

Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

REF: 985094

NANOCOLOR TOC 60 -RS PM-

Page: 1/10

Printing date: 01.10.2019

Date of issue: 12.11.2018

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

1.1 Product identifier

REF 985094
 Product name NANOCOLOR TOC 60 -RS PM-

REACH Registration number(s): see SECTION 3.1/3.2 or
 A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.

1 x 5 mL blank TOC (NULL)
 1 x 1 g TOC (R2)
 1 x 6 mL TOC 25/60/600 R0
 10 x 6 mL TOC 60 (tubes)

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

Relevant identified uses

Product for analytical use.

Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
 The exposure scenario is integrated into sections 1-16.

Uses advised against

not described

1.3 Details of the supplier of the safety data sheet

Manufactured by:

MACHEREY-NAGEL GmbH & Co. KG
 Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY
 Tel.: +49 2421 969 0

E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.
 DE: Gemeinsames Giftinformationszentrum (GGIZ) 99089 Erfurt tel. +49 361 730 730

You find our current versions of SDS (22 languages) in Internet:

<http://www.mn-net.com/SDS>

SECTION 2: Hazard identification

2.0 Classification of the complete product



GHS03 GHS05 GHS07 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H272	Ox. Sol. 2
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H317	Skin Sens. 1
H318	Eye Dam. 1
H319	Eye Irrit. 2
H334	Resp. Sens. 1
H335	STOT SE 3

2.1 Classification of the substance or mixture

5 mL blank TOC (NULL)

Do not need labelling as hazardous

Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

REF: 985094

NANOCOLOR TOC 60 -RS PM-

Page: 3/10

Printing date: 01.10.2019

Date of issue: 12.11.2018

Signal word: DANGER

H317, H334

May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

P261sh, P280sh, P342+311

Avoid breathing dust/vapours. Wear protective gloves/eye protection. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

6 mL TOC 25/60/600 R0



GHS05

Signal word: DANGER

H318

Causes serious eye damage.

P280sh, P305+351+338, P310

Wear protective gloves/eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

6 mL TOC 60 (tubes)

Do not need labelling as hazardous

Signal word: -

2.3 Other hazards

Possible hazards from physicochemical properties

Generally in the case of pH values are less than 2 or higher than 11.5 then it is corrosive. In the case of pH values are less than 5 or higher than 9 then it is irritant. ---

Information pertaining to particular risks to human and possible symptoms

Causes varying degrees of acid burns on the skin, to the eyes and to the mucous membranes and wounds which do not heal quickly depending on the concentration, temperature and the exposure time. Vapours especially which steam from hot liquids and mist can have a severe irritant effect upon the eyes and the respiratory organs. Cause after oral intake, inhalation of vapours/dust, skin contact, impairments of health when ingested in small quantities. May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled. -

Information pertaining to particular risks to the environment

PBT: not applicable

vPvB: not applicable

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

5 mL blank TOC (NULL)

Chemical: *thymol blue, sodium salt (pH indicator)*

CAS No.: 62625-21-2

Classification: No criteria for classification or naming of chemical not required.

Formula: $C_{27}H_{29}NaO_5S$

Pseudonym: 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis[5-methyl-2-(1-methylethyl)-phenol, sodium salt

TSCA Inventory: listed

EC No.: 263-650-6

MFCD:

00151093

Concentration: < 1,00 %

acc. CLP (GHS): The criteria for classification are not fulfilled.

1 g TOC (R2)

Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

REF: 985094

NANOCOLOR TOC 60 -RS PM-

Page: 4/10

Printing date: 01.10.2019

Date of issue: 12.11.2018

Chemical: *sodium peroxodisulfate* CAS No.: 7775-27-1
 Classification: H272, Ox. Liq. 2, H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H317, Skin Sens. 1, H319, Eye Irrit. 2, H334, Resp. Sens. 1, H335, STOT SE 3
 Formula: $\text{Na}_2\text{O}_8\text{S}_2$
 Pseudonym: sodium persulfate
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119495975-15-xxxx
 EC No.: 231-892-1
 RTECS: SE0525000
 KE No.: KE-12369
 Concentration: 80 - <100 %
 acc. CLP (GHS): H272, Ox. Liq. 2, H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H317, Skin Sens. 1, H319, Eye Irrit. 2, H334, Resp. Sens. 1, H335, STOT SE 3

