

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

### 1.1 Product identifier

Trade name: Bilirubin Auto Total FS Reagent R1  
As part of the kits: 1 0811 XX XX XXX  
(The positions X code different packages.)

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

General use: Reagent for in-vitro diagnostics in human samples  
For professional use only

### 1.3 Details of the supplier of the safety data sheet

Company name: DiaSys Diagnostic Systems GmbH  
Street/POB-No.: Alte Strasse 9  
Postal Code, city: 65558 Holzheim  
WWW: <http://www.diasys.de>  
E-mail: [mail@diasys.de](mailto:mail@diasys.de)  
Telephone: +49 (0) 6432-9146-0  
Telefax: +49 (0) 6432-9146-32  
Department responsible for information:  
Corporate headquarters, Telephone: +49 (0) 6432-9146-0, Email: [mail@diasys.de](mailto:mail@diasys.de)

### 1.4 Emergency telephone number

Infraserv, Telephone: +49 (0) 69-305-6418

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to EC regulation 1272/2008 (CLP)

Met. Corr. 1; H290 May be corrosive to metals.  
Eye Irrit. 2; H319 Causes serious eye irritation.

### 2.2 Label elements

#### Labelling (CLP)



Signal word: **Warning**

Hazard statements: H290 May be corrosive to metals.  
H319 Causes serious eye irritation.

## Bilirubin Auto Total FS Reagent R1

Material number 1 0811 R1

Page: 2 of 9

### Precautionary Statements:

P234	Keep only in original packaging.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P390	Absorb spillage to prevent material damage.

### 2.3 Other hazards

A corrosive effect cannot be ruled out because of the pH value.

### Results of PBT and vPvB assessment:

No data available

## SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

### 3.2 Mixtures

Chemical characterisation: aqueous solution

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. 231-595-7 CAS 7647-01-0	Hydrochloric acid	1 - 5 %	Met. Corr. 1; H290. Skin Corr. 1B; H314. STOT SE 3; H335.
EC No. 200-311-3 CAS 57-09-0	Cetrimonium bromide	1 - 2 %	Acute Tox. 4; H302. Skin Irrit. 2; H315. Eye Dam. 1; H318. STOT SE 3; H335. STOT RE 2; H373. Aquatic Acute 1; H400.
EC No. 618-344-0 CAS 9002-93-1	Octylphenoxypolyethoxyethanol (SVHC)	< 1 %	Acute Tox. 4; H302. Eye Dam. 1; H318. Aquatic Chronic 2; H411.
EC No. 618-541-1 CAS 9036-19-5	Octylphenol, ethoxylated (SVHC)	< 1 %	Acute Tox. 4; H302. Eye Dam. 1; H318. Aquatic Chronic 2; H411.

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

Additional information: Contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH: Octylphenoxypolyethoxyethanol (EQC), Octylphenol, ethoxylated (EQC)

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General information:	If medical advice is needed, have product container or label at hand. First aider: Pay attention to self-protection!
In case of inhalation:	Provide fresh air. Seek medical aid in case of troubles.
Following skin contact:	After contact with skin, wash immediately with plenty of water. Take off contaminated clothing and wash it before reuse. Cover with sterile dressing material to protect against infection. Seek medical attention.

## Bilirubin Auto Total FS Reagent R1

Material number 1 0811 R1

Page: 3 of 9

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently seek the immediate attention of an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water.  
Do not induce vomiting. Do not try to neutralize. Immediately get medical attention.

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

Causes serious eye irritation. A corrosive effect cannot be ruled out because of the pH value. May cause skin irritation in susceptible persons. May cause respiratory irritation.

### 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:

Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

### 5.2 Special hazards arising from the substance or mixture

Fires in the immediate vicinity may cause the development of dangerous vapours. In case of fire may be liberated: Hydrogen chloride, hydrogen bromide (HBr), nitrogen oxides (NO<sub>x</sub>), carbon monoxide and carbon dioxide.

### 5.3 Advice for firefighters

Special protective equipment for firefighters:

In case of surrounding fires: Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information: Hazchem-Code: 2X

Do not allow fire water to penetrate into surface or ground water.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe mist/vapours/spray. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse.

Avoid contact with skin and eyes. Keep unprotected people away.

### 6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.

### 6.3 Methods and material for containment and cleaning up

Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance. Final cleaning.

### 6.4 Reference to other sections

Refer additionally to section 8 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe mist/vapours/spray. Avoid contact with skin and eyes. Wear appropriate protective equipment. Wash hands before breaks and after work. Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse. Have eye wash bottle or eye rinse ready at work place.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep containers tightly closed and at a temperature between 2 °C and 8 °C. Do not freeze. Protect from light. Keep sterile.

Unsuitable materials: Metals

Keep only in original container.

Hints on joint storage: Keep away from food, drink and animal feedingstuffs.

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
7647-01-0	Hydrochloric acid	Europe: IOELV: STEL	15 mg/m <sup>3</sup> ; 10 ppm (Hydrogen chloride)
		Europe: IOELV: TWA	8 mg/m <sup>3</sup> ; 5 ppm (Hydrogen chloride)
		Great Britain: WEL-STEL	8 mg/m <sup>3</sup> ; 5 ppm (gas and aerosol mists)
		Great Britain: WEL-TWA	2 mg/m <sup>3</sup> ; 1 ppm (gas and aerosol mists)
		Ireland: 15 minutes	15 mg/m <sup>3</sup> ; 10 ppm
		Ireland: 8 hours	8 mg/m <sup>3</sup> ; 5 ppm

### 8.2 Exposure controls

Provide adequate ventilation, and local exhaust as needed.

### Personal protection equipment

#### Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type (E-P2/P3) according to EN 14387.

