SAFETY DATA SHEET

Based upon Regulation (EC) No. 1907/2006, as amended by Regulation (EC) No. 453/2010

SILIRUB AQ

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

1.1. Product identifier

Product name : SILIRUB AQ
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Sealant

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

SOUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
☎ +32 14 42 42 31
 +32 14 42 65 14
msds@soudal.com

Manufacturer of the product

SOUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
☎ +32 14 42 42 31
 +32 14 42 65 14
msds@soudal.com

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

2.2. Label elements

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
triacetoxyethylsilane 01-2119881778-15	17689-77-9 241-677-4	1%<C<5%	Acute Tox. 4; H302 Skin Corr. 1B; H314	(1)(10)	Constituent

(1) For H-statements in full: see heading 16
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

If you feel unwell, seek medical advice.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse with water. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms

After inhalation:

No effects known.

After skin contact:

No effects known.

After eye contact:

No effects known.

After ingestion:

No effects known.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Polyvalent foam. Dry chemical powder. Carbon dioxide.

5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

5.3.1 Instructions:

No specific fire-fighting instructions required.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Contain leaking substance. Use appropriate containment to avoid environmental contamination.

6.3. Methods and material for containment and cleaning up

Cover the solid spill with sand/kieselguhr. Scoop solid spill into closing containers. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Store in a dry area. Store at room temperature. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:

Heat sources, oxidizing agents.

7.2.3 Suitable packaging material:

Plastics.

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

If applicable and available it will be listed below.

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

DNEL/DMEL - Workers

triacetoxyethylsilane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute local effects inhalation	32.5 mg/m³	
	Long-term local effects inhalation	32.5 mg/m³	

DNEL/DMEL - General population

triacetoxyethylsilane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	6.5 mg/m³	

PNEC

triacetoxyethylsilane

Compartments	Value	Remark
Fresh water	0.2 mg/l	
Marine water	0.02 mg/l	
Aqua (intermittent releases)	1.7 mg/l	
STP	1 mg/l	
Fresh water sediment	0.74 mg/kg sediment dw	
Marine water sediment	0.074 mg/kg sediment dw	
Soil	0.031 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat.

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection:

Respiratory protection not required in normal conditions.

b) Hand protection:

Gloves.

c) Eye protection:

Safety glasses.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Paste
Odour	Vinegar odour
Odour threshold	No data available
Colour	Variable in colour, depending on the composition
Particle size	No data available
Explosion limits	No data available
Flammability	Non-flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Flash point	> 100 °C
Evaporation rate	No data available
Relative vapour density	No data available
Vapour pressure	No data available
Solubility	water ; insoluble
	organic solvents ; soluble
Relative density	1
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. Other information

Critical temperature	No data available
Critical pressure	No data available
Surface tension	No data available
Absolute density	1025 kg/m³

SECTION 10: Stability and reactivity

10.1. Reactivity
Heating increases the fire hazard.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
Keep away from naked flames/heat.

10.5. Incompatible materials
Oxidizing agents.

10.6. Hazardous decomposition products
Upon combustion: CO and CO2 are formed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
11.1.1 Test results

Acute toxicity

SILIRUB AQ

No (test)data on the mixture available

triacetoxyethylsilane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	1460 mg/kg bw		Rat (male/female)	Experimental value	
Dermal						Data waiving	
Inhalation						Data waiving	

Judgement is based on the relevant ingredients

Conclusion

Not classified for acute toxicity

Corrosion/irritation

SILIRUB AQ

No (test)data on the mixture available

triacetoxyethylsilane

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye						Data waiving	
Eye	Not irritating	OECD 405	24 h	1; 24; 48; 72; 168 hours	Rabbit	Literature study	
Skin	Corrosive	Equivalent to OECD 404	3 minutes	24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating	OECD 404	4 h	1; 24; 48; 72 hrs; 7; 14 days	Rabbit	Literature study	

In the light of practical experience, the classification for this mixture is less stringent than the one based on the calculation set out

Conclusion

Not classified as irritating to the skin

Not classified as irritating to the eyes

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

SILIRUB AQ

No (test)data on the mixture available

triacetoxyethylsilane

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Negative	OECD 406	6 h	24; 48 hours	Guinea pig (female)	Experimental value	

Judgement is based on the relevant ingredients

Conclusion

Not classified as sensitizing for inhalation

Not classified as sensitizing for skin

Specific target organ toxicity

SILIRUB AQ

No (test)data on the mixture available

triacetoxyethylsilane

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)		Subacute toxicity test		General	Reduced body weight and food consumption; CNS effects; signs of necropsy	7 day(s)	Rat (male/female)	Experimental value
Dermal								Data waiving
Inhalation								Data waiving

Judgement is based on the relevant ingredients

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

SILIRUB AQ

No (test)data on the mixture available

triacetoxyethylsilane

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Escherichia coli	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

Mutagenicity (in vivo)

SILIRUB AQ

No (test)data on the mixture available

triacetoxyethylsilane

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative			Mouse (male)		