6 mL TOC 25/60/600 R0

Chemical: *sodium hydrogensulfate* CAS No.: 10034-88-5
 Classification: H318, Eye Dam. 1
 Formula: $\text{NaHSO}_4 \cdot \text{H}_2\text{O}$
 TSCA Inventory: listed (CAS 7681-38-1)
 REACH Reg. No.: 01-2119552465-36-xxxx
 EC No.: 231-665-7 Indice No.: 016-046-00-X
 RTECS: VZ1870000
 KE No.: not listed
 Concentration: 10 - <25 %
 acc. CLP (GHS): H318, Eye Dam. 1

6 mL TOC 60 (tubes)

Chemical: *thymol blue, sodium salt (pH indicator)* CAS No.: 62625-21-2
 Classification: No criteria for classification or naming of chemical not required.
 Formula: $\text{C}_{27}\text{H}_{29}\text{NaO}_5\text{S}$
 Pseudonym: 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis[5-methyl-2-(1-methylethyl)-phenol, sodium salt
 TSCA Inventory: listed
 EC No.: 263-650-6 MFCD: 00151093
 Concentration: < 1,00 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%.

List of H and P phrases: see section 16.1

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice. Remove contaminated clothing. Show product package, packing insert and this material safety data sheet to the doctor. Take to a doctor, in a raised position if there are breathing difficulties.

4.1.1 After SKIN Contact

Remove contaminated clothing immediately. Rinse the affected skin or mucous membrane thoroughly for min. 15 minutes under running water. (If possible) use soap. Avoid neutralisation. Then apply a loose bandage.

4.1.2 After EYE Contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open for min. 10 minutes with eye washing bottle, eye douche or running water (protect intact eye). Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Further treatment to be carried out by an eye specialist.

4.1.3 After INHALATION of vapours

After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function. ---

4.1.4 After ORAL Intake

After oral intake lots of water should be drunk after it has been ingested. ---

Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

REF: 985094

NANOCOLOR TOC 60 -RS PM-

Page: 5/10

Printing date: 01.10.2019

Date of issue: 12.11.2018

4.2 Most important symptoms and effects, both acute and delayed

Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled. ---

4.3 Indication of any immediate medical attention and special treatment needed

After SKIN CONTACT rinse with water for a long time. Apply glucocorticosteroides following inflammatory reactions. After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive chemical. Further treatment must to be carried out by an eye specialist. Inform patient respectively further measures and the possibility of long-term damages. ---

SECTION 5: Firefighting measures

5.1 Extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture

Formation of hazardous and caustic vapour-air mixtures possible. ---

5.3 Advice for firefighters

No, for listed product. Product package burns like paper or plastic. Spray any vapours released with water. Retent fire water. Use only acid-resistant safety equipment.

For great amount - if necessary - protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

5.4 Additional information

Danger for environment **only in the event of a large-scale leakage** or formation of hazardous substances. ---

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Wear suitable protective gloves (see 8.2.2). Wear eye protection, respectively face protection. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2 Environmental precautions

not necessary

6.3 Methods and material for containment and cleaning up

Bind any escaping liquid with inert absorbent. And dispose in accordance to local regulations for the disposal of hazardous chemicals.

Clean any contaminated equipment and floors with plenty of water.

Collect small amounts of leaked liquid and flush with water into drains.

6.4 Reference to other sections

see information in section 5.4 ---

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product. Use only in well-ventilated working areas. Use a safety bottle when shaking test tubes.

7.2 Conditions for safe storage, including any incompatibilities

The original product package of MACHEREY-NAGEL allows a safe storage.

Storage class (VCI): 5.1B

Water hazard class (DE): 2

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage. Use inbreakable container for transport of glass bottles.

7.3 Specific end use(s)

Product for analytical use.

Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

REF: 985094

NANOCOLOR TOC 60 -RS PM-

Page: 6/10

Printing date: 01.10.2019

Date of issue: 12.11.2018

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

5 mL blank TOC (NULL)

Chemical: *thymol blue, sodium salt (pH indicator)*

CAS No.: 62625-21-2

1 g TOC (R2)

Chemical: *sodium peroxodisulfate*

CAS No.: 7775-27-1

NIOSH: not listed

[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: not listed

6 mL TOC 25/60/600 R0

Chemical: *sodium hydrogensulfate*

CAS No.: 10034-88-5

6 mL TOC 60 (tubes)

Chemical: *thymol blue, sodium salt (pH indicator)*

CAS No.: 62625-21-2

8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

8.2.1 Respiratory protection

Use for open access of these substances for example a protection filter, class A/AX. No additional recommendations.

8.2.2 Hand protection

Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC, natural latex, Neopren, or Nitril (f.ex. from Ansell or KCL). Use for short times chemical resistant latex gloves with code EN 374-3 level 1.

8.2.3 Eye protection

Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection or face protection.

8.2.4 Skin protection

Recommended to avoid contamination with these hazards.

8.2.5 Personal hygiene

Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

5 mL blank TOC (NULL)

Appearance: liquid

Colour: blue
6-8

Odor: odorless

pH:

1 g TOC (R2)

Appearance: solid

Colour: colourless

Odor: odorless

pH:

4,3

Melting point:

instable < 200 °C

Specific gravity:

2,40 sol.

Solubility in water:

0-35 %

6 mL TOC 25/60/600 R0

Appearance: solid

Colour: colourless

Odor: odorless

pH:

6-8

Solubility in water:

0-20 %

6 mL TOC 60 (tubes)

Appearance: liquid

Colour: blue
6-8

Odor: odorless

pH:

Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

REF: 985094

NANOCOLOR TOC 60 -RS PM-

Page: 7/10

Printing date: 01.10.2019

Date of issue: 12.11.2018

9.2 Other information

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

Relevant Properties of Substance Group

SECTION 10: Stability and reactivity

10.1 Reactivity

no further data available.

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

No further data available.

10.4 Conditions to avoid

Not necessary. Observe labeled storage temperature. ---

10.5 Incompatible materials

Avoid contact with strong acids or alkalines.

10.6 Hazardous decomposition products

In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

5 mL blank TOC (NULL)

Chemical: *thymol blue, sodium salt (pH indicator)*
TSCA Inventory: listed

CAS No.: 62625-21-2

1 g TOC (R2)

Chemical: *sodium peroxodisulfate*
TSCA Inventory: listed
Australia NICNAS: Yes (PEC/18)
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
Japan ISHL: listed $\geq 1,0\%/\geq 0,1\%$, Article 57-2 (SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-12369
LD50_{orl rat}: 902 mg/kg

CAS No.: 7775-27-1

California Proposition 65 List: not listed
Canada CEPA 1999: DSL Yes

Acute Effects: Cause after oral intake, inhalation of vapours/dust, skin contact, impairments of health when ingested in small quantities.

Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

6 mL TOC 25/60/600 R0

Chemical: *sodium hydrogensulfate*
TSCA Inventory: listed (CAS 7681-38-1)
Korea Exist.Chem.Inventory: not listed
LD50_{orl rat}: 2490 mg/kg

CAS No.: 10034-88-5

6 mL TOC 60 (tubes)

Chemical: *thymol blue, sodium salt (pH indicator)*
TSCA Inventory: listed

CAS No.: 62625-21-2

Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

REF: 985094

NANOCOLOR TOC 60 -RS PM-

Page: 8/10

Printing date: 01.10.2019

Date of issue: 12.11.2018

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

5 mL blank TOC (NULL)

Chemical: *thymol blue, sodium salt (pH indicator)*
 Water hazard class (DE): 2
 Storage class (VCI): 12-13

CAS No.: 62625-21-2

1 g TOC (R2)

Chemical: *sodium peroxodisulfate*
 Water hazard class (DE): 1 WGK No.: 1352
 Storage class (VCI): 5.1 B

CAS No.: 7775-27-1

6 mL TOC 25/60/600 R0

Chemical: *sodium hydrogensulfate*
 LC50_{fish/96h}: [24h] 82 mg/L
 EC50_{daphnia/48h}: [24h] 6.9 g/L
 Water hazard class (DE): 1
 Storage class (VCI): 12-13

CAS No.: 10034-88-5

6 mL TOC 60 (tubes)

Chemical: *thymol blue, sodium salt (pH indicator)*
 Water hazard class (DE): 2
 Storage class (VCI): 12-13

CAS No.: 62625-21-2

12.2 Persistence and degradability

not necessary

12.3 Bioaccumulative potential

not necessary

12.4 Mobility in soil

not necessary

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no additional data available

SECTION 13: Disposal considerations

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

13.1 Waste treatment methods

SECTION 14: Transport information

14.1. UN number: 3316 14.2. UN proper shipping name: Chemical Kit

14.3. Class: 9 14.4. Packing group: II

Road transport

Classification code: M11 Tunnel restriction code: E

Limited Quantity: acc. ADR 3.3.1/251: see LQ in Alternative declaration for transportation

Air transport

PAX: 960 max. weight PAX: 10 KG

CAO: 960 max. weight CAO: 10 KG

Maritime transport

EmS: F-A, S-P Storage category: A

Or use **Alternative declaration for transportation:**

UN No.: (see below) class 5.1 III, class 8 III, **Excepted Quantities** ($\leq 30 \text{ mL} / \Sigma \leq 1 \text{ L}$) = ADR/ IATA E1
 or

Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

REF: 985094	NANOCOLOR TOC 60 -RS PM-	Page: 9/10
Printing date: 01.10.2019	Date of issue: 12.11.2018	

14.1 UN number: 1505 **14.2 UN proper shipping name:** Sodium persulphate
14.3 Class: 5.1 **14.4 Packing group:** III
Road transport
 Classification code: O2
 Limited Quantity: 5 Kg Tunnel restriction code: E
 Excepted Quantity: E 1
Air transport
 PAX: 559 max. weight PAX: 25 Kg
 CAO: 563 max. weight CAO: 100 Kg
Maritime transport
 EmS: F-A, S-Q Storage category: A

14.1 UN number: 3264
14.2 UN proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (sodium hydrogensulfate solution)
14.3 Class: 8 **14.4 Packing group:** III
Road transport
 Classification code: C1
 Limited Quantity: 5 L Tunnel restriction code: E
 Excepted Quantity: E 1
Air transport
 PAX: 852 max. weight PAX: 5 L
 CAO: 856 max. weight CAO: 60 L
Maritime transport
 EmS: F-A, S-B Storage category: A

- 14.5 Environmental hazards**
none, contains only small quantities of hazardous substances
- 14.6 Special precautions for user**
not necessary
- 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**
 German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013
 German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC
 TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011
 MN Leaflet/User manual, also see www.mn-net.com
 Look for your country-specific regulations.
- 15.2 Chemical safety assessment**
not necessary for these small amounts ---

SECTION 16: Other information

- 16.1 List of H and P phrases**
 - 16.1.1 List of relevant H phrases**
 - H272 May intensify fire; oxidizer.
 - H302 Harmful if swallowed.
 - H315 Causes skin irritation.
 - H317 May cause an allergic skin reaction.
 - H318 Causes serious eye damage.
 - H319 Causes serious eye irritation.
 - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 - H335 May cause respiratory irritation.
 - 16.1.2 List of relevant P phrases**
 - P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 - P261sh Avoid breathing dust/vapours.



Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

REF: 985094	NANOCOLOR TOC 60 -RS PM-	Page: 10/10
Printing date: 01.10.2019	Date of issue: 12.11.2018	

P264W	Wash with water thoroughly after handling.
P280sh	Wear protective gloves/eye protection.
P301+312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+351+338	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.
P330	Rinse mouth.
P342+311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P403+233	Store in a well-ventilated place. Keep container tightly closed.

16.2 Training advice

Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.

16.3 Recommended restriction on use

Only for professional user.
 Look about employee restrictions for young people (f. ex. 94/33/EC or DE § 22 JArbSchG)!
 Look about employee restrictions for pregnant women and nursing women (f.ex. 92/85/EEC or for DE §§ 11-13 MuSchG 2017)!
 An individual package of this product or test kit has a moderate hazardous potential.

16.4 Further information

MACHEREY-NAGEL GmbH & Co. KG provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.
 MACHEREY-NAGEL GmbH & Co. KG makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly MACHEREY-NAGEL GmbH & Co. KG will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

16.5 Sources of key data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
 Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress
 Regulation 669/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress
 TRGS 900, German engineering rules governing limits in air at work, updated 03/2018
 SUVA .CH, Limits in air at work 2009, revised on 01.2009
 TRGS 907, German engineering rules governing listing of substances and causes of sensitizations, updated November 2011
 KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Revisions/Updates

Reason for Revision: 2016-03 Adaptation of regulation 1221/2015/EU