Hand protection: Protective gloves according to EN 374.  
Glove material: Nitrile rubber - Layer thickness: 0.11 mm.  
Breakthrough time: >480 min.  
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing.

## Bilirubin Auto Total FS Reagent R1

Material number 1 0811 R1

Page: 5 of 9

### General protection and hygiene measures:

Avoid contact with skin and eyes. Wash hands before breaks and after work. Do not breathe mist/vapours/spray. Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse. Have eye wash bottle or eye rinse ready at work place.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Physical state at 20 °C and 101.3 kPa: liquid Colour: clear to slightly opalescent, colourless to slightly yellowish
Odour:	no characteristic odour
Odour threshold:	No data available
pH value:	0.78 - 0.85
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	not combustible
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Density:	1.0124 g/mL
Water solubility:	at 20 °C: completely miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity, kinematic:	No data available
Explosive properties:	No data available
Oxidizing characteristics:	No data available

### 9.2 Other information

Additional information: No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

May be corrosive to metals.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

## Bilirubin Auto Total FS Reagent R1

Material number 1 0811 R1

Page: 6 of 9

### 10.4 Conditions to avoid

Protect against heat /sun rays.

### 10.5 Incompatible materials

Alkalis, metals

### 10.6 Hazardous decomposition products

No hazardous decomposition products when regulations for storage and handling are observed.

Thermal decomposition: No data available

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

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

Serious eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Lack of data.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

### Symptoms

A corrosive effect cannot be ruled out because of the pH value. May cause skin irritation in susceptible persons. May cause respiratory irritation.

## SECTION 12: Ecological information

### 12.1 Toxicity

Aquatic toxicity: Harmful effects on water organisms by modification of pH-value.

Information about Cetrimonium bromide:

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 0.03 mg/L/48h

Fish toxicity:

LC50 Brachydanio rerio (zebra-fish): 0.3 mg/L/96h

## 12.2 Persistence and degradability

Further details: Information about Cetrimonium bromide:  
Biodegradability: 100 %/28 d. Readily degradable.

## 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:  
No data available

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

No data available

## 12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

# SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

### Product

Waste key number: 16 05 06\* = Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals.  
\* = Evidence for disposal must be provided.

Recommendation: Special waste. Dispose of waste according to applicable legislation.

### Contaminated packaging

Waste key number: 15 01 02 = Plastic packaging

Recommendation: Dispose of waste according to applicable legislation.  
Non-contaminated packages may be recycled.

# SECTION 14: Transport information

## 14.1 UN number

ADR/RID, IMDG, IATA-DGR:  
UN 3264

## 14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:  
UN 3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid mixture)

## 14.3 Transport hazard class(es)

ADR/RID: Class 8, Code: C1  
IMDG: Class 8, Subrisk -  
IATA-DGR: Class 8





# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

Revision date: 23/1/2019  
Version: 32  
Language: en-GB,IE  
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## Bilirubin Auto Total FS Reagent R1

Material number 1 0811 R1

Page: 8 of 9

### 14.4 Packing group

ADR/RID, IMDG, IATA-DGR:  
III

### 14.5 Environmental hazards

Marine pollutant: no

### 14.6 Special precautions for user

#### Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 80, UN number UN 3264  
Hazard label: 8  
Special provisions: 274  
Limited quantities: 5 L  
EQ: E1  
Contaminated packaging - Instructions: P001 IBC03 LP01 R001  
Special provisions for packing together: MP19  
Portable tanks - Instructions: T7  
Portable tanks - Special provisions: TP1 TP28  
Tank coding: L4BN  
Tunnel restriction code: E

#### Sea transport (IMDG)

EmS: F-A, S-B  
Special provisions: 223, 274  
Limited quantities: 5 L  
Excepted quantities: E1  
Contaminated packaging - Instructions: P001, LP01  
Contaminated packaging - Provisions: -  
IBC - Instructions: IBC03  
IBC - Provisions: -  
Tank instructions - IMO: -  
Tank instructions - UN: T7  
Tank instructions - Provisions: TP1, TP28  
Stowage and handling: Category A. SW2  
Properties and observations: Causes burns to skin, eyes and mucous membranes.  
Segregation group: 1

#### Air transport (IATA)

Hazard label: Corrosive  
Excepted Quantity Code: E1  
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y841 - Max. Net Qty/Pkg. 1 L  
Passenger and Cargo Aircraft: Pack.Instr. 852 - Max. Net Qty/Pkg. 5 L  
Cargo Aircraft only: Pack.Instr. 856 - Max. Net Qty/Pkg. 60 L  
Special provisions: A3 A803  
Emergency Response Guide-Code (ERG): 8L

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

No data available





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## Bilirubin Auto Total FS Reagent R1

Material number 1 0811 R1

Page: 9 of 9

### SECTION 15: Regulatory information

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

##### National regulations - Great Britain

Hazchem-Code: 2X  
No data available

##### National regulations - EC member states

Further regulations, limitations and legal requirements:  
Use restriction according to REACH annex XVII, no.: 3

#### 15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

### SECTION 16: Other information

#### Further information

Wording of the H-phrases under paragraph 2 and 3:

- H290 = May be corrosive to metals.
- H302 = Harmful if swallowed.
- H314 = Causes severe skin burns and eye damage.
- H315 = Causes skin irritation.
- H318 = Causes serious eye damage.
- H319 = Causes serious eye irritation.
- H335 = May cause respiratory irritation.
- H373 = May cause damage to organs through prolonged or repeated exposure.
- H400 = Very toxic to aquatic life.
- H411 = Toxic to aquatic life with long lasting effects.

Reason of change: ADR/RID 2019  
General revision

Date of first version: 30/10/2006

#### Department issuing data sheet

Contact person: see section 1: Department responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.