



354 Elektronik-Spray 073540250AB

Print date: 17.10.2017

Product code: 11A07354025AB

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

1.1. Product identifier

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

Use of the substance/mixture

Corrosion inhibitor

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name: TUNAP Deutschland Vertriebs GmbH & Co. Betriebs KG
Street: Bürgermeister-Seidl-Str. 2
Place: D-82515 Wolfratshausen
Telephone: + 49 (0) 8171/1600 - 0 Telefax: + 49 (0) 8171/1600 - 40
e-mail: sdb@tunap.com
Internet: www.tunap.com

Supplier

Company name: TUNAP UK Limited
Street: Unit L4 Deacon Trading Estate, Morley Road
Place: GB Tonbridge, Kent. TN9 1RA
Telephone: +44 (0)1732 365163
e-mail: sdb@tunap.com
Internet: www.tunap.co.uk

1.4. Emergency telephone number:

111 NHS (National Health Service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Aerosol: Aerosol 1
Respiratory or skin sensitisation: Skin Sens. 1A
Specific target organ toxicity - repeated exposure: STOT RE 1
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
Extremely flammable aerosol.
Pressurised container: May burst if heated.
May cause an allergic skin reaction.
Causes damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Hydrocarbons, C10-C13, n-alkanes, iso-alkanes, cyclics, aromates (2-25 %)
Dihydro-3-(tetrapropenyl)furan-2,5-dione

Signal word: Danger



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Pictograms:



Hazard statements

- | | |
|------|---|
| H222 | Extremely flammable aerosol. |
| H229 | Pressurised container: May burst if heated. |
| H317 | May cause an allergic skin reaction. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H412 | Harmful to aquatic life with long lasting effects. |

Precautionary statements

- | | |
|-----------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P211 | Do not spray on an open flame or other ignition source. |
| P260 | Do not breathe Aerosol. |
| P280 | Wear eye/face protection. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P273 | Avoid release to the environment. |
| P302+P352 | IF ON SKIN: Wash with plenty of Water and soap.. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P410+P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. |
| P251 | Do not pierce or burn, even after use. |

Special labelling of certain mixtures

- | | |
|--------|---|
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
|--------|---|

2.3. Other hazards

In use, may form flammable/explosive vapour-air mixture.

SECTION 3: Composition/information on ingredients

3.2. Mixtures



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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
64742-82-1	Hydrocarbons, C10-C13, n-alkanes, iso-alkanes, cyclics, aromates (2-25 %)			25 - < 50 %
	919-164-8		01-2119473977-17	
	STOT RE 1, Asp. Tox. 1, Aquatic Chronic 3; H372 H304 H412 EUH066			
64742-53-6	Baseoil - unspecified, Distillates (petroleum), hydrotreated light naphthenic			25 - < 50 %
	265-156-6		01-2119480375-34	
	Asp. Tox. 1; H304			
75-28-5	isobutane			25 - < 50 %
	200-857-2	601-004-00-0	01-2119485395-27	
	Flam. Gas 1, Liquefied gas; H220 H280			
74-98-6	propane			3 - < 5 %
	200-827-9	601-003-00-5	01-2119486944-21	
	Flam. Gas 1, Liquefied gas; H220 H280			
106-97-8	butane			1 - < 3 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Liquefied gas; H220 H280			
26544-38-7	Dihydro-3-(tetrapropenyl)furan-2,5-dione			0.1 - < 1 %
	247-781-6			
	Eye Irrit. 2, Skin Sens. 1A, Aquatic Chronic 4; H319 H317 H413			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

After inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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

Headache, nausea, dizziness, fatigue, skin irritation

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

Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours.



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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water fog. Foam. Carbon dioxide (CO₂). Extinguishing powder.

Unsuitable extinguishing media

High power water jet

5.2. Special hazards arising from the substance or mixture

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO₂, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

Additional information

Danger of bursting container.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Observe instructions for use.
Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.
When using do not eat, drink, smoke, sniff.
Wear personal protection equipment (refer to section 8).
In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Heating causes rise in pressure with risk of bursting.

Further information on handling

Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities



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Requirements for storage rooms and vessels

Keep container tightly closed. Observe legal regulations and provisions.

Advice on storage compatibility

Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions

Protect from frost. Protect against direct sunlight. Store in a cool dry place. Observe legal regulations and provisions.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL

Additional advice on limit values

- a no restriction
- b End of exposure or shift
- c in long-term exposure: after several shifts
- d prior to next shift

STEL (EC) : Short Term Exposure Limit

TWA (EC): time-weighted average

U: Urea

B: Blood

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

Eye/face protection

Suitable eye protection: Tightly sealed safety glasses.

DIN EN 166

Hand protection

Protect skin by using skin protective cream. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material: NBR (Nitrile rubber) Breakthrough time (maximum wearing time) 480min

Thickness of the glove material 0,45 mm

DIN EN 374

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.



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When exceeding the relevant workplace exposure limits, note the following:
 Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..
 Filtering device with filter or ventilator filtering device of type: AX
 Observe the wear time limits as specified by the manufacturer.
 Observe legal regulations and provisions.

