

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DURETHAN KU2-2903 000000

Version 1.0 Revision Date: 21.07.2023 SDS Number: 203000000502 Date of last issue: -
Country / Language: DE / 6N (EN)

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

1.1 Product identifier

Trade name : DURETHAN KU2-2903 000000
Product code : 000000000000408066

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

Use of the Substance/Mixture : Production of moulded plastic articles

1.3 Details of the supplier of the safety data sheet

Company : LANXESS Performance Materials GmbH
Kennedyplatz 1,
50569 Köln

Responsible Department : +49 221 8885 2288
infosds@lanxess.com

1.4 Emergency telephone number

Emergency telephone number : For 24/7 multilingual emergency please call
CHEMTREC EMEA: +44 20 3885 0382 and mention CCN
1001748.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Copolyamide based on ϵ -caprolactam

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Substances with a workplace exposure limit :			
silica	112926-00-8 01-2119379499-16		$\geq 1 - < 10$

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : If inhalation of melt processing fumes occurs, remove to fresh air.
If patient has difficulty in breathing, administer oxygen, keep him calm and protect him from loss of warmth.
Get medical attention if symptoms appear.
- In case of skin contact : CONTACT WITH THE HOT MELT: Cooling immediately with plenty of water. Do not remove product crusts which may have formed neither forcibly nor by applying any solvents to the skin involved. In order to obtain medical care for possible burns and for a smooth cleansing of the skin, seek medical advice immediately.
- In case of eye contact : Flush eyes with water as a precaution.
Call a physician if irritation develops or persists.
- If swallowed : No special measures required.
Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Contact with hot material causes thermal skin burns.

4.3 Indication of any immediate medical attention and special treatment needed

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Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or CO₂.

Unsuitable extinguishing media : Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

Hazardous combustion products : Carbon dioxide (CO₂)
Carbon monoxide
Nitrogen oxides (NO_x)
Metal oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Further information : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
No action shall be taken involving any personal risk or without suitable training.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : granular
Hazard of slipping on spilt product.
Melt: where there is a risk of exothermal decomposition as a result of overheating (rise in temperature, formation of fumes or smoke) cool the melt in a water bath

6.2 Environmental precautions

Environmental precautions : No special environmental precautions required.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.

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6.4 Reference to other sections

For disposal considerations see section 13., For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Dust must be extracted directly at the point of origin.
During regranulation avoid formation of dust.
Take measures to prevent the build up of electrostatic charge.
Avoid inhaling vapours.
Avoid inhaling dust.
Grease skin.
- Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep in a dry place.
- Storage class (TRGS 510) : 11, Combustible Solids

7.3 Specific end use(s)

- Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The regulations for the substances listed below must be observed when processing this product, particularly if processing takes place at elevated temperatures. In our experience the provision of effective fresh-air and exhaust ventilation equipment at the points where vapors may be generated will ensure compliance with the tolerance limits quoted below.

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
silica	112926-00-8	AGW (Inhalable fraction)	4 mg/m ³ (Silica)	DE TRGS 900
Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
ε-caprolactam	105-60-2	TWA (Dust and vapour)	10 mg/m ³	2000/39/EC

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	Further information: Indicative			
		STEL (Dust and vapour)	40 mg/m ³	2000/39/EC
	Further information: Indicative			
		AGW (Vapour and dust, inhalable fraction)	5 mg/m ³	DE TRGS 900
	Peak-limit: excursion factor (category): 2;(I)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
silica	Workers	Inhalation	Long-term exposure, Systemic effects	4 mg/m ³

8.2 Exposure controls

Engineering measures

Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits.

Personal protective equipment

Eye/face protection : Safety glasses with side-shields

Hand protection
Material : Protective gloves of leather, contaminated or damaged gloves should be replaced.

Skin and body protection : Skin covering working clothes; wear dust-proof overalls if large quantities of dust are generated.

Respiratory protection : In case of dust formation particle filter.

