

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

1.1. Product identifier

Product form : Substance
Substance name : DMAC (Dimethylacetamide)
Product code : 311-200420-1
Formula : C₄H₉NO

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Plastic, resin, gum and solvents for electrolytes
Catalyst, paint remover, high purity solvent for crystallization and refining processes
Polymer solvent in production of fibers

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Akkim Kimya Sanayi ve Tic. A.Ş.
Merkez Mahallesi, Ak-Kim Sokak , 7
77600
T +90 226 815 33 00 - F +90 226 353 25 39
www.akkim.com.tr

1.4. Emergency telephone number

Emergency number : +90 226 815 33 00/33112

Country	Organisation/Company	Address	Emergency number	Comment
Turkey	Ulusal Zehir Merkezi (UZEM) Refik Saydam Hıfzıssıhha Merkezi Başkanlığı	Cemal Gürsel Cd. No: 18 Sıhhiye Çankaya 06590 Ankara	114	Information is provided to public and medical personnel on poisoning incidents via 114.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (dermal), Category 4 H312
Acute toxicity (inhal.), Category 4 H332
Acute toxicity (inhalation:dust,mist) Category 4 H332
Reproductive toxicity, Category 1B H360

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

Adverse physicochemical, human health and environmental effects

May damage fertility or the unborn child. Harmful in contact with skin. Harmful if inhaled.

DMAC (Dimethylacetamide)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

GHS08

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H312+H332 - Harmful in contact with skin or if inhaled.
H360 - May damage the unborn child.

Precautionary statements (CLP)

: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 - IF exposed or concerned: Get medical advice or attention.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : DMAC (Dimethylacetamide)

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
DMAC (Dimethylacetamide) substance listed as REACH Candidate (N,N-dimethylacetamide)	CAS-No.: 127-19-5 EC-No.: 204-826-4	> 99.9	Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Repr. 1B, H360D

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

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell. Never give anything by mouth to an unconscious person. People with over sensibility problems are not allowed to work or be exposed to the product. In all cases of doubt, or when symptoms persist, seek medical attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

No additional information available

DMAC (Dimethylacetamide)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray, dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).
Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Reactivity in case of fire : At high temperature may liberate dangerous gases.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire : Approach from upwind. Use water spray or fog for cooling exposed containers. Keep away from combustible materials.
Firefighting instructions : Use water spray or fog for cooling exposed containers. Cool adjacent tanks / containers / drums with water jet. Do not allow water to enter the vessels, a violent reaction may occur. Do not enter fire area without proper protective equipment, including respiratory protection. Exercise caution when fighting any chemical fire. Keep upwind. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information : High temperature decomposition products are harmful by inhalation. Inhalation of vapour can cause breathing difficulties.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Access forbidden to unauthorised personnel. Use protective clothing. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Notify authorities if product enters sewers or public waters. Use care in walking on spilled material. Do not inhale vapour.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment. Dust formation: dust mask. Wear suitable protective clothing, gloves and eye or face protection.
Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not touch or walk on the spilled product. Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel.
Measures in case of dust release : In case of dust production: protective goggles. Dust mask. In case of vapour formation use adequate respirator.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Only qualified personnel equipped with suitable protective equipment may intervene. Wear suitable protective clothing, gloves and eye/face protection.
Emergency procedures : Avoid contact with skin and eyes. Do not touch spilled material. Evacuate unnecessary personnel. Keep away from combustible material. Keep public away from danger area. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters. Do not allow to enter drains or water courses. Do not discharge into drains or waterways without neutralizing.

DMAC (Dimethylacetamide)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

6.3. Methods and material for containment and cleaning up

- For containment : Comply with the safety instructions. Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Notify authorities if product enters sewers or public waters. Clean up any spills as soon as possible, using an absorbent material to collect it. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Sweep or shovel spills into appropriate container for disposal. Minimise generation of dust.
- Other information : Dispose of materials or solid residues at an authorized site. Dispose of contaminated materials in accordance with current regulations.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Use adequate ventilation to keep vapour concentrations below applicable standard. Take all necessary technical measures to avoid or minimize the release of the product on the workplace.
- Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid dust formation. Avoid prolonged and repeated contact with skin. Contaminated work clothing should not be allowed out of the workplace. Do not spray on an open flame or other ignition source. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Keep valves and fittings free from oil and grease. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Take precautionary measures against static discharge.
- Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations. Containers which are opened should be properly resealed and kept upright to prevent leakage. Ensure adequate ventilation, especially in confined areas.
- Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.
- Incompatible products : Strong acids. Strong bases. Strong oxidizing agents. Peroxides. Explosives.
- Incompatible materials : Extremely high or low temperatures.
- Heat and ignition sources : Do not smoke. KEEP SUBSTANCE AWAY FROM: ignition sources. heat sources.
- Information on mixed storage : Keep away from food, drink and animal feeding stuffs.
- Storage area : Avoid: Extremely high or low temperatures. Heat and ignition sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