Environmental exposure controls

Observe legal regulations and provisions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Aerosol
 Colour: light yellow
 Odour: characteristic

Test method

pH-Value (at 20 °C): not determined

Changes in the physical state

Melting point: not determined
 Initial boiling point and boiling range: -40 °C
 Flash point: -80 °C

Flammability

Solid: not applicable
 Gas: not applicable

Lower explosion limits: 1 vol. %
 Upper explosion limits: 11 vol. %

Auto-ignition temperature

Solid: not applicable
 Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidising.

Vapour pressure: not determined

Vapour pressure: No information available.

Density (at 20 °C): 0,825 g/cm³ DIN 51757

Bulk density: not applicable

Water solubility: The study does not need to be conducted because the substance is known to be insoluble in water

Solubility in other solvents

not determined

Partition coefficient: not determined

Viscosity / dynamic: No information available.

Viscosity / kinematic: No information available.

Flow time: not applicable

Vapour density: not determined

Evaporation rate: not determined



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9.2. Other information

Solid content: not determined

Data apply to technical substance: Relative density, Colour, Odour, Viscosity, pH.

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable, Ignition hazard.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharges.

10.5. Incompatible materials

Oxidizing agents. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO₂, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

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



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CAS No	Chemical name			
	Exposure route	Dose	Species	Source
64742-82-1	Hydrocarbons, C10-C13, n-alkanes, iso-alkanes, cyclics, aromates (2-25 %)			
	oral	LD50 >15000 mg/kg	Rat	
	dermal	LD50 >3400 mg/kg	Rabbit	
	inhalative (4 h) aerosol	LC50 13,1 mg/l	Rat	
64742-53-6	Baseoil - unspecified, Distillates (petroleum), hydrotreated light naphthenic			
	oral	LD50 >5000 mg/kg	Rat	
	dermal	LD50 >3000 mg/kg	Rabbit	
106-97-8	butane			
	inhalative (4 h) gas	LC50 658 ppm	Rat	GESTIS
26544-38-7	Dihydro-3-(tetrapropenyl)furan-2,5-dione			
	oral	LD50 2900 mg/kg	Rat	
	dermal	LD50 6250-7500 mg/kg	Rat	
	inhalative (4 h) vapour	LC50 1220 mg/l	Rat	
	inhalative (4 h) aerosol	LC50 5,3 mg/l	Rat	

Irritation and corrosivity

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

Sensitising effects

May cause an allergic skin reaction. (Dihydro-3-(tetrapropenyl)furan-2,5-dione)

Carcinogenic/mutagenic/toxic effects for reproduction

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

No indication of human carcinogenicity.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.

STOT-single exposure

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

STOT-repeated exposure

Repeated exposure may cause skin dryness or cracking.

Causes damage to organs through prolonged or repeated exposure. (Hydrocarbons, C10-C13, n-alkanes, iso-alkanes, cyclics, aromates (2-25 %))

Aspiration hazard

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

Specific effects in experiment on an animal

No information available.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.



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CAS No	Chemical name				
	Aquatic toxicity	Dose	[h] [d]	Species	Source
26544-38-7	Dihydro-3-(tetrapropenyl)furan-2,5-dione				
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50 110 mg/l	96 h	Selenastrum capricornutum	

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
64742-82-1	Hydrocarbons, C10-C13, n-alkanes, iso-alkanes, cyclics, aromates (2-25 %)			
	OECD Guideline 301 F	77,05%	28	
	Easily biodegradable (concerning to the criteria of the OECD)			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64742-82-1	Hydrocarbons, C10-C13, n-alkanes, iso-alkanes, cyclics, aromates (2-25 %)	4,2
75-28-5	isobutane	2,8
74-98-6	propane	2,36
106-97-8	butane	2,89
26544-38-7	Dihydro-3-(tetrapropenyl)furan-2,5-dione	>=4,39

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

Waste disposal number of used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste



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Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.1
Classification code: 5F
Special Provisions: 190 327 344 625
Limited quantity: 1 L
Excepted quantity: E0
Transport category: 2
Tunnel restriction code: D

Inland waterways transport (ADN)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.1
Classification code: 5F
Special Provisions: 190 327 344 625
Limited quantity: 1 L
Excepted quantity: E0

Marine transport (IMDG)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2, see SP63
Marine pollutant: No
Special Provisions: 63, 190, 277, 327, 344, 959
Limited quantity: See SP277
Excepted quantity: E0
EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS, flammable
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -



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Hazard label:	2.1
Special Provisions:	A145 A167 A802
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning: Flammable gases.

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 28: Hydrocarbons, C10-C13, n-alkanes, iso-alkanes, cyclics, aromates (2-25 %); Baseoil - unspecified, Distillates (petroleum), hydrotreated light naphthenic; isobutane; butane

2010/75/EU (VOC): No information available.

2004/42/EC (VOC): No information available.

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]:

Calculation method.

Aerosol directive (75/324/EEC)

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,8,10,11,14,15.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances



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ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H372	Causes damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)