

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

### 1.1. Product identifier

Product form : Mixture  
Product name : DENSURF DA 4115  
Type of product : Polyglycol modified polyalkylene imine

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

Main use category : Industrial use  
Use of the substance/mixture : VOC and solvent-free wetting and dispersing additive for solvent-borne and solvent-free coating systems, floor coatings, and printing inks.

### 1.3. Details of the supplier of the safety data sheet

DENGE KİMYA VE TEKSTİL SAN. TİC. A.Ş.  
Velimeşe Organize Sanayi Bölgesi Mah.  
259.Sok. No:4/1  
Ergene TEKİRDAĞ TÜRKİYE  
T +90 (0282) 674 54 00 - F +90 (0282) 674 50 01  
[mduvenci@dengekimya.com](mailto:mduvenci@dengekimya.com) - [www.densurf.com](http://www.densurf.com)

### 1.4. Emergency telephone number

No additional information available

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.

Acute toxicity (oral), Category 4 H302  
Serious eye damage/eye irritation, Category 1 H318  
Full text of H-statements: see section 16  
Adverse physicochemical, human health and environmental effects : Harmful if swallowed. Causes serious eye damage.

### 2.2. Label elements

Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.

Hazard pictograms (SEA) :



GHS05

GHS07

Signal word (SEA) : Danger  
Hazardous ingredients : Polyethyleneimine, alkoxyated  
Hazard statements (SEA) : H302 - Harmful if swallowed.  
H318 - Causes serious eye damage.  
Precautionary statements (SEA) : P264 - Wash hands, forearms and face with soap and water thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P312 - IF SWALLOWED: If you feel unwell, immediately dial 114 for the NATIONAL POISON CENTER or call a doctor/physician.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 - Immediately dial 114 for the NATIONAL POISON CENTER or call a doctor/physician.  
 P330 - Rinse mouth.  
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

**2.3. Other hazards**

**Other hazards not contributing to the classification**

No additional information available

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

Not applicable

**3.2. Mixtures**

Name	Product identifier	%	Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.
Polyethyleneimine, alkoxyated	CAS-No.: 52501-07-2	65 – 75	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318

Full text of H-statements: see section 16

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

- First-aid measures general : Call a poison center or a doctor if you feel unwell. If medical advice is needed, have product container or label at hand. If you feel unwell, seek medical advice (show the label where possible). 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.
- First-aid measures after inhalation : If experiencing respiratory symptoms: Call a poison center or a doctor. Remove person to fresh air and keep comfortable for breathing. Allow the victim to rest.
- First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Do not remove clothing if it sticks to the skin. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. Obtain medical attention if pain, blinking or redness persists. Consult an ophthalmologist if irritation persists.
- First-aid measures after ingestion : Rinse mouth. Call a poison center or a doctor if you feel unwell. Rinse mouth out with water. Do not induce vomiting. Get medical advice/attention if you feel unwell.

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

Symptoms/effects after eye contact : Serious damage to eyes.

**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 powder. Foam. Carbon dioxide.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Advice for firefighters

- Precautionary measures fire : Do not allow contact with air. Keep container tightly closed and away from heat, sparks and flame. Keep container closed when not in use.  
Firefighting instructions : In case of fire: stop leak if safe to do so. Cool laterally with water containers exposed to flames, even after the fire is extinguished. Prevent fire fighting water from entering the environment.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.  
Other information : On exposure to high temperature, may decompose, releasing toxic gases.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Evacuate area. Avoid contact with skin and eyes. Do not handle until all safety precautions have been read and understood. Stop leak if safe to do so. Absorb spillage to prevent material damage. Isolate from fire, if possible, without unnecessary risk. No open flames. No smoking.

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid contact with skin, eyes and clothing. Evacuate unnecessary personnel. Only qualified personnel equipped with suitable protective equipment may intervene.

#### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".  
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so. Use grounded electrical/mechanical equipment. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

### 6.2. Environmental precautions

Avoid release to the environment. Prevent liquid from entering sewers, watercourses, underground or low areas. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- For containment : Consult an expert on waste disposal or treatment. Do not touch or walk on the spilled product. Cover spill with non combustible material, e.g.: sand, earth, vermiculite. Collect spillage. Using a clean shovel, put the material in a dry container and cover without compressing it. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.  
Methods for cleaning up : If the product is liquid. Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). If the product is solid. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.  
Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Remove contaminated clothes.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Store in a well-ventilated place. Keep container tightly closed. Comply with applicable regulations. Take precautionary measures against static discharge.
- Storage conditions : Protect from sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in a closed container. Protect from moisture. Keep only in original container.
- Incompatible products : Refer to the detailed list of incompatible materials in section 10 Stability/Reactivity.
- Incompatible materials : For further information, refer to section 10 : "Stability and Reactivity".
- Storage area : Store away from heat. Store in a well-ventilated place.
- Packaging materials : Keep only in the original container in a cool, well-ventilated place away from combustible materials.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

- Appropriate engineering controls : Measure concentrations regularly, and at the time of any change occurring in conditions likely to have consequences on workers exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure that there is a suitable ventilation system.
- Personal protective equipment : Gloves. Protective goggles. Wear a mask. Protective clothing.
- Hand protection : Protective gloves
- Eye protection : Safety glasses
- Skin and body protection : Wear suitable protective clothing
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment
- Personal protective equipment symbol(s)



- Environmental exposure controls : Avoid release to the environment.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Appearance	: Transparent yellow viscous liquid.
Colour	: Yellow
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

**9.2. Other information**

Solid content % (1 g, 160 °C)	: 98±1
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**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).

