

# **Polyurethane Sealant**

Revision nr.7 Dated 27/09/2018 Printed on 27/09/2018 Page n. 1 / 14

Replaced revision:6 (Dated 16/06/2016)

#### Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

#### 1.1. Product identifier

Polyurethane Sealant - 472576 (Black), 472583 (Grey), 472590 (White) Product name

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

Intended use One-component elastic sealant suitable for various types of use.

| Identified Uses                     | Industrial                | Professional      | Consumer |
|-------------------------------------|---------------------------|-------------------|----------|
| SEALANTS AND ADHESIVES FORMULATIONS |                           |                   |          |
| IN INDUSTRY                         | SU: 10.                   |                   |          |
|                                     | ERC: 2.                   |                   |          |
|                                     | PROC: 3, 4, 5, 8a, 8b, 9. |                   |          |
|                                     | PC: 1.                    |                   |          |
| INDUSTRIAL APPLICATIONS OF SEALANTS |                           | -                 | -        |
| AND ADHESIVES                       | SU: 17, 19.               | SU: 17, 19.       |          |
| AND ADITESIVES                      | ERC: 5, 8b.               | ERC: 5, 8b.       |          |
|                                     | PROC: 10, 8a, 8b.         | PROC: 10, 8a, 8b. |          |
|                                     | PC: 1.                    | PC: 1.            |          |
|                                     | PG. 1.                    | FG. 1.            |          |
|                                     |                           |                   | -        |
| CHEMICAL SUBSTANCE USE IN           |                           |                   |          |
| LABORATORY, INDUSTRIAL              | PROC: 15.                 |                   |          |
|                                     | PC: 1, 21.                |                   |          |

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

Name Indasa Abrasives (UK) Ltd Full address Viking Works, Greenstead Road, **District and Country** Colchester, Essex, CO1 2ST 01206 870366 Tel Fax 01206 860525 e-mail address of the competent person

responsible for the Safety Data Sheet

office@indasa.co.uk

#### 1.4. Emergency telephone number

For urgent enquiries 01206 870 366

08:45 - 17:00 Monday-Thursday

08:45 - 16:00 Friday

#### **SECTION 2. Hazards identification**

#### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Respiratory sensitization, category 1

H334

May cause allergy or asthma symptoms or breathing

difficulties if inhaled.



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#### SECTION 2. Hazards identification .../>

#### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: Danger

Hazard statements:

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**EUH204** Contains isocyanates. May produce an allergic reaction.

Precautionary statements:

P342+P311 If experiencing respiratory symptoms: call a POISON CENTER / doctor / . . . P304+P340 IF INHALED: remove person to fresh air and keep comfortable for breathing. P284 [In case of inadequate ventilation] wear respiratory protection.

Contains: DIFENILMETANODIISOCIANATO, ISOMERI E OMOLOGHI

TRIS(NONYLPHENYL)PHOSPHITE

#### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

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

#### 3.2. Mixtures

Contains:

Identification x = Conc. % Classification 1272/2008 (CLP)

REACTIVE MIXTURE OF ETHYLBENZENE, m-XYLENE AND p-XYLENE

CAS 0 ≤ x < 5,7 Flam. Liq. 2 H225, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304,

STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335

EC 905-562-9

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Reg. no. 01-2119555267-33 XYLENE (BENZENE <0.01%)

CAS 1330-20-7 0 ≤ x < 5,7 Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304,

STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Classification note according to Annex VI to the CLP Regulation: C

EC 215-535-7 INDEX 601-022-00-9

Reg. no. 01-2119488216-32-XXXX

ETHYL ACETATE

CAS 141-78-6 1 ≤ x < 1,5 Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066

EC 205-500-4 INDEX 607-022-00-5 Reg. no. 01-2119475103-46

DIFENILMETANODIISOCIANATO, ISOMERI E OMOLOGHI

CAS 9016-87-9 0,89 ≤ x < 1 Carc. 2 H351, Acute Tox. 4 H332, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315,

STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317

EC INDEX

BIS(2,2,6,6-TETRAMETHYL-4-PIPERIDYL)SEBACATE

CAS 52829-07-9 0,3 ≤ x < 0,35 Eye Dam. 1 H318, Aquatic Acute 1 H400 M=1, Aquatic Chronic 2 H411

EC 258-207-9

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Reg. no. 01-2119537297-32-XXXX





# Indasa Abrasives (UK) Ltd Polyurethane Sealant

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#### SECTION 3. Composition/information on ingredients .../>>

