

material safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.07.2017

Version number 04-06

Revision: 03.07.2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**Trade name: **DELTA®-THAN****1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

Application of the substance / the mixture Adhesives**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Dörken GmbH & Co. KG

Wetterstr. 58

D - 58313 Herdecke

Further information obtainable from:

Product Management

Mrs. Karen Buschauer-Lippman

phone +49 (0) 2330 / 63-934

msds@doerken.de

1.4 Emergency telephone number:

Emergency CONTACT (24-hour-Number): GBK GmbH +49 (0) 6132-84463

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS02 GHS07

Signal word Danger**Hazard-determining components of labelling:**

butanone

ethyl acetate

Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

(Contd. on page 2)

material safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.07.2017

Version number 04-06

Revision: 03.07.2017

Trade name: DELTA®-THAN

(Contd. of page 1)

- P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403 Store in a well-ventilated place.

2.3 Other hazards

In case of large-scale processing of the product remove all kind of ignition sources, e.g. welder, bells, heating plates, refrigerator, night-storage heater, etc. in the wider area and deeper lying floors. Place warning signs, which warn of explosive atmosphere.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 78-93-3 EINECS: 201-159-0 Index number: 606-002-00-3 Reg.nr.: 01-2119457290-43-xxxx	butanone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	10-25%
CAS: 141-78-6 EINECS: 205-500-4 Index number: 607-022-00-5 Reg.nr.: 01-2119475103-46-xxxx	ethyl acetate Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	< 10%

SVHC No SVHC-substances included.

Additional information:

Doesn't contain SVHC-substances

For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

Treat affected skin with cotton wool or cellulose. Then wash and rinse thoroughly with water and a mild cleaning agent.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

GB

(Contd. on page 3)

material safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.07.2017

Version number 04-06

Revision: 03.07.2017

Trade name: **DELTA®-THAN**

(Contd. of page 2)

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.**For safety reasons unsuitable extinguishing agents:** Water with full jet**5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters**Protective equipment:** Wear self-contained respiratory protective device.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Keep away from ignition sources.

With exposure of vapours/aerosols use respiratory protection.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

6.2 Environmental precautions:

Prevent seepage into sewage system, workpits and cellars.

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Pick up mechanically.

Do not flush with water or aqueous cleansing agents

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Information about fire - and explosion protection:

Fumes can combine with air to form an explosive mixture.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:**

Prevent any seepage into the ground.

Store in a cool location.

Information about storage in one common storage facility: Store away from foodstuffs.**Further information about storage conditions:**

Protect from frost.

Store receptacle in a well ventilated area.

Keep container tightly sealed.

(Contd. on page 4)

material safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.07.2017

Version number 04-06

Revision: 03.07.2017

Trade name: **DELTA®-THAN**

(Contd. of page 3)

Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

78-93-3 butanone

WEL	Short-term value: 899 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm Sk, BMGV
-----	---

141-78-6 ethyl acetate

WEL	Short-term value: 400 ppm Long-term value: 200 ppm
-----	---

DNELs

141-78-6 ethyl acetate

Oral	DNEL (c)	4.5 (long term)
Dermal	DNEL (w)	63 (long term)
	DNEL (c)	37 (long term)
Inhalative	DNEL (w)	1,468 (acute)
		734 (long term)
	DNEL (c)	734 (acute)
		367 (long term)

PNECs

141-78-6 ethyl acetate

PNEC (sediment)	1.25 (fresh water) 0.125 (marine water)
PNEC (soil)	0.24 (soil)
PNEC (water)	1.65 (intermittent releases) 0.26 (fresh water) 0.026 (marine water) 650 (sewage treatment plant)

Ingredients with biological limit values:

78-93-3 butanone

BMGV	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one
------	---

Additional information: The lists valid during the making were used as basis.

(Contd. on page 5)

material safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.07.2017

Version number 04-06

Revision: 03.07.2017

Trade name: DELTA®-THAN

(Contd. of page 4)

8.2 Exposure controls**Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection:

Not necessary if room is well-ventilated.

Short term filter device:

A2 (DIN EN 14387 / DIN EN 141)

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.7 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

Value for permeation: level 5 ≥ 240 min

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety goggles recommended, if direct contact possible.

Tightly sealed goggles

Body protection: Protective work clothing

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

Form:	Pasty
Colour:	Black
Odour:	Solvent-like
Odour threshold:	Not determined.
pH-value:	Not determined.

Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: 77 °C

(Contd. on page 6)

material safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.07.2017

Version number 04-06

Revision: 03.07.2017

Trade name: DELTA®-THAN

(Contd. of page 5)

Flash point:	-4 °C
Flammability (solid, gas):	Not applicable.
Ignition temperature:	460 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
Lower:	1.8 Vol %
Upper:	11.5 Vol %
Vapour pressure at 20 °C:	105 hPa
Density at 20 °C:	1 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water:	Partly soluble.
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	26.0 %
VOC (EC)	259.7 g/l
Solids content:	74.0 %
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity**10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

Reacts with acids.

Reacts with strong oxidising agents.

