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

1.1. Product identifier

TPdur bright

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

coating

1.3. Details of the supplier of the safety data sheet

Company name:	durXtreme GmbH	
Street:	Nicolaus-Otto-Str. 39	
Place:	D-89079 Ulm	
Telephone:	+49 731 360 809 16	Telefax: +49 731 360 809 17
e-mail:	info@durXtreme.com	
e-mail (Contact person):	msds@durXtreme.com	
Internet:	www.durXtreme.com	

1.4. Emergency telephone number:

+44 1865 407333 (Transport Code: MICROCHEM29003-NCEC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Flammable liquid: Flam. Liq. 2
Acute toxicity: Acute Tox. 4
Skin corrosion/irritation: Skin Corr. 1B
Serious eye damage/eye irritation: Eye Dam. 1
Specific target organ toxicity - single exposure: STOT SE 3
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
Highly flammable liquid and vapour.
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause drowsiness or dizziness.
Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

n-butyl acetate
organic polysiloxane compound
3-aminopropyltriethoxysilane

Signal word: Danger

Pictograms:

Hazard statements

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

H336	May cause drowsiness or dizziness.
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.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands and face thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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 call a POISON CENTER/doctor.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Pictograms:

Hazard statements

H314-H412

Precautionary statements

P260-P264-P280-P303+P361+P353-P305+P351+P338-P310

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Polysilanes in organic solvents (halogen-free)

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
123-86-4	n-butyl acetate			>=50 - <=70 %
	204-658-1	607-025-00-1	01-2119485493-29	
	Flam. Liq. 3, STOT SE 3; H226 H336 EUH066			
475645-84-2	organic polysiloxane compound			30 - < 50 %
	Flam. Liq. 2, Acute Tox. 4, Skin Corr. 1B, Aquatic Chronic 3; H225 H302 H314 H412			
919-30-2	3-aminopropyltriethoxysilane			>=1 - <3 %
	213-048-4	612-108-00-0		
	Acute Tox. 4, Skin Corr. 1B; H302 H314			
108-88-3	toluene			0,3 - < 1 %
	203-625-9	601-021-00-3		
	Flam. Liq. 2, Repr. 2, Asp. Tox. 1, STOT RE 2, Skin Irrit. 2, STOT SE 3; H225 H361d *** H304 H373 ** H315 H336			

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 contaminated, saturated clothing immediately. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Remove casualty to fresh air and keep warm and at rest. Call a physician immediately. No direct artificial respiration to be given by first aider.

After contact with skin

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Call a physician immediately.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Check for and remove any contact lenses.

After ingestion

Rinse mouth. Do NOT induce vomiting. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

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

Symptoms:
irritation, Headache, Cough.
Narcotic effects.
Has degreasing effect on the skin.

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

Use Foam, Carbon dioxide (CO2) to extinguish. Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Never use water.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)

5.3. Advice for firefighters

Special protective equipment for firefighters Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Dispose according to legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protection equipment.

6.2. Environmental precautions

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

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). Collect in closed and suitable containers for disposal. 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 8Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Do not breathe gas/fumes/vapour/spray. Do not get in eyes or on skin or clothing. Wear suitable protective clothing, gloves and eye/face protection. Provide adequate ventilation as well as local exhaustion at critical locations.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges . Provide earthing of containers, equipment, pumps and ventilation facilities.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep/Store only in original container. Open containers in periodic time intervals to relieve pressure, whichmay have been generated (ammonia).

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions

Keep container tightly closed in a cool, well-ventilated place. Keep container dry. Protect from sunlight. Donot store at temperatures above 25 C°.

7.3. Specific end use(s)

coating

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
123-86-4	Butyl acetate	150	724		TWA (8 h)	WEL
		200	966		STEL (15 min)	WEL
108-88-3	Toluene	50	191		TWA (8 h)	WEL
		100	384		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
123-86-4	n-butyl acetate		
Worker DNEL, acute	inhalation		960 mg/m³
Worker DNEL, long-term	inhalation		480 mg/m³
Consumer DNEL, acute	inhalation		859,7 mg/m³
Consumer DNEL, long-term	inhalation		102,34 mg/m³

PNEC values

CAS No	Substance
Environmental compartment	Value
123-86-4	n-butyl acetate
Freshwater	0,18 mg/l
Marine water	0,018 mg/l
Freshwater sediment	0,981 mg/kg
Marine sediment	0,0981 mg/kg
Soil	0,0903 mg/kg

Additional advice on limit values

Y: A risk of reproductive effects needs not to be feared if the occupational exposure limit value (AGW) and the biological limit value (BGW) is kept

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Protective and hygiene measures

Protect skin by using skin protective cream. Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin and eyes. Keep away from food, drink and animal feedingstuffs.

Eye/face protection

Tightly sealed safety glasses.

Hand protection

Breakthrough time (maximum wearing time): >10min
Thickness of the glove material: > 0,5mm
By short-term hand contact: solvent resistant protective gloves (Butyl caoutchouc (butyl rubber))

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. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Protective clothing antistatic, flame retardant
Protective clothing, Category 3, Type 3 Liquid-tight
Protective clothing, Category 3, Type 4 Spray-tight

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Combination filtering device (EN 14387) A2 B2 E2 K2 Hg/P3, DIN EN371/372

Environmental exposure controls

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	Ammonia

		Test method
pH-Value:	not applicable	
Changes in the physical state		
Initial boiling point and boiling range:	124 °C	(Solvent)
Flash point:	16 °C	
Flammability		
Solid:	not determined	
Gas:	not determined	
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Ignition temperature:	420 °C	(Solvent)
Auto-ignition temperature		
Solid:	not determined	
Gas:	not determined	
Decomposition temperature:	not determined	
Vapour pressure:	not determined	
Density:	0,93 g/cm³	
Water solubility:	Reacts with : Water	

Solubility in other solvents

not determined

Partition coefficient:	not determined
Vapour density:	not determined

Evaporation rate:	not determined

9.2. Other information

Solid content:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

The product hydrolyses quickly in the presence of water to: Hydrogen, Ammonia (NH3), siloxanes

10.2. Chemical stability

The product hydrolyses quickly in the presence of water to: Hydrogen, Ammonia (NH3), siloxanes Due to gaseous decomposition products, overpressure can occur in tightly sealed containers.

