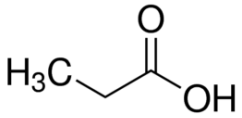
PROPIONIC ACID FOR SYNTHESIS

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Reference number: 00265
Issue date: 22-12-2022 Revision date: 22-12-2022 Supersedes version of: 14-04-2016 Version: 1.0

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	PROPIONIC ACID FOR SYNTHESIS
IUPAC name	:	Propanoic acid
EC Index-No.	:	607-089-00-0
EC-No.	:	201-176-3
CAS-No.	:	79-09-4
Product code	:	00265
Type of product	:	Carboxylic acids
Formula	:	C3H6O2
Chemical structure	:	
Synonyms	:	Carboxyethane, Ethanecarboxylic acid, Ethyl formic acid, Metacetonic acid, Methylacetic acid

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

1.2.1. Relevant identified uses

Use of the substance/mixture	:	Laboratory chemicals, Manufacture of substances
Use of the substance/mixture	:	Solvents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai
INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number	:	+ 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3	H226
Skin corrosion/irritation, Category 1, Sub-Category 1B	H314
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335

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

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. May cause respiratory irritation. Causes severe skin burns and eye damage.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02 GHS05 GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H314 - Causes severe skin burns and eye damage.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P280 - Wear protective clothing, eye protection, face protection, protective gloves.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type	:	Mono-constituent
Name	:	PROPIONIC ACID
CAS-No.	:	79-09-4
EC-No.	:	201-176-3
EC Index-No.	:	607-089-00-0

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	:	Call a physician immediately.
First-aid measures after inhalation	:	Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	:	Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor. Call a physician immediately.
First-aid measures after eye contact	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Call a physician immediately.
First-aid measures after ingestion	:	Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects	:	Causes severe skin burns and eye damage.
Symptoms/effects after inhalation	:	May cause respiratory irritation.
Symptoms/effects after skin contact	:	Burns.

Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

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 : Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media : Do not use extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. On land, sweep or shovel into suitable containers. Collect spillage. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe vapours. Provide good ventilation in process area to prevent formation of vapour. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

PROPIONIC ACID FOR SYNTHESIS (79-09-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Propionic acid
IOEL TWA [ppm]	10 ppm
IOEL STEL	62 mg/m³
IOEL STEL [ppm]	20 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	31 mg/m³
AGW (OEL TWA) [2]	10 ppm
Peak exposure limitation factor	2(I)
Remark	EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Portugal - Occupational Exposure Limits	
Local name	Ácido propiónico
OEL TWA [ppm]	10 ppm
Regulatory reference	Norma Portuguesa NP 1796:2014

PROPIONIC ACID FOR SYNTHESIS (79-09-4)	
Spain - Occupational Exposure Limits	
Local name	Ácido propiónico
VLA-ED (OEL TWA) [1]	31 mg/m³
VLA-ED (OEL TWA) [2]	10 ppm
VLA-EC (OEL STEL)	62 mg/m³
VLA-EC (OEL STEL) [ppm]	20 ppm
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2022. INSHT
United Kingdom - Occupational Exposure Limits	
Local name	Propionic acid
WEL TWA (OEL TWA) [1]	31 mg/m³
WEL TWA (OEL TWA) [2]	10 ppm
WEL STEL (OEL STEL)	46 mg/m³
WEL STEL (OEL STEL) [ppm]	15 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
USA - ACGIH - Occupational Exposure Limits	
Local name	Propionic acid
ACGIH OEL TWA [ppm]	10 ppm
Remark (ACGIH)	TLV® Basis: Eye, skin, & URT irr
Regulatory reference	ACGIH 2022

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

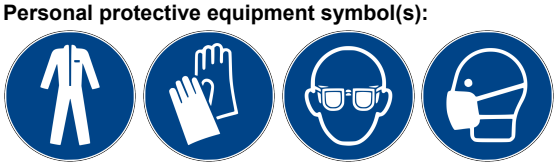
8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses

8.2.2.2. Skin protection

Hand protection:
Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:
Wear appropriate mask

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear liquid.
Molecular mass	:	74.08 g/mol
Colour	:	Colourless.
Odour	:	Pungent. unpleasant.
Odour threshold	:	No data available
pH	:	2.5 at 20°C
pH solution concentration	:	10 %
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	Not applicable
Freezing point	:	-20.5 °C
Boiling point	:	141 °C
Flash point	:	54 °C
Auto-ignition temperature	:	512 °C
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Not applicable
Vapour pressure	:	3.2 hPa at 20 °C
Relative vapour density at 20 °C	:	2.56 (Air = 1.0)
Relative density	:	No data available
Density	:	0.993 g/cm³ at 20°C
Solubility	:	Water: Miscible in water
Partition coefficient n-octanol/water (Log Pow)	:	0.25
Viscosity, kinematic	:	1.027 mm²/s
Viscosity, dynamic	:	1.02 cP at 25°C
Explosive properties	:	No data available
Oxidising properties	:	No data available
Lower explosive limit (LEL)	:	2.9 vol %
Upper explosive limit (UEL)	:	12.1 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified
Skin corrosion/irritation	:	Causes severe skin burns. pH: 2.5 at 20°C
Serious eye damage/irritation	:	Assumed to cause serious eye damage pH: 2.5 at 20°C
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	May cause respiratory irritation.
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified

PROPIONIC ACID FOR SYNTHESIS (79-09-4)	
Viscosity, kinematic	1.027 mm²/s

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	:	Before neutralisation, the product may represent a danger to aquatic organisms.
Hazardous to the aquatic environment, short–term (acute)	:	Not classified
Hazardous to the aquatic environment, long–term (chronic)	:	Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

PROPIONIC ACID FOR SYNTHESIS (79-09-4)	
Partition coefficient n-octanol/water (Log Pow)	0.25

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1 UN number

UN-No. (ADR)	: UN 3463
UN-No. (IMDG)	: UN 3463
UN-No. (IATA)	: UN 3463
UN-No. (ADN)	: UN 3463
UN-No. (RID)	: UN 3463

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: PROPIONIC ACID
Proper Shipping Name (IMDG)	: PROPIONIC ACID
Proper Shipping Name (IATA)	: Propionic acid
Proper Shipping Name (ADN)	: PROPIONIC ACID
Proper Shipping Name (RID)	: PROPIONIC ACID
Transport document description (ADR)	: UN 3463 PROPIONIC ACID, 8 (3), II, (D/E)
Transport document description (IMDG)	: UN 3463 PROPIONIC ACID, 8 (3), II
Transport document description (IATA)	: UN 3463 Propionic acid, 8 (3), II
Transport document description (ADN)	: UN 3463 PROPIONIC ACID, 8 (3), II
Transport document description (RID)	: UN 3463 PROPIONIC ACID, 8 (3), II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8 (3)

Danger labels (ADR) : 8, 3

:

IMDG

Transport hazard class(es) (IMDG) : 8 (3)

Danger labels (IMDG) : 8, 3

:

IATA

Transport hazard class(es) (IATA) : 8 (3)

Danger labels (IATA) : 8, 3

:

ADN

Transport hazard class(es) (ADN) : 8 (3)

Danger labels (ADN) : 8, 3

:

RID

Transport hazard class(es) (RID) : 8 (3)

Danger labels (RID) : 8, 3

:

14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : CF1

Limited quantities (ADR) : 1l

Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02

Mixed packing provisions (ADR) : MP15

Portable tank and bulk container instructions (ADR) : T7

Portable tank and bulk container special provisions (ADR) : TP2

Tank code (ADR) : L4BN

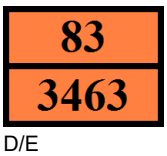
Vehicle for tank carriage : FL

Transport category (ADR) : 2

Special provisions for carriage - Operation (ADR) : S2

Hazard identification number (Kemler No.) : 83

Orange plates :



Tunnel restriction code (ADR) : D/E

EAC code : •2W

APP code : A(fl)

Transport by sea

Limited quantities (IMDG)	:	1 L
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P001
IBC packing instructions (IMDG)	:	IBC02
Tank instructions (IMDG)	:	T7
Tank special provisions (IMDG)	:	TP2
EmS-No. (Fire)	:	F-E
EmS-No. (Spillage)	:	S-C
Stowage category (IMDG)	:	A
Segregation (IMDG)	:	SGG1, SG36, SG49
Properties and observations (IMDG)	:	Colourless flammable liquid with a pungent odour. Miscible with water. Corrosive to lead and most other metals. Burns skin. Vapours irritate mucous membranes. Pure PROPIONIC ACID: flashpoint 50ºC c.c.
MFAG-No	:	132

Air transport

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y840
PCA limited quantity max net quantity (IATA)	:	0.5L
PCA packing instructions (IATA)	:	851
PCA max net quantity (IATA)	:	1L
CAO packing instructions (IATA)	:	855
CAO max net quantity (IATA)	:	30L
ERG code (IATA)	:	8F

Inland waterway transport

Classification code (ADN)	:	CF1
Limited quantities (ADN)	:	1 L
Excepted quantities (ADN)	:	E2
Carriage permitted (ADN)	:	T
Equipment required (ADN)	:	PP, EP, EX, A
Ventilation (ADN)	:	VE01
Number of blue cones/lights (ADN)	:	1

Rail transport

Classification code (RID)	:	CF1
Limited quantities (RID)	:	1L
Excepted quantities (RID)	:	E2
Packing instructions (RID)	:	P001, IBC02
Mixed packing provisions (RID)	:	MP15
Portable tank and bulk container instructions (RID)	:	T7
Portable tank and bulk container special provisions (RID)	:	TP2
Tank codes for RID tanks (RID)	:	L4BN
Transport category (RID)	:	2
Colis express (express parcels) (RID)	:	CE6
Hazard identification number (RID)	:	83

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	**Applicable on**
3(a)	PROPIONIC ACID FOR SYNTHESIS
3(b)	PROPIONIC ACID FOR SYNTHESIS
40.	PROPIONIC ACID FOR SYNTHESIS

REACH Annex XIV (Authorisation List)

PROPIONIC ACID FOR SYNTHESIS is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

PROPIONIC ACID FOR SYNTHESIS is not on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

PROPIONIC ACID FOR SYNTHESIS is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 july 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

PROPIONIC ACID FOR SYNTHESIS is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

PROPIONIC ACID is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

15.1.2. National regulations

Germany

Water hazard class (WGK)	:	WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 483).
Hazardous Incident Ordinance (12. BImSchV)	:	Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	The substance is not listed
SZW-lijst van mutagene stoffen	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	:	The substance is not listed

Denmark

Class for fire hazard	:	Class II-1
Store unit	:	5 liter
Classification remarks	:	R10 <H226;H314;H335>; Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations	:	Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Flam. Liq. 3	Flammable liquids, Category 3

Full text of H- and EUH-statements:	
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.