**10.5. Incompatible materials**

No additional information available

**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) : Harmful if swallowed.  
 Acute toxicity (dermal) : Not classified  
 Acute toxicity (inhalation) : Not classified

ATE (SEA) (oral)	666,667 mg/kg bodyweight
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<b>Polyethyleneimine, alkoxyated (52501-07-2)</b>	
LD50 oral rat	> 2000 mg/kg

Skin corrosion/irritation : Not classified  
 Serious eye damage/irritation : Causes serious eye damage.  
 Respiratory or skin sensitisation : Not classified  
 Germ cell mutagenicity : Not classified  
 Carcinogenicity : Not classified  
 Reproductive toxicity : Not classified  
 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

<b>Polyethyleneimine, alkoxyated (52501-07-2)</b>	
LC50 - Fish [1]	> 100 mg/l

**12.2. Persistence and degradability**

<b>Polyethyleneimine, alkoxyated (52501-07-2)</b>	
Biodegradation	> 70 %

**12.3. Bioaccumulative potential**

<b>DENSURF DA 4115</b>	
Bioaccumulative potential	No additional information available

**12.4. Mobility in soil**

<b>DENSURF DA 4115</b>	
Mobility in soil	No additional information available

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

No additional information available

**12.6. Other adverse effects**

Ozone : Not classified  
 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 Management Regulation published in the Official Journal numbered 29314 on April 2, 2015.  
 Waste treatment methods : Assure that emissions are compliant with all applicable air pollution control regulations.  
 Dispose of contents/container in accordance with licensed collector's sorting instructions.  
 Product/Packaging disposal recommendations : Avoid release to the environment.  
 Additional information : Consult an expert on waste disposal or treatment. Do not re-use empty containers.

**SECTION 14: Transport information**

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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

**14.6. Special precautions for user**

**Overland transport**  
 No data available

**Transport by sea**  
 No data available

**Air transport**  
 No data available

**Inland waterway transport**  
 No data available

**Rail transport**  
 No data available

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 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. National regulations**

Local regulations (Turkey) :

- : Regulation on Transportation of Dangerous Goods by Road published in the Official Journal numbered 28801 on October 24, 2013
- Personal Protective Equipment Regulation published in the Official Journal numbered 30761 on May 1, 2019
- Regulation on Use of Personal Protective Equipments in Workplaces published in the Official Journal numbered 28695 on July 2, 2013
- Occupational Health and Safety Regulation published in the Official Journal numbered 25311 on December 9, 2003
- Regulation on Test Methods that will be Applied to Determine the Physicochemical, Toxicological and Ecotoxicological Properties of Substances and Mixtures published in the Official Journal numbered 28848 on December 11, 2013
- Regulation on Health and Safety Precautions When Working with Chemical Substances published in the Official Journal numbered 28733 on August 12, 2013
- Regulation on Health and Safety Precautions When Working with Carcinogenic and Mutagenic Substances published in the Official Journal numbered 28730 on August 6, 2013 according to By-law on Registration, Evaluation, Authorization and Restriction of Chemicals (O.G: 23.06.2017 - 30105)
- Waste Management Regulation published in the Official Journal numbered 29314 on April 2, 2015
- Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.

This product doesn't contain any substances that is controlled or prohibited for use according to the Regulation on Ozone Depleting Substances published in the Official Journal numbered 30031 on April 7, 2017.

Substance(s) are not subject to Regulation on Persistent Organic Pollutants (O.G. 14.11.2018-30595)

**SECTION 16: Other information**

<b>Abbreviations and acronyms</b>	
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



<b>Abbreviations and acronyms</b>	
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
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

: ECHA (European Chemicals Agency). Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SE) Regulation published in the Official Journal numbered 28848 on December 11, 2013.

<b>Full text of H- and EUH-statements</b>	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H302	Harmful if swallowed.
H318	Causes serious eye damage.

<b>Safety Data Sheet author's</b>	
Name	MERVE ASLI DÜVENCİ
Certificate number	LONCA KDU 65/2021.10

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<b>Safety Data Sheet author's</b>	
Certificate valid until	06/03/2026
Contact information	mduvenci@dengekimya.com

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.