10.3. Possibility of hazardous reactions

Reacts vigorously with water, including moisture in the air. Reacts with : Alcohol, Amines; Decomposition under formation of: Ammonia

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect against direct sunlight.

10.5. Incompatible materials

Oxidising agent, Base, Acid, halogenated constituents

10.6. Hazardous decomposition products

Hydrogen, Ammonia

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

The product has not been tested.

Acute toxicity

The product has not been tested.

ATEmix calculated

ATE (oral) 1304,2 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
123-86-4	n-butyl acetate				
	oral	LD50 >10000 mg/kg	Scenedesmus subspicatus		
	dermal	LD50 >17600 mg/kg	Rabbit	GESTIS	OECD 403
	inhalation (4 h) vapour	LC50 21,1 mg/l	Rat		
475645-84-2	organic polysiloxane compound				
	oral	LD50 300 - 2000 mg/kg	Rat		
919-30-2	3-aminopropyltriethoxysilane				
	oral	LD50 1780 mg/kg	Rat	RTECS	
	dermal	LD50 3800 mg/kg	Rabbit	RTECS	
108-88-3	toluene				
	dermal	LD50 12200 mg/kg	Rabbit	GESTIS	
	inhalation (4 h) vapour	LC50 49 mg/l	Rat	GESTIS	

Irritation and corrosivity

Skin corrosion/irritation:
OECD 404, Rabbit:
n-butyl acetate: negative.
organic polysiloxane compound: Causes chemical burns.

Serious eye damage/eye irritation: (n-butyl acetate) OECD 405, Rabbit: negative.

Sensitising effects

n-butyl acetate, toluene:
Respiratory or skin sensitisation: Regulation (EC) No. 440/2008, Annex, B.6 (Maximisation test), Guinea pig: negative.

Carcinogenic/mutagenic/toxic effects for reproduction

organic polysiloxane compound:
Germ cell mutagenicity, In vitro mutagenicity/genotoxicity:
OECD 471 (Ames test): negative. (Escherichia coli.)

STOT-single exposure

May cause drowsiness or dizziness. (n-butyl acetate, toluene)

Practical experience

Other observations

n-butyl acetate:
Further information: Has degreasing effect on the skin.

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
123-86-4	n-butyl acetate						
	Acute fish toxicity	LC50	18 mg/l	96 h	Pimephales promelas (fathead minnow)		
	Acute algae toxicity	ErC50	675 mg/l	72 h	Scenedesmus subspicatus		
	Acute crustacea toxicity	EC50	44 mg/l	48 h	Ceriodaphnia spec		
	Acute bacteria toxicity	(356 mg/l)			Activated sludge		
475645-84-2	organic polysiloxane compound						
	Acute fish toxicity	LC50 mg/l	57,1	96 h	Brachydanio rerio (zebra-fish)		
919-30-2	3-aminopropyltriethoxysilane						
	Acute algae toxicity	ErC50	603 mg/l	72 h	Desmodesmus subspicatus		
	Acute crustacea toxicity	EC50	331 mg/l	48 h	Daphnia magna		
108-88-3	toluene						
	Acute fish toxicity	LC50	13 mg/l	96 h	Carassius auratus	IUCLID	
	Acute algae toxicity	ErC50 mg/l	12,5	72 h		GESTIS	

12.2. Persistence and degradability

The product has not been tested.

n-butyl acetate: Readily biodegradable (according to OECD criteria).

12.3. Bioaccumulative potential

The product has not been tested.

n-butyl acetate: Does not accumulate in organisms.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
123-86-4	n-butyl acetate	1,78
919-30-2	3-aminopropyltriethoxysilane	0,31
108-88-3	toluene	2,73

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

n-butyl acetate: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

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 mix with aqueous wastes or wastes containing protic substances. Disposal in conformity with the standards of a suitable and authorized waste disposal site. Optionally keep consultation with the disposal or the competent authority. Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 2924
14.2. UN proper shipping name:	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (organic polysiloxane compound, n-butyl acetate)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3+8

Classification code:	FC
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	338
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number:	UN 2924
14.2. UN proper shipping name:	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (organic polysiloxane compound, n-butyl acetate)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3+8

Classification code:	FC
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2

Marine transport (IMDG)

14.1. UN number:	UN 2924
14.2. UN proper shipping name:	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (organic polysiloxane compound, n-butyl acetate)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3+8

Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-C

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 2924
14.2. UN proper shipping name:	FLAMMABLE LIQUID, CORROSIVE, N.O.S.(organic polysiloxane compound, n-butyl acetate)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3+8

Special Provisions:	A3
Limited quantity Passenger:	0.5 L
Passenger LQ:	Y340
Excepted quantity:	E2
IATA-packing instructions - Passenger:	352
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	363
IATA-max. quantity - Cargo:	5 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

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 3: n-butyl acetate

Entry 48: toluene

National regulatory information

Water contaminating class (D): 2 - clearly water contaminating

Additional information

)

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): 2,3,9,11.

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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

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

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Acute Tox. 4; H302	Calculation method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
STOT SE 3; H336	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

Observe in addition any national regulations!

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.)