**DIFENILMETAN-4,4'-DIISOCIANATO** 

CAS 101-68-8 0,25 ≤ x < 0,3 Carc. 2 H351, Acute Tox. 4 H332, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315,

STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317,

Classification note according to Annex VI to the CLP Regulation: 2 C

Skin Sens. 1 H317, Aguatic Acute 1 H400 M=1, Aguatic Chronic 1 H410 M=1

EC 202-966-0 INDEX 615-005-00-9

Reg. no. 01-2119457014-47-XXXX TRIS(NONYLPHENYL)PHOSPHITE

CAS 26523-78-4  $0.2 \le x < 0.25$ 

EC 247-759-6

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Reg. no. 01-2119520601-54-XXXX

The full wording of hazard (H) phrases is given in section 16 of the sheet.

The two substances with no. REACH: 01-2119555267-33 and Nr. REACH: 01-2119488216-32 constitute a mixture in variable proportions and then the maximum percentage to be considered in the finished product is equal to the maximum considered for only one of them. They having the same classification, each combination does not involve changes in the final classification of the mixture.

#### **SECTION 4. First aid measures**

#### 4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately. INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

#### **SECTION 5. Firefighting measures**

#### 5.1. Extinguishing media

#### SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

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

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

#### 5.3. Advice for firefighters

#### **GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).



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#### **SECTION 6. Accidental release measures**

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

#### 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

#### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

#### **SECTION 7. Handling and storage**

#### 7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany): 10

#### 7.3. Specific end use(s)

Information not available

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

#### 8.1. Control parameters

Regulatory References:

| DEU | Deutschland    | TRGS 900 (Fassung 31.1.2018 ber.) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte          |
|-----|----------------|---|
| ESP | España         | INSHT - Límites de exposición profesional para agentes químicos en España 2017                  |
| FRA | France         | JORF n°0109 du 10 mai 2012 page 8773 texte n° 102   |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits   |
| GRC | Ελλάδα         | ΕΦΗΜΕΡΙΣ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ -ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 19 - 9 Φεβρουαρίου 2012                       |
| HRV | Hrvatska       | NN13/09 - Ministarstvo gospodarstva, rada i poduzetništva                                       |
| ITA | Italia         | Decreto Legislativo 9 Aprile 2008, n.81   |
| NLD | Nederland      | Databank of the social and Economic Concil of Netherlands (SER) Values, AF 2011:18              |
| POL | Polska         | ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 7 czerwca 2017 r                     |
| SWE | Sverige        | Occupational Exposure Limit Values, AF 2011:18  |
| EU  | OEL EU         | Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; |
|     |                | Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.                               |
|     | TLV-ACGIH      | ACGIH 2018  |



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SECTION 8. Exposure controls/personal protection .../>>