Filter type : P1 filter

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : granular

Physical state : solid

Colour : colourless

Odour : odourless

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Odour Threshold : Not applicable

Melting point/range : 190 °C

Boiling point/boiling range : No data available

Flammability : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Flash point : > 250 °C
Method: closed cup

Ignition temperature : > 300 °C

Decomposition temperature : > 300 °C

pH : substance/mixture is non-soluble (in water)

Viscosity

 Viscosity, dynamic : No data available

 Viscosity, kinematic : No data available

Solubility(ies)

 Water solubility : insoluble

 Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Vapour pressure : Not applicable

Relative density : No data available

Density : 1,14 g/cm³ (20 °C)

Bulk density : 700 kg/m³

9.2 Other information

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Explosives	:	No data available
Oxidizing properties	:	No data available
Flammable solids Burning number	:	No data available
Self-ignition	:	No data available
Metal corrosion rate	:	Not corrosive to metals
Evaporation rate	:	No data available
Miscibility with water	:	immiscible

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

This product is stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : In the case of dusty organic products the possibility of a dust explosion should always be considered.
Prevent dust accumulation.

10.5 Incompatible materials

Materials to avoid : No specific data.

10.6 Hazardous decomposition products

Hazardous decomposition products : ϵ -caprolactam
Caused by smouldering and incomplete combustion toxic fumes mainly consisting of CO and CO₂ may be developed.
Degradation products of the polymers and their additives may also be formed.

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SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified based on available information.

Components:

silica:

Acute oral toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

silica:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes
Remarks : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Serious eye damage/eye irritation

Not classified based on available information.

Components:

silica:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation
GLP : yes

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

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Repeated dose toxicity

Components:

silica:

Species : Rat, male and female
NOEL : 4000 - 4500 mg/kg
Application Route : Oral
Exposure time : 90 d
Number of exposures : Continuous
Dose : 300-330 / 1200-1400/ 4000-4500
Method : OECD Test Guideline 408
GLP : yes
Remarks : Subchronic toxicity

Aspiration toxicity

Not classified based on available information.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : Under the recommended processing conditions small amounts of emitted substance (e.g. residual monomers, residual solvents, decomposition products) may be discharged. According to our experience and information the product has no harmful effects on health if properly handled. The substance(s) listed in Chapter 3 is/are encapsulated in this preparation in a polymer and is/are therefore not bioavailable. In individual cases intensive contact of the unprotected skin with rough surfaces of glass-fibre-reinforced plastics may lead to irritation.

SECTION 12: Ecological information

12.1 Toxicity

Components:

silica:

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Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 10.000 mg/l
Exposure time: 96 h
Analytical monitoring: no
Method: OECD Test Guideline 203
GLP: yes
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10.000 mg/l
Exposure time: 24 h
Analytical monitoring: no
Method: OECD Test Guideline 202
GLP: yes
Remarks: Fresh water

12.2 Persistence and degradability

Components:

silica:

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : The product is practically insoluble in water. In view of its consistency and insolubility in water, no ecological problems are to be expected if the product is properly handled. This product

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is not readily biodegradable.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : May only be transported to suitable incinerator with reduced non-air emissions observing local official regulations. May be disposed of together with household refuse if local official regulations are observed. The product is suitable for mechanical recycling. After appropriate treatment it can be remelted and reprocessed into new moulded articles. Mechanical recycling is only possible if the material has been selectively retrieved and carefully segregated according to type. Where possible recycling is preferred to disposal or incineration.
- Contaminated packaging : If recycling is not practicable, dispose of in compliance with local regulations. The generation of waste should be avoided or minimised wherever possible. Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number or ID number

- ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

- ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

- ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good

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RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.4 Packing group

ADN : Not regulated as a dangerous good

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA (Cargo) : Not regulated as a dangerous good

IATA (Passenger) : Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Hazard and Handling Notes. : Not dangerous cargo.
Keep dry.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors : Not applicable

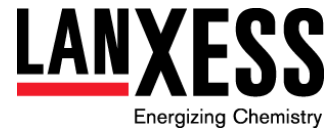
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

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Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors. : Neither banned nor restricted

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : Not applicable

Water hazard class (Germany) : nwg not water endangering
Code Number: 766
Remarks: Classification according to AwSV § 6 (4)

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of H-Statements

Full text of other abbreviations

2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.
2000/39/EC / TWA : Limit Value - eight hours
2000/39/EC / STEL : Short term exposure limit
DE TRGS 900 / AGW : Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good La-

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boratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered to be a guidance for processing and does not contain any warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.

Relevant changes from the previous version are marked on the left side of the Safety Data Sheet with a black double bar in appropriate places.