Carcinogenicity

SILIRUB AQ

No (test)data on the mixture available

Reproductive toxicity

SILIRUB AQ

No (test)data on the mixture available

triacetoxyethylsilane

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	Other	≥ 1600 mg/kg bw/day	17 day(s)	Mouse	No effect		Experimental value
	NOAEL	Other	≥ 1000 mg/kg bw/day	5 day(s)	Mouse	No effect		Experimental value
Maternal toxicity	NOAEL	Other	≥ 1600 mg/kg bw/day	17 day(s)	Mouse	No effect		Experimental value
	NOAEL	Other	≥ 1000 mg/kg bw/day	5 day(s)	Mouse	No effect		Experimental value
Effects on fertility	NOAEL (P)	Other	50 mg/kg bw/day		Rat (female)	No effect		Experimental value
	NOAEL (P)	Other	≥ 2500 mg/kg bw/day		Rat (female)	No effect		Experimental value

Judgement is based on the relevant ingredients

Conclusion CMR

Not classified for reprotoxic or developmental toxicity

Not classified for mutagenic or genotoxic toxicity

Not classified for carcinogenicity

Toxicity other effects

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No (test)data on the mixture available

Chronic effects from short and long-term exposure

SILIRUB AQ

No effects known.

SECTION 12: Ecological information

12.1. Toxicity

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No (test)data on the mixture available

triacetoxyethylsilane

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	251 mg/l	96 h	Brachydanio rerio	Semi-static system	Fresh water	Experimental value; GLP
Acute toxicity invertebrates	EC50	OECD 202	62 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
	NOEC	OECD 202	43 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
	EC50	EU Method C.2	168.7 mg/l	48 h	Daphnia magna	Static system	Fresh water	Read-across; GLP
Toxicity algae and other aquatic plants	EC50	OECD 201	76 mg/l	72 h	Scenedesmus subspicatus	Static system	Fresh water	Experimental value; Growth rate
	EC50	OECD 201	73 mg/l	72 h	Scenedesmus subspicatus	Static system	Fresh water	Experimental value; Biomass
	EC50	OECD 201	24.41 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value
	NOEC	EPA 67014-73-0	25 mg/l	7 day(s)	Pseudokirchneriella subcapitata	Static system	Fresh water	Read-across; Growth rate
Long-term toxicity aquatic invertebrates	NOEC	OECD 211	≥ 100 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Read-across; GLP
Toxicity aquatic micro-organisms	EC50	OECD 209	> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Read-across; GLP
	NOEC	OECD 301C	100 mg/l	28 h	Activated sludge		Fresh water	Read-across

	Parameter	Method	Value	Duration	Species	Value determination
Toxicity soil macro-organisms	LC50	Other	> 1000 mg/kg soil dw	14 day(s)	Eisenia fetida	Experimental value
	NOEC	Other	≥ 1000 mg/kg soil dw	14 day(s)	Eisenia fetida	Experimental value

Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2. Persistence and degradability

triacetoxyethylsilane

Biodegradation water

Method	Value	Duration	Value determination
EU Method C.4	74 %; GLP	21 day(s)	Experimental value

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
OECD 111: Hydrolysis as a function of pH	< 0.2 minutes	Primary degradation	Experimental value

Conclusion

Contains readily biodegradable component(s)

12.3. Bioaccumulative potential

SILIRUB AQ

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

triacetoxyethylsilane

Log Kow

Method	Remark	Value	Temperature	Value determination
KOWWIN		-1.9	20 °C	QSAR

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

triacetoxyethylsilane

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	1	Calculated value

Conclusion

Contains component(s) with potential for mobility in the soil

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

SILIRUB AQ

Global warming potential (GWP)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

triacetoxyethylsilane

Global warming potential (GWP)

Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
08 04 10 (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants other than those mentioned in 08 04 09). Depending on branch of industry and production process, also other waste codes may be applicable. Can be considered as non-hazardous waste according to Regulation (EU) No 1357/2014.

13.1.2 Disposal methods

Allow waste to solidify. Remove waste in accordance with local and/or national regulations. Dispose of small quantities of cured product as household waste. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).
15 01 02 (plastic packaging).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

Rail (RID)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

Inland waterways (ADN)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name
14.3. Transport hazard class(es)

Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

Sea (IMDG/IMSBC)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name
14.3. Transport hazard class(es)

Class	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Marine pollutant	-
Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Annex II of MARPOL 73/78	

Air (ICAO-TI/IATA-DGR)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name
14.3. Transport hazard class(es)

Class	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
< 2 %	

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

· triacetoxyethylsilane	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects,2. Articles not complying with paragraph 1 shall not be placed on the market.3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with R65 or H304,4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).5. Without prejudice to the implementation of

	effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life- threatening lung damage"; b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage"; c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'

National legislation The Netherlands

SILIRUB AQ

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 03
Waterbezwaarlijkheid	11

National legislation Germany

SILIRUB AQ

WGK	1; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

triacetoxyethylsilane

TA-Luft	5.2.5; I

National legislation France

SILIRUB AQ

No data available

National legislation Belgium

SILIRUB AQ

No data available

Other relevant data

SILIRUB AQ

No data available

15.2. Chemical safety assessment

No chemical safety assessment is required.

SECTION 16: Other information

Full text of any H-statements referred to under headings 2 and 3:

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.