Categories	Risk Management Measures
1 – Use in closed process, no likelihood of exposure	<p>Handle substance within a closed system [E47]. Ensure material transfers are under containment or extract ventilation [E66].</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
2 – Use in closed, continuous process with occasional controlled exposure (e.g. sampling)	<p>Handle substance within a predominantly closed system provided with extract ventilation [E49].</p> <p>Ensure material transfers are under containment or extract ventilation [E66].</p> <p>Ensure samples are obtained under containment or extract ventilation [E76].</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
3 – Use in closed, batch process (synthesis or formulation)	<p>Handle substance within a predominantly closed system provided with extract ventilation [E49].</p> <p>Ensure material transfers are under containment or extract ventilation [E66].</p> <p>Ensure samples are obtained under containment or extract ventilation [E76].</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear a full face respirator conforming to EN140 with Type A/P2 filter or better [PPE32].</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
4 – Use in batch and other process (synthesis) where opportunity for exposure arises	<p>Provide extract ventilation to points where emissions occur [E54].</p> <p>Ensure material transfers are under containment or extract ventilation [E66].</p> <p>Ensure samples are obtained under containment or extract ventilation [E76].</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear a full face respirator conforming to EN140 with Type A/P2 filter or better [PPE32].</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
5 – Mixing or blending in batch processes for formulation of preparations.	<p>Provide extract ventilation to points where emissions occur [E54].</p> <p>Ensure material transfers are under containment or extract ventilation [E66].</p> <p>Ensure samples are obtained under containment or extract ventilation [E76].</p> <p>97% efficiency is required by means of the use of LEV described above.</p> <p>Use suitable eye protection and gloves [PPE14].</p>

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	<p>Wear a full face respirator conforming to EN140 with Type A/P2 filter or better [PPE32].</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
7 – Industrial spraying.	<p>Provide extract ventilation to points where emissions occur [E54].</p> <p>Ensure material transfers are under containment or extract ventilation [E66].</p> <p>Ensure samples are obtained under containment or extract ventilation [E76].</p> <p>97% efficiency is required by means of the use of LEV described above.</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
8a – Transfer of chemicals from/to vessels/ large containers at non-dedicated facilities.	<p>Fill containers/cans at dedicated fill points supplied with local extract ventilation [E51].</p> <p>Provide extract ventilation to material transfer points and other openings [E82].</p> <p>97% efficiency is required by means of the use of LEV described above.</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear a respirator protection.</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
8b – Transfer of chemicals from/to vessels/ large containers at dedicated facilities.	<p>Fill containers/cans at dedicated fill points supplied with local extract ventilation [E51].</p> <p>Provide extract ventilation to material transfer points and other openings [E82].</p> <p>97% efficiency is required by means of the use of LEV described above.</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear a respirator protection.</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
9 – Transfer of substance into small containers (dedicated filling line, including weighing)	<p>Fill containers/cans at dedicated fill points supplied with local extract ventilation [E51].</p> <p>Provide extract ventilation to material transfer points and other openings [E82].</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear a respirator protection.</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
10 – Roller application or brushing	<p>Provide extract ventilation to points where emissions occur [E54].</p> <p>97% efficiency is required by means of the use of LEV described above.</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear a respirator protection.</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
11 – Non industrial spraying	<p>Provide extract ventilation to points where emissions occur [E54].</p> <p>97% efficiency is required by means of the use of LEV described above.</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear a respirator protection.</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
13 – Treatment of articles by dipping and pouring	<p>Provide extract ventilation to points where emissions occur [E54].</p> <p>97% efficiency is required by means of the use of LEV described above.</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear a respirator protection.</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
14 – Production of preparation or articles by tableting, compression, extrusion, pelletisation	<p>Provide extract ventilation to points where emissions occur [E54].</p> <p>97% efficiency is required by means of the use of LEV described above.</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear a respirator protection.</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
15 – Use as laboratory reagent	<p>Provide extract ventilation to points where emissions occur [E54].</p> <p>97% efficiency is required by means of the use of LEV described above.</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>
21 – Low energy manipulation of substances bound in materials and/or articles	<p>Provide extract ventilation to points where emissions occur [E54].</p> <p>97% efficiency is required by means of the use of LEV described above.</p> <p>Use suitable eye protection and gloves [PPE14].</p> <p>Wear suitable coveralls to prevent exposure to the skin [PPE27].</p>