DMAC (Dimethylacetamide) (127-19-5)	
Turkey - Occupational Exposure Limits	
OEL TWA	36 mg/m ³

DMAC (Dimethylacetamide)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

DMAC (Dimethylacetamide) (127-19-5)	
OEL TWA [ppm]	10 ppm
OEL STEL	72 mg/m ³
OEL STEL [ppm]	20 ppm

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Avoid contact with skin, eyes and clothing. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection. Consider work permit system e.g. for maintenance activities. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. In the event that dust and/or fine particles are generated with this product, it is prudent to minimize prolonged inhalation exposure to these forms not to exceed the occupational exposure limit. Measure concentrations regularly, and at the time of any change occurring in conditions likely to have consequences on workers exposure.

8.2.2. Personal protection equipment

Personal protective equipment:

Corrosionproof clothing. Gloves. Safety glasses. Gas mask.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses. EN 166. Where excessive dust may result, wear goggles

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing. In case of dust production: dustproof clothing. In case of dust production: head/neck protection. Where contact with eyes or skin is likely, wear suitable protection

Hand protection:

Protective gloves. EN 374

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. Dust production: dust mask with filter type P1. Where excessive vapour may result, wear approved mask

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

DMAC (Dimethylacetamide)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Consumer exposure controls:

Do not eat, drink or smoke during use. Always wash hands after handling the product. Avoid contact with skin and eyes. Avoid contact during pregnancy/while nursing.

Other information:

Always wash hands after handling the product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Molecular mass	: 87.12 g/mol
Colour	: Colorless
Odour	: Ammonia-like
Odour threshold	: No data available
pH	: 4.0 (200g/l) @ 20°C
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: -20°C @ 101.325 kPa
Boiling point	: 166°C @ 101.325 kPa
Flash point	: 64°C @ 101.325 kPa
Auto-ignition temperature	: 490 °C @ 101.325 kPa
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 0.2 kPa @ 21,7°C
Relative vapour density	: 3 (Air:1)
Relative density	: No data available
Density	: 0.937 g/cm ³ @ 20°C
Solubility	: Water: 1000 g/l @ 20°C
Partition coefficient n-octanol/water (Log Pow)	: -0.77 n-oktanol/water (@ 25°C)
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.92 mPa·s
Explosive properties	: No data available
Oxidising properties	: No data available
Lower explosive limit (LEL)	: 1.8 vol %
Upper explosive limit (UEL)	: 11.5 vol %

9.2. Other information

Surface tension mN/m @ 20°C	: 33.8
Volatile component	: 100 vol.%

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

DMAC (Dimethylacetamide)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Peroxides. Explosives.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Harmful in contact with skin.
Acute toxicity (inhalation) : Harmful if inhaled. Harmful if inhaled.

DMAC (Dimethylacetamide) (127-19-5)

LD50 oral rat	4800 - 5830 mg/kg
LD50 oral	2820 mg/kg
LD50 dermal rabbit	2100 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	2.2 mg/l/4h

Skin corrosion/irritation : Not classified
pH: 4 (200g/l) @ 20°C
Serious eye damage/irritation : Not classified
pH: 4 (200g/l) @ 20°C
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : May damage the unborn child.
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified
Not rapidly degradable

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

DMAC (Dimethylacetamide)

Log Pow	-0.77 n-oktanol/water (@ 25°C)
---------	--------------------------------

12.4. Mobility in soil

No additional information available

DMAC (Dimethylacetamide)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.5. Results of PBT and vPvB assessment

DMAC (Dimethylacetamide)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

DMAC (Dimethylacetamide)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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

N,N-dimethylacetamide is on the REACH Candidate List

DMAC (Dimethylacetamide) is not on the REACH Annex XIV List

DMAC (Dimethylacetamide) 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.

DMAC (Dimethylacetamide) 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

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Toxic for reproduction (article 57c)

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV; ID No. 1289)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

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
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level

DMAC (Dimethylacetamide)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Abbreviations and acronyms:	
NOAEC	No-Observed Adverse Effect Concentration
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
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative

Data sources

: 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. ECHA (European Chemicals Agency). Supplier's safety documents.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H360D	May damage the unborn child.
Repr. 1B	Reproductive toxicity, Category 1B

Safety Data Sheet (SDS), EU

The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable