







## Safety Data Sheet dated 29/11/1997 version 6.1 dated 15/12/2015

This safety data sheet has been completely updated in compliance to Regulation 2015/830/EU.

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

1.1. Product identifier

Mixture identification:

INDURA - UNIVERSAL DARK RED COLOURANT Trade name:

Trade code: S50

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

1.3. Details of the supplier of the safety data sheet

Seller: Capella Solutions Group. Second Avenue, Chatham, Kent ME4 5AU

Tel. +44 (0)1634 823907 - Fax +44 (0)1634 823909

Competent person responsible for the safety data sheet: salescapellasolutionsgroup.com

1.4. Emergency telephone number Tel: +44(0) 1634 823900 (08.00 / 17.00)

UK: NPIS National Poisons Information Centre Tel: +44 0344 892 0111

IRL: Beaumont Hospital - National Poisons Information Centre: Tel: +353 1 8092566

#### **SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP):

- Warning, Flam. Liq. 3, Flammable liquid and vapour.
- Warning, Acute Tox. 4, Harmful if inhaled.
- Warning, Skin Irrit. 2, Causes skin irritation.
- Warning, Eye Irrit. 2, Causes serious eye irritation.
- Warning, STOT SE 3, May cause respiratory irritation.
- Warning, STOT RE 2, May cause damage to organs through prolonged or repeated exposure.

Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

#### 2.2. Label elements

#### Symbols:







#### Warning

# Hazard statements:

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

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.

P273 Avoid release to the environment.

P280 Wear protective gloves/clothing and eye/face protection.

P312 Call a POISON CENTER/ doctor/if you feel unwell.

P314 Get medical advice/attention if you feel unwell.

P370+P378 In case of fire, use a foam fire extinguisher to extinguish.

**Special Provisions:** 

None

Contents:

Xylene [Reaction mass of ethylbenzene and m-xylene and p-xylene] (Benzene < 0,01%)

Hydrocarbons, C9, aromatics

2-butanone oxime; ethyl methyl ketoxime: May produce an allergic reaction.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

## **SECTION 3: Composition/information on ingredients**

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification: >= 25% - < 30% Xylene [Reaction mass of ethylbenzene and m-xylene and p-xylene] (Benzene < 0.01%)

REACH No.: 01-2119555267-33, EC: 905-562-9

- 2.6/3 Flam. Liq. 3 H226
- ♦ 3.10/1 Asp. Tox. 1 H304
- ♦ 3.3/2 Eye Irrit. 2 H319
- ♦ 3.8/3 STOT SE 3 H335
- 3.9/2 STOT RE 2 H373

- ◆ 3.1/4/Inhal Acute Tox. 4 H332

>= 12.5% - < 15% xylene

REACH No.: 01-2119488216-32, Index number: 601-022-00-9, CAS: 1330-20-7, EC: 215-535-7

- 2.6/3 Flam. Liq. 3 H226
- ♦ 3.10/1 Asp. Tox. 1 H304
- ♦ 3.3/2 Eye Irrit. 2 H319
- ◆ 3.8/3 STOT SE 3 H335
- § 3.9/2 STOT RE 2 H373
- ♦ 3.1/4/Dermal Acute Tox. 4 H312
- ◆ 3.1/4/Inhal Acute Tox. 4 H332

>= 5% - < 7% Hydrocarbons, C9, aromatics

REACH No.: 01-2119455851-35, EC: 918-668-5

- 2.6/3 Flam. Liq. 3 H226
- ◆ 3.8/3 STOT SE 3 H335
- ♦ 3.10/1 Asp. Tox. 1 H304
- ◆ 3.8/3 STOT SE 3 H336
- 4.1/C2 Aquatic Chronic 2 H411

EUH066

>= 3% - < 5% 2-methoxy-1-methylethyl acetate

REACH No.: 01-2119475791-29, Index number: 607-195-00-7, CAS: 108-65-6, EC: 203-603-9 

• 2.6/3 Flam. Liq. 3 H226

>= 0.5% - < 1% 2-butanone oxime; ethyl methyl ketoxime

REACH No.: 01-2119539477-28, Index number: 616-014-00-0, CAS: 96-29-7, EC: 202-496-6

- ♦ 3.6/2 Carc. 2 H351
- ♦ 3.3/1 Eye Dam. 1 H318
- 1,1A,1B H317 \$\psi\$ 3.4.2/1-1A-1B Skin Sens. 1,1A,1B H317
- ◆ 3.1/4/Dermal Acute Tox. 4 H312

## 157 ppm ethylbenzene

REACH No.: 01-2119489370-35, Index number: 601-023-00-4, CAS: 100-41-4, EC: 202-849-4

- 2.6/2 Flam. Lig. 2 H225
- ◆ 3.1/4/Inhal Acute Tox. 4 H332
- ♦ 3.9/2 STOT RE 2 H373
- ♦ 3.10/1 Asp. Tox. 1 H304

The full text of H-phrases is shown in section 16.

### **SECTION 4: First aid measures**

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

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

None

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

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

Treatment:

None

# **SECTION 5: Firefighting measures**

5.1. Extinguishing media

Suitable extinguishing media:

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

#### **SECTION 6: Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

6.2. Environmental precautions

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

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

## **SECTION 7: Handling and storage**

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store at below 20  $^{\circ}$ C. Keep away from unguarded flam e and heat sources. Avoid direct exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

None in particular

#### **SECTION 8: Exposure controls/personal protection**

8.1. Control parameters

Xylene [Reaction mass of ethylbenzene and m-xylene and p-xylene] (Benzene < 0,01%)

EU - LTE(8h): 221 mg/m3, 50 ppm - STE: 442 mg/m3, 100 ppm - Notes: Bold-type: Indicative Occupational Exposure Limit Values [2,3] and Limit Values for Occupational Exposure [4] (for references see bibliography)

ACGIH - LTE(8h): 100 ppm - STE: 150 ppm - Notes: A4, BEI - URT and eye irr, CNS impair

xylene - CAS: 1330-20-7

EU - LTE(8h): 221 mg/m3, 50 ppm - STE: 442 mg/m3, 100 ppm - Notes: Bold-type: Indicative Occupational Exposure Limit Values [2,3] and Limit Values for Occupational

Exposure [4] (for references see bibliography) ACGIH - LTE(8h): 100 ppm - STE: 150 ppm - Notes: A4, BEI - URT and eye irr, CNS impair Hydrocarbons, C9, aromatics ACGIH - LTE(8h): 100 mg/m3, 19 ppm 2-methoxy-1-methylethyl acetate - CAS: 108-65-6 EU - LTE(8h): 275 mg/m3, 50 ppm - STE: 550 mg/m3, 100 ppm - Notes: Indicative Occupational Exposure Limit Values [2,3] and Limit Values for Occupational Exposure [4] (for references see bibliography) ethylbenzene - CAS: 100-41-4 EU - LTE(8h): 442 mg/m3, 100 ppm - STE: 884 mg/m3, 200 ppm - Notes: Bold-type: Indicative Occupational Exposure Limit Values [2,3] and Limit Values for Occupational Exposure [4] (for references see bibliography) ACGIH - LTE(8h): 20 ppm - Notes: A3, BEI - URT irr, kidney dam (nephropathy), cochlear impair **DNEL Exposure Limit Values** Xvlene [Reaction mass of ethylbenzene and m-xvlene and p-xvlene] (Benzene < 0.01%) Consumer: 260 ppm - Exposure: Human Inhalation - Frequency: Short Term (acute) Consumer: 65.3 ppm - Exposure: Human Inhalation - Frequency: Long Term (repeated) xylene - CAS: 1330-20-7 Worker Industry: 289 mg/m3 - Worker Professional: 289 mg/m3 - Consumer: 174 mg/m3 - Exposure: Human Inhalation - Frequency: Short Term, local effects Worker Industry: 77 mg/m3 - Worker Professional: 77 mg/m3 - Consumer: 14.8 mg/m3 -Exposure: Human Inhalation - Frequency: Long Term, systemic effects Worker Industry: 180 mg/kg/d - Worker Professional: 180 mg/kg/d - Consumer: 108 mg/kg/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects Consumer: 1.6 mg/kg/d - Exposure: Human Oral Frequency: Long Term, systemic effects Hydrocarbons, C9, aromatics Consumer: 11 mg/kg/d - Exposure: Human Oral - Frequency: Long Term, systemic effects Worker Industry: 150 mg/m3 - Worker Professional: 150 mg/m3 - Consumer: 32 mg/m3 -Exposure: Human Inhalation - Frequency: Long Term, systemic effects Worker Industry: 25 mg/kg/d - Worker Professional: 25 mg/kg/d - Consumer: 11 mg/kg/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects 2-methoxy-1-methylethyl acetate - CAS: 108-65-6 Consumer: 1.67 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects Worker Professional: 275 ppm - Consumer: 33 ppm - Exposure: Human Inhalation -Frequency: Long Term, systemic effects Worker Professional: 153.5 mg/kg - Consumer: 54.8 mg/kg - Exposure: Human Dermal -Frequency: Long Term, systemic effects 2-butanone oxime; ethyl methyl ketoxime - CAS: 96-29-7 Worker Professional: 2.5 mg/kg - Consumer: 1.5 mg/kg - Exposure: Human Dermal -Frequency: Short Term, systemic effects Worker Professional: 1.3 mg/kg - Consumer: 0.78 mg/kg - Exposure: Human Dermal -Frequency: Long Term, systemic effects Worker Professional: 9 ppm - Consumer: 2.7 ppm - Exposure: Human Inhalation -Frequency: Long Term, systemic effects Worker Professional: 3.33 ppm - Consumer: 2 ppm - Exposure: Human Inhalation -Frequency: Long Term, local effects **PNEC Exposure Limit Values** Xylene [Reaction mass of ethylbenzene and m-xylene and p-xylene] (Benzene < 0,01%) Target: Fresh Water - Value: 0.327 mg/l Target: Marine water - Value: 0.327 mg/l Target: Freshwater sediments - Value: 12.46 mg/kg Target: Marine water - Value: 12.46 mg/kg

Target: Soil (agricultural) - Value: 2.31 mg/kg

xylene - CAS: 1330-20-7

Target: Fresh Water - Value: 0.327 mg/l Target: Marine water - Value: 0.327 mg/l

Target: Freshwater sediments - Value: 12.46 mg/kg

Target: Marine water - Value: 12.46 mg/kg Target: Soil (agricultural) - Value: 2.31 mg/kg 2-methoxy-1-methylethyl acetate - CAS: 108-65-6 Target: Fresh Water - Value: 0.635 mg/l

Target: Freshwater sediments - Value: 3.29 mg/kg Target: Marine water sediments - Value: 0.329 mg/kg

Target: Microorganisms in sewage treatments - Value: 100 mg/l

2-butanone oxime; ethyl methyl ketoxime - CAS: 96-29-7

Target: Fresh Water - Value: 0.256 mg/l

Target: Microorganisms in sewage treatments - Value: 177 mg/l

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Use adequate protective respiratory equipment.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

. None

## **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	liquid dark red		
Odour:	Characteristic		
Odour threshold:	N.A.		
pH:	N.A.		
Melting point / freezing point:	N.A.		
Initial boiling point and boiling range:	137℃		
Flash point:	25 ℃		
Evaporation rate:	N.A.		
Solid/gas flammability:	N.A.		
Upper/lower flammability	N.A.		

or explosive limits:		
Vapour pressure:	N.A.	 
Vapour density:	> 1	 
Relative density:	1.000 g/cm3 - 20℃	 
Solubility in water:	insoluble	 
Solubility in oil:	N.A.	 
Partition coefficient (n-octanol/water):	N.A.	 
Auto-ignition temperature:	> 400℃	 
Decomposition temperature:	N.A.	 
Viscosity:	N.A.	 
Explosive properties:	N.A.	 
Oxidizing properties:	N.A.	 

## 9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	N.A.		
Fat Solubility:	N.A.		
Conductivity:	N.A.		
Substance Groups relevant properties	N.A.		

# **SECTION 10: Stability and reactivity**

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products None.

# **SECTION 11: Toxicological information**

11.1. Information on toxicological effects

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Toxicological information of the mixture:
            N.A.
      Toxicological information of the main substances found in the mixture:
            xylene - CAS: 1330-20-7
            a) acute toxicity:
                   Test: LC50 - Route: Inhalation Vapour - Species: Rat > 20 mg/l - Duration: 4h
                   Test: LD50 - Route: Skin - Species: Rabbit > 4200 mg/kg
                   Test: LD50 - Route: Oral - Species: Rat = 3500 mg/kg
            Hydrocarbons, C9, aromatics
            a) acute toxicity:
                   Test: LC50 - Route: Inhalation - Species: Rat > 6193 mg/m3 - Duration: 4h
                   Test: LD50 - Route: Oral - Species: Rat = 3592 mg/kg
                   Test: LD50 - Route: Skin - Species: Rabbit > 3160 mg/kg
            2-methoxy-1-methylethyl acetate - CAS: 108-65-6
            a) acute toxicity:
                   Test: LD50 - Route: Oral - Species: Rat = 8530 mg/kg
            2-butanone oxime; ethyl methyl ketoxime - CAS: 96-29-7
            a) acute toxicity:
                   Test: LD50 - Route: Oral - Species: Rat = 2400 mg/kg
                   Test: LD50 - Route: Skin - Species: Rabbit > 1000 mg/kg
                   Test: LC50 - Route: Inhalation - Species: Rat = 20 mg/l - Duration: 4h
      If not differently specified, the information required in Regulation (EU)2015/830 listed below must be
      considered as N.A.:
            a) acute toxicity:
            b) skin corrosion/irritation;
            c) serious eye damage/irritation;
            d) respiratory or skin sensitisation;
            e) germ cell mutagenicity;
            f) carcinogenicity:
            g) reproductive toxicity;
            h) STOT-single exposure;
            i) STOT-repeated exposure:
            i) aspiration hazard.
SECTION 12:Ecological information
      12.1. Toxicity
            Adopt good working practices, so that the product is not released into the environment.
            xylene - CAS: 1330-20-7
            a) Aquatic acute toxicity:
                   Endpoint: LC50 - Species: Fish > 1 ml/l - Duration h: 96
                   Endpoint: EC50 - Species: Daphnia = 1 mg/l - Duration h: 24
            2-methoxy-1-methylethyl acetate - CAS: 108-65-6
            a) Aquatic acute toxicity:
                   Endpoint: LC50 - Species: Fish > 100 mg/l - Duration h: 96
            2-butanone oxime; ethyl methyl ketoxime - CAS: 96-29-7
            a) Aquatic acute toxicity:
                   Endpoint: EC50 - Species: Daphnia = 201 mg/l - Duration h: 48
                   Endpoint: EC50 - Species: Algae = 11.8 mg/l - Duration h: 72
                   Endpoint: LC50 - Species: Fish > 100 mg/l - Duration h: 96
                   Endpoint: NOEC - Species: Algae = 2.56 mg/l - Duration h: 72
      12.2. Persistence and degradability
            2-methoxy-1-methylethyl acetate - CAS: 108-65-6
                   Biodegradability: Readily biodegradable - Test: N.A. - Duration: N.A. - %: N.A. - Notes:
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N.A. 12.3. Bioaccumulative potential

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

Bioaccumulation: Not bioaccumulative - Test: N.A. N.A. - Duration: N.A. - Notes: N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

## **SECTION 13: Disposal considerations**

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

## **SECTION 14: Transport information**



14.1. UN number

ADR-UN Number: 1263 IATA-UN Number: 1263 IMDG-UN Number: 1263

14.2. UN proper shipping name

ADR-Shipping Name: PAINT IATA-Shipping Name: PAINT IMDG-Shipping Name: PAINT

14.3. Transport hazard class(es)

ADR-Class: 3

ADR - Hazard identification number: 30

IATA-Class: 3 IATA-Label: 3 IMDG-Class: 3

Sea (IMO): Classe 3, P.G. III - EmS F-E, S-E

14.4. Packing group

ADR-Packing Group: III IATA-Packing group: III IMDG-Packing group: III

14.5. Environmental hazards

ADR-Enviromental Pollutant: No IMDG-Marine pollutant: No

14.6. Special precautions for user

ADR-Subsidiary risks: -

ADR-S.P.: 163 640E 650

ADR-Tunnel Restriction Code: (D/E)
IATA-Passenger Aircraft: 355
IATA-Subsidiary risks: IATA-Cargo Aircraft: 366
IATA-S.P.: A3 A72
IATA-ERG: 3L

IMDG-EmS: F-E , S-E

IMDG-Subsidiary risks: -

IMDG-Storage category: Category A

IMDG-Storage notes:

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

## **SECTION 15: Regulatory information**

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) 2015/830

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restriction 40

Restrictions related to the substances contained:

Restriction 30

Volatile Organic compounds - VOCs = 53.46 %

Volatile Organic compounds - VOCs = 534.86 g/l

Volatile CMR substances = 0.01 %

Halogenated VOCs which are assigned the risk phrase R40 = 0.90 %

Organic Carbon - C = 0.46

Where applicable, refer to the following regulatory provisions:

Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.

Regulation (EC) nr 648/2004 (detergents).

1999/13/EC (VOC directive)

Provisions related to directives 82/501/EC(Seveso), 96/82/EC(Seveso II):

15.2. Chemical safety assessment

No

## **SECTION 16: Other information**

Text of phrases referred to under heading 3:

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H319 Causes serious eve irritation.

H335 May cause respiratory irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

H315 Causes skin irritation.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

H351 Suspected of causing cancer.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H225 Highly flammable liquid and vapour.

This document was prepared by a competent person who has received appropriate training. Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,

Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van

Nostrand Reinold CCNL - Appendix 1

Insert further consulted bibliography

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of

Dangerous Goods by Road.

CAS: Chemical Abstracts Service (division of the American Chemical

Society).

CLP: Classification, Labeling, Packaging.

DNEL: Derived No Effect Level.

EINECS: European Inventory of Existing Commercial Chemical Substances.

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of

Chemicals.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport

Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization"

(ICAO).

IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

LTE: Long-term exposure.

PNEC: Predicted No Effect Concentration.

RID: Regulation Concerning the International Transport of Dangerous Goods

by Rail.

STE: Short-term exposure.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.

TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day.

(ACGIH Standard).

WGK: German Water Hazard Class.

N.A.: N.A.

N.D.: