## Safety data sheet according to 1907/2006/EC. Article 31

**AKEMI®** 

Printing date 07.09.2018 Version number 2 Revision: 07.09.2018

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

· 1.1 Product identifier

• Trade name: Top Shield Black High-Performance Protection

- Article number: 12018

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 Protective impregnation

· 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH

Lechstrasse 28 D 90451 Nürnberg Tel. +49(0)911-642960 Fax. +49(0)911-644456 e-mail info@akemi.de

Further information obtainable

from:

Laboratory

· 1.4 Emergency telephone

<u>number:</u> Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH

Tel. +49(0)911-64296-59

Reachable during the following office hours: Monday – Thursday from 07:30 a.m. to 16:30 p.m.

Friday from 07:30 a.m. to 13:30 p.m.

+44 (171) 635 91 91

National Poison Inform. Centre

Medical Toxicology Unit Avalonley Road London SE14 5ER

#### **SECTION 2: Hazards identification**

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin

with water [or shower].

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention.

Storage: Store in a well-ventilated place. Keep cool.

Store locked up.

(Contd. on page 2)



### according to 1907/2006/EC, Article 31

Printing date 07.09.2018 Version number 2 Revision: 07.09.2018

#### Trade name: Top Shield Black High-Performance Protection

(Contd. of page 1)

#### · 2.2 Label elements

 Labelling according to Regulation (EC) No 1272/2008

· Hazard pictograms

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



Danger





GHS02 GHS07 GHS08

Signal word

Hazard-determining components

of labelling:

2,2,4,6,6-pentamethylheptan

Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics

<u>Hazard statements</u>
 <u>H226 Flammable liquid and vapour.</u>
 H319 Causes serious eye irritation.

H304 May be fatal if swallowed and enters airways. H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label

at hand.

P102 Keep out of reach of children. P103 Read label before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

P280 Wear eye protection / face protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/

doctor.

P331 Do NOT induce vomiting.

P302+P352 IF ON SKIN: Wash with plenty of water.

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+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/

regional/national/international regulations.

Additional information: EUH066 Repeated exposure may cause skin dryness or cracking.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

PBT: Not applicable.√P∨B: Not applicable.

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

· 3.2 Chemical characterisation: Mixtures

Description: Mixture: consisting of the following components.

· Dangerous components:

CAS: 13475-82-6 EINECS: 236-757-0 Reg.nr.: 01-2119490725-29 2,2,4,6,6-pentamethylheptan

Flam. Liq. 3, H226
Asp. Tox. 1, H304
Aquatic Chronic 4, H413

12.5-25%

(Contd. on page 3)



### according to 1907/2006/EC, Article 31

Printing date 07.09.2018 Version number 2 Revision: 07.09.2018

### **Trade name:** Top Shield Black High-Performance Protection

		(Contd. of page 2)
EC number: 923-037-2	Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics	12.5-25%
Reg.nr.: 01-2119471991-29-xxx	X Flam. Liq. 3, H226	
	& Asp. Tox. 1, H304 Aquatic Chronic 2, H411	
CAS: 5593-70-4	tetra-n-butoxytitanium	1-5%
EINECS: 227-006-8	♠ Flam. Lig. 3, H226	
Reg.nr.: 01-2119967423-33	Eye Dam. 1, H318	
	5 Skin Irrit. 2, H315; STOT SE 3, H335-H336	
CAS: 1333-86-4	Carbon black	<1%
EINECS: 215-609-9 Reg.nr.: 01-2119384822-32-00x	♦ Self-heat. 1, H251	
		40/
CAS: 67-56-1 EINECS: 200-659-6	methanol	<1%
Index number: 603-001-00-X	© Flam. Liq. 2, H225 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	
Reg.nr.: 01-2119433307-44	STOT SE 1, H370	
· Additional information:	For the wording of the listed hazard phrases refer to section 16.	
· Additional information.	To the wording of the listed hazard phrases refer to section 16.	

#### **SECTION 4: First aid measures**

· 4.1 Description of first aid measures

• General information: Take affected persons out into the fresh air.

Position and transport stably in side position.

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

· After skin contact: If skin irritation continues, consult a doctor.

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

doctor.

After swallowing:
 If symptoms persist consult doctor.

• 4.2 Most important symptoms and effects, both acute and

<u>delayed</u> Headache

Breathing difficulty Profuse sweating

Dizziness Dizziness Nausea

Information for doctor:
 Symptoms in intoxication with (aromatic) hydrocarbons (dosis letalis about 30 g)

a) In acute intoxication: headache, dizziness, euphoria, gastro-intestinal

dysfunction, state of excitement, coma.

b) In chronic intoxication: myelotoxic damage, fatigue, dizziness, emaciation,

cardiac palpitation after physical exercise, leucopenia, anemia, leukosis.

Therapy in hydrocarbons intoxication: In case of inhalation provision of fresh air; in case of peroral intake administration of Carbo medicinalis; only after intubation conduct of gastrolavage in application of Carbo medicinalis; in case of

cramps administration of Diazepam 20 mg intravenously.

• <u>Hazards</u> Danger of impaired breathing.

 4.3 Indication of any immediate medical attention and special treatment needed

If swallowed, gastric irrigation with added, activated carbon.

If swallowed or in case of vomiting, danger of entering the lungs.

### **SECTION 5: Firefighting measures**

· 5.1 Extinguishing media

· Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol

resistant foam.

(Contd. on page 4)



### according to 1907/2006/EC, Article 31

Printing date 07.09.2018 Version number 2 Revision: 07.09.2018

**Trade name:** Top Shield Black High-Performance Protection

(Contd. of page 3)

· 5.2 Special hazards arising from

**the substance or mixture** Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide (CO)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

· 5.3 Advice for firefighters

• <u>Protective equipment:</u> Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

Wear fully protective suit.

· Additional information Dispose of fire debris and contaminated fire fighting water in accordance with

official regulations.

#### **SECTION 6: Accidental release measures**

 6.1 Personal precautions, protective equipment and

<u>emergency procedures</u> Ensure adequate ventilation

Use respiratory protective device against the effects of fumes/dust/aerosol.

Keep away from ignition sources.

 $\cdot$  **6.2 Environmental precautions:** Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage

system.

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

· 6.3 Methods and material for

<u>containment and cleaning up:</u> Absorb with liquid-binding material (sand, diatomite, acid binders, universal

binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

• 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 Keep receptacles tightly sealed.

Store in cool, dry place in tightly closed receptacles.

Keep away from heat and direct sunlight.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier

than air).

Use only in well ventilated areas.

Ensure good ventilation/exhaustion at the workplace.

· Information about fire - and

explosion protection: No special measures required.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

Requirements to be met by

<u>storerooms and receptacles:</u> <u>Store only in the original receptacle.</u>

Prevent any seepage into the ground.

· Information about storage in one

common storage facility: Store away from oxidising agents.

Store away from foodstuffs.

· Further information about storage

conditions: Store receptacle in a well ventilated area.

Protect from frost.

Storage class: 3

(Contd. on page 5)



### according to 1907/2006/EC, Article 31

Printing date 07.09.2018 Version number 2 Revision: 07.09.2018

Trade name: Top Shield Black High-Performance Protection

(Contd. of page 4)

· 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:

1333-86-4 Carbon black

WEL Short-term value: 7 mg/m³ Long-term value: 3.5 mg/m³

67-56-1 methanol

WEL Short-term value: 333 mg/m³, 250 ppm Long-term value: 266 mg/m³, 200 ppm

Sk

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

· 8.2 Exposure controls

· Personal protective equipment:

General protective and hygienic

measures:

Do not eat, drink, smoke or sniff while working.

Apply solvent resistant skin cream before starting work.

Use skin protection cream for skin protection.

Clean skin thoroughly immediately after handling the product.

Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Respiratory protection:

Filter AX

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. Preventive skin protection by use of skin-protecting agents is recommended.

• Protection of hands:

After use of gloves apply skin-cleaning agents and skin cosmetics.

Skin protection agent recommendation for preventive skin shelter without use of

protective gloves:

STOKODERM (http://www.stoko.com)

Skin protection agent recommendation for preventive skin shelter in application

and combination of protective gloves: STOKO EMULSION (http://www.stoko.com)

Skin protection recommendation for skin cleaning after product handling:

FRAPANTOL (http://www.stoko.com)

Skin protection agent recommendation for skin aftercare:

STOKO VITAN (http://www.stoko.com)

The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory anylyses of the company KCL

GmbH in compliance with EN374.

This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH,

Germany, 36124 Eichenzell, internet: http://www.kcl.de).

(Contd. on page 6)



### according to 1907/2006/EC, Article 31

Printing date 07.09.2018 Version number 2 Revision: 07.09.2018

Trade name: Top Shield Black High-Performance Protection

(Contd. of page 5)



### Protective gloves

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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration

times, rates of diffusion and the degradation

· Material of gloves Fluorocarbon rubber (Viton)

> 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.

Value for the permeation: Level ≤ 6; 480 min Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the

protective gloves and has to be observed.