10.4 Conditions to avoid No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.

(Contd. on page 7)

material safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.07.2017

Version number 04-06

Revision: 03.07.2017

Trade name: **DELTA®-THAN**

(Contd. of page 6)

10.6 Hazardous decomposition products:

No decomposition if used with intended storage and handling.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

Inhalative	LC50/4 h	246 (ATE)
------------	----------	-----------

78-93-3 butanone

Oral	LD50	3,300 (rat)
Dermal	LD50	5,000 (rabbit)

141-78-6 ethyl acetate

Oral	LD50	5,620 (rat)
Dermal	LD50	18,000 (rabbit)
Inhalative	LC50/4 h	>29.3 (rat)

Primary irritant effect:

Skin corrosion/irritation With prolonged or repeated skin contact irritations are possible.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Additional toxicological information: Vapours may cause drowsiness and dizziness.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness.

STOT-repeated exposure Based on available data, the classification criteria are not met.

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

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

141-78-6 ethyl acetate

EC50	17.9 (green algae)
EC50 / 48 h	3,300 (green algae)
	724 (Daphnia magna (big water flea))
EC50 / 48 h	717 (Daphnia magna (big water flea))
LC50 / 48 h	350 (Leuciscus idus (golden orfe))
LC50 / 96 h	431 (Danio rerio (zebrafish))
	230 (Oncorhynchus mykiss (rainbow trout))

(Contd. on page 8)

material safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.07.2017

Version number 04-06

Revision: 03.07.2017

Trade name: **DELTA®-THAN**

(Contd. of page 7)

12.2 Persistence and degradability No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Behaviour in sewage processing plants:****141-78-6 ethyl acetate**EC10 / 16 h 2,900 (*Pseudomonas putida* (bacteria))**Additional ecological information:****General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation** Dispose in accordance with official regulations.**Waste disposal key:**

Do not dispose of in or on soil, in water courses or through sewage system, but treat as industrial waste. These EU refuse code numbers are recommendations for waste accruing through the use of adhesives and sealants. Any waste produced from organic solvents or other dangerous substances listed under item 3 of this safety data sheet is itself classified as dangerous (*).

Wastes produced with usage:

08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances

08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09

Wastes produced with cleaning:

08 04 11* adhesives and sealant sludges containing organic solvents or other dangerous substances

08 04 12 adhesives and sealant sludges other than those mentioned in 08 04 11

Uncleaned packaging:**Recommendation:**

Disposal must be made according to official regulations.

15 01 10* packaging containing residues of or contaminated by dangerous substances

Clean packaging wastes:

15 01 01 paper and cardboard packaging

15 01 02 plastic packaging

15 01 04 metallic packaging

SECTION 14: Transport information**14.1 UN-Number**

ADR, IMDG, IATA

UN1133

14.2 UN proper shipping name

ADR

1133 ADHESIVES

(Contd. on page 9)

material safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.07.2017

Version number 04-06

Revision: 03.07.2017

Trade name: **DELTA®-THAN**

(Contd. of page 8)

IMDG, IATA

ADHESIVES

14.3 Transport hazard class(es)

ADR



Class
Label

3 (F1) Flammable liquids.
3

IMDG, IATA



Class
Label

3 Flammable liquids.
3

14.4 Packing group

ADR, IMDG, IATA

II

14.5 Environmental hazards:

Marine pollutant:

No

14.6 Special precautions for user

Warning: Flammable liquids.

Danger code (Kemler):

33

EMS Number:

F-E,S-D

Stowage Category

B

14.7 Transport in bulk according to Annex II of

Marpol and the IBC Code

Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ)

5L

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

Transport category

2

Tunnel restriction code

D/E

IMDG

Limited quantities (LQ)

5L

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

Remarks:

(Packing group III, if content of packaging ≤ 30l,
according 2.3.2.2 IMDG)

IATA

Remarks:

(Packing group III, if content of packaging ≤ 30l,
according 3.3.3.1.1 IATA)

(Contd. on page 10)

material safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.07.2017

Version number 04-06

Revision: 03.07.2017

Trade name: DELTA®-THAN**UN "Model Regulation":**

UN 1133 ADHESIVES, 3, II, (D/E)

(Contd. of page 9)

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

No further relevant information available.

Directive 2012/18/EU**Named dangerous substances - ANNEX I** None of the ingredients is listed.**Seveso category** P5c FLAMMABLE LIQUIDS**Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t**Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

Class	Share in %
NK	26.0

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Department issuing SDS: R&D Department L10**Contact:**

Dr. Yvonne Weeke

+49 (0) 2330 / 63-831

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

Flam. Liq. 2: Flammable liquids – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Sources

Internet:

<http://www.baua.de><http://www.arbeitssicherheit.de><http://www.dguv.de/ifs/de/gestis/stoffdb>

Legislation:

Directive 1999/45/EC - classification, packaging and labelling of dangerous preparations

Directive 67/548/EEC - dangerous substance directive

Regulation (EC) 1907/2006 - REACH

Regulation (EC) 1272/2008 - CLP

*** Data compared to the previous version altered.**