· For the permanent contact gloves made of the following materials are

suitable:

Fluorocarbon rubber (Viton)

Vitoject (KCL, Art\_No. 890)

Butyl rubber, BR

 As protection from splashes gloves made of the following materials are

suitable:

Nitrile rubber, NBR

Camatril (KCL, 730, 731, 732, 733)

Chloroprene rubber, CR

Camapren (KCL, Art\_No. 720, 722, 726)

Butoject (KCL, Art\_No. 897, 898) Fluorocarbon rubber (Viton) Vitoject (KCL, Art\_No. 890) Butoject (KCL, Art\_No. 897, 898)

Butyl rubber, BR

· Not suitable are gloves made of

the following materials:

Natural rubber, NR

Leather gloves

Strong material gloves

Gogales recommended during refilling · Eye protection:

· Body protection: Protective work clothing

### **SECTION 9: Physical and chemical properties**

· 9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form: Fluid Colour: Black Odour: Specific type Odour threshold: Not determined.

· pH-value: Not applicable

· Change in condition

Melting point/freezing point: Undetermined. Initial boiling point and boiling range: Undetermined.

(Contd. on page 7)



### according to 1907/2006/EC, Article 31

Printing date 07.09.2018 Version number 2 Revision: 07.09.2018

Trade name: Top Shield Black High-Pe	errormance Protection	
	(Contd. of page 6)	
· Flash point:	42 °C	
· Flammability (solid, gas):	Not applicable.	
· Ignition temperature:	270 °C	
· Decomposition temperature:	Not determined.	
· Auto-ignition temperature:	Product is not selfigniting.	
· Explosive properties:	Product does not present an explosion hazard.	
<ul> <li>Explosion limits:</li> <li>Lower:</li> <li>Upper:</li> </ul>	0.7 Vol % 10.4 Vol %	
· Vapour pressure at 20 °C:	10.7 hPa	
Density at 20 °C:     Relative density     Vapour density     Evaporation rate	0.87 g/cm <sup>3</sup> Not determined. Not determined. Not determined.	
Solubility in / Miscibility with water:	Not miscible or difficult to mix.	
· Partition coefficient: n-octanol/water:	Not determined.	
<ul> <li>Viscosity:         <ul> <li>Dynamic:</li> <li>Kinematic:</li> </ul> </li> </ul>	Not determined. Not determined.	
Solvent content:     Organic solvents:     9.2 Other information	50.0 % 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 and stored according to specifications.

· 10.3 Possibility of hazardous

reactions Reacts with strong oxidising agents.

Forms flammable gases/fumes.

• 10.4 Conditions to avoid
• 10.5 Incompatible materials:

No further relevant information available.

No further relevant information available.

10.6 Hazardous decomposition

products: Carbon monoxide and carbon dioxide

### **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:

**ATE (Acute Toxicity Estimates)** 

Inhalative LC50/4 h 766 mg/l (rat)

13475-82-6 2,2,4,6,6-pentamethylheptan

Oral LD50 >5,000 mg/kg (rat)

(Contd. on page 8)



### according to 1907/2006/EC, Article 31

Printing date 07.09.2018 Version number 2 Revision: 07.09.2018

Trade name: Top Shield Black High-Performance Protection

(Contd. of page 7)

1.1.1.0.	1.050/01	F (v.1)	(Conta. or page 1)
innalative	LC50/8h	>5 ppm (rat)	
Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics			
Oral	LD50	>5,000 mg/kg (rat)	
Inhalative	LC50/8h	>5 mg/l (rat)	

· Primary irritant effect:

· Skin corrosion/irritation Based on available data, the classification criteria are not met.

· Serious eye damage/irritation Causes serious eye irritation.

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

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity
 Carcinogenicity
 Reproductive toxicity
 STOT-single exposure
 STOT-repeated exposure
 Based on available data, the classification criteria are not met.
 Based on available data, the classification criteria are not met.
 Based on available data, the classification criteria are not met.
 Based on available data, the classification criteria are not met.
 Based on available data, the classification criteria are not met.

· Aspiration hazard May be fatal if swallowed and enters airways.

### **SECTION 12: Ecological information**

### · 12.1 Toxicity

· Aquatic toxicity:		
13475-82-6 2,2,4,6,6-pentamethylheptan		
IC50/72h	>1,000 mg/l (Pseudokirchneriella subcapitata)	
EC50/48h	>1,000 mg/l (daphnia magna)	
LC50/96h	>1,000 mg/l (Oncorhynchus mykiss)	
Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics		
EL0/48h	1,000 mg/l (daphnia magna)	
EL0/72h	1,000 mg/l (Pseudokirchneriella subcapitata)	
LL0/96h	1,000 mg/l (Oncorhynchus mykiss)	
NOELR/72h	1,000 mg/l (Pseudokirchneriella subcapitata)	
NOELR/21d	<1 mg/l (daphnia magna)	

### · 12.2 Persistence and

degradability
 12.3 Bioaccumulative potential
 12.4 Mobility in soil
 No further relevant information available.
 No further relevant information available.

Additional ecological information:

• <u>General notes:</u> Do not allow product to reach ground water, water course or sewage system.

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for

water

#### · 12.5 Results of PBT and vPvB assessment

PBT: Not applicable.√PvB: Not applicable.

• 12.6 Other adverse effects No further relevant information available.

### **SECTION 13: Disposal considerations**

### · 13.1 Waste treatment methods

• Recommendation Must not be disposed together with household garbage. Do not allow product to

reach sewage system.

· Uncleaned packaging:

· Recommendation: Empty contaminated packagings thoroughly. They may be recycled after

thorough and proper cleaning.

(Contd. on page 9)



# Safety data sheet according to 1907/2006/EC, Article 31

Printing date 07.09.2018 Version number 2 Revision: 07.09.2018

Trade name: Top Shield Black High-Performance	Protection
· Recommended cleansing agents: Alcohol	(Contd. of page 8)
SECTION 14: Transport information	
· <u>14.1 UN-Number</u> · ADR, IMDG, IATA	UN3295
<ul> <li>14.2 UN proper shipping name</li> <li>ADR</li> <li>IMDG, IATA</li> </ul>	3295 HYDROCARBONS, LIQUID, N.O.S. HYDROCARBONS, LIQUID, N.O.S.
· 14.3 Transport hazard class(es)	
· ADR	
· <u>Class</u> · <u>Label</u>	3 (F1) Flammable liquids.
· IMDG, IATA	
· <u>Class</u> · <u>Label</u>	3 Flammable liquids. 3
· <b>14.4 Packing group</b> · ADR, IMDG, IATA	III
<ul> <li>14.5 Environmental hazards:</li> <li>Marine pollutant:</li> </ul>	No
<ul> <li>14.6 Special precautions for user</li> <li>Danger code (Kemler):</li> <li>EMS Number:</li> <li>Stowage Category</li> </ul>	Warning: Flammable liquids. 30 F-E,S-D A
<ul> <li>14.7 Transport in bulk according to Annex II o Marpol and the IBC Code</li> </ul>	Mot applicable.
· Transport/Additional information:	
ADR     Limited quantities (LQ)     Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category     Tunnel restriction code	Maximum het quantity per outer packaging. 1000 mi 3 D/E
IMDG     Limited quantities (LQ)     Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3295 HYDROCARBONS, LIQUID, N.O.S., 3, III  (Contd. on page 10)



### according to 1907/2006/EC, Article 31

Printing date 07.09.2018 Version number 2 Revision: 07.09.2018

Trade name: Top Shield Black High-Performance Protection

(Contd. of page 9)

### **SECTION 15: Regulatory information**

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

· Labelling according to Regulation

(EC) No 1272/2008 GHS label elements

· 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

- REGULATION (EC) No 1907/2006

ANNEX XVII Conditions of restriction: 3

National regulations:

· Information about limitation of use: Employment restrictions concerning juveniles must be observed.

Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

- VOC EU 432.1 g/l

· 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.

H226 Flammable liquid and vapour. H251 Self-heating: may catch fire.

H301 Toxic if swallowed.

H304 May be fatal if swallowed and enters airways.

H311 Toxic in contact with skin. H315 Causes skin irritation. H318 Causes serious eye damage.

H331 Toxic if inhaled.

H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness.

H370 Causes damage to organs.

H411 Toxic to aquatic life with long lasting effects.

H413 May cause long lasting harmful effects to aquatic life.

· Recommended restriction of use refer to Technical Data Sheet (TDS)

Department issuing SDS: Laboratory

· Contact: Dieter Zimmermann

· 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

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 Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

(Contd. on page 11)



### Safety data sheet according to 1907/2006/EC, Article 31

Printing date 07.09.2018 Version number 2 Revision: 07.09.2018

### Trade name: Top Shield Black High-Performance Protection

(Contd. of page 10)

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Self-heat. 1: Self-heating substances and mixtures – Category 1

Acute Tox. 3: Acute toxicity - Category 3

Skin Irrit. 2: Skin corrosion/irritation - Category 2

Eye Dam. 1: Serious eye damage/eye irritation - Category 1 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Asp. Tox. 1: Aspiration hazard - Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - Category 2 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3 Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

· \* Data compared to the previous version altered.

Adaptation in accordance with REACH directive 1907/2006/EC