| DIISONONYL | . PHTHALATE |
|------------|-------------|

 Threshold Limit Value

 Type
 Country
 TWA/8h
 STEL/15min

 mg/m3
 ppm
 mg/m3
 ppm

 WEL
 GBR
 5

|                 |             |                   |        | XYLENE (BE | NZENE <0.0 | 1%)             |          |         |          |
|-----------------|-------------|-------------------|--------|------------|------------|-----------------|----------|---------|----------|
| Threshold Limi  | t Value     |                   |        |            |            |                 |          |         |          |
| Type            | Counti      | y TWA/8h          |        | STEL/15    | min        |                 |          |         |          |
|                 |             | mg/m3             | ppm    | mg/m3      | ppm        |                 |          |         |          |
| AGW             | DEU         | 440               | 100    | 880        | 200        | SKIN            |          |         |          |
| MAK             | DEU         | 440               | 100    | 880        | 200        | SKIN            |          |         |          |
| VLA             | ESP         | 221               | 50     | 442        | 100        | SKIN            |          |         |          |
| VLEP            | FRA         | 221               | 50     | 442        | 100        | SKIN            |          |         |          |
| WEL             | GBR         | 220               | 50     | 441        | 100        |                 |          |         |          |
| TLV             | GRC         | 435               | 100    | 650        | 150        |                 |          |         |          |
| GVI             | HRV         | 221               | 50     | 442        | 100        | SKIN            |          |         |          |
| VLEP            | ITA         | 221               | 50     | 442        | 100        | SKIN            |          |         |          |
| OEL             | NLD         | 210               |        | 442        |            | SKIN            |          |         |          |
| NDS             | POL         | 100               |        |            |            |                 |          |         |          |
| MAK             | SWE         | 221               | 50     | 442        | 100        | SKIN            |          |         |          |
| OEL             | EU          | 221               | 50     | 442        | 100        | SKIN            |          |         |          |
| TLV-ACGIH       |             | 434               | 100    | 651        | 150        |                 |          |         |          |
| Predicted no-ef | fect conce  | ntration - PNE    | С      |            |            |                 |          |         |          |
| Normal value    | in fresh wa | ater              |        |            |            |                 | 0,327    | mg/l    |          |
| Normal value    | in marine   | water             |        |            |            |                 | 0,327    | mg/l    |          |
| Normal value    | for fresh w | ater sediment     |        |            |            |                 | 12,46    | mg/kg   |          |
| Normal value    | for marine  | water sedimen     | t      |            |            |                 | 12,46    | mg/kg   |          |
| Normal value    | for water,  | intermittent rele | ase    |            |            |                 | 0,327    | mg/l    |          |
| Normal value    | of STP mi   | croorganisms      |        |            |            |                 | 6,58     | mg/l    |          |
| Normal value    | for the ten | estrial comparti  | ment   |            |            |                 | 2,31     | mg/kg   |          |
| Health - Derive | d no-effect | level - DNEL /    | DMEL   |            |            |                 |          |         |          |
|                 |             | Effects on consi  | umers  |            |            | Effects on worl | ers      |         |          |
| Route of exp    | osure       | Acute Ac          | ute    | Chronic    | Chronic    | Acute local     | Acute    | Chronic | Chronic  |
|                 |             | local sys         | stemic | local      | systemic   |                 | systemic | local   | systemic |
| Oral            |             |                   |        | VND        | 1,6        |                 |          |         |          |
|                 |             |                   |        |            | mg/kg/d    |                 |          |         |          |
| Inhalation      |             |                   |        | VND        | 14,8       | 289             | VND      | VND     | 77       |
|                 |             |                   |        |            | mg/m3      | mg/kg           |          |         | mg/m3    |
| Skin            |             |                   |        | VND        | 108        |                 |          | VND     | 180      |
|                 |             |                   |        |            | mg/kg/d    |                 |          |         | mg/kg/d  |

|                       | F              | REACTIVE    | MIXTURE | OF ETHYLBI | ENZENE, m-X        | YLENE AND p-XY | LENE     |         |          |
|-----------------------|----------------|-------------|---------|------------|--------------------|----------------|----------|---------|----------|
| Threshold Limit Value | •              |             |         |            |                    |                |          |         |          |
| Type C                | ountry T       | WA/8h       |         | STEL/15    | min                |                |          |         |          |
|                       | n              | ng/m3       | ppm     | mg/m3      | ppm                |                |          |         |          |
| TLV-ACGIH             | 2              | 221         | 50      | 442        | 100                |                |          |         |          |
| redicted no-effect co | oncentratio    | n - PNEC    |         |            |                    |                |          |         |          |
| Normal value in fres  | sh water       |             |         |            |                    |                | 0,327    | mg/l    |          |
| Normal value in ma    | rine water     |             |         |            |                    |                | 0,327    | mg/l    |          |
| Normal value for fre  | sh water se    | diment      |         |            |                    |                | 12,46    | mg/kg   |          |
| Normal value for ma   | arine water s  | sediment    |         |            |                    |                | 12,46    | mg/kg   |          |
| Normal value for wa   | iter, intermit | tent releas | se      |            |                    |                | 0,327    | mg/l    |          |
| Normal value of ST    | P microorga    | ınisms      |         |            |                    |                | 6,58     | mg/l    |          |
| Normal value for the  | e terrestrial  | compartm    | ent     |            |                    |                | 2,31     | mg/kg   |          |
| lealth - Derived no-e | ffect level -  | DNEL / D    | MEL     |            |                    |                |          |         |          |
|                       | Effects        | on consun   | ners    |            | Effects on workers |                |          |         |          |
| Route of exposure     | Acute          | Acut        | е       | Chronic    | Chronic            | Acute local    | Acute    | Chronic | Chronic  |
|                       | local          | syste       | emic    | local      | systemic           |                | systemic | local   | systemic |
| Oral                  |                |             |         | VND        | 1,6                |                |          |         |          |
|                       |                |             |         |            | mg/kg              |                |          |         |          |
| Inhalation            | VND            | 174         |         | VND        | 14,8               | VND            | 289      | VND     | 77       |
|                       |                | mg/n        | n3      |            | mg/m3              |                | mg/m3    |         | mg/m3    |
| Skin                  |                |             |         | VND        | 108                |                |          | VND     | 180      |
|                       |                |             |         |            | mg/kg              |                |          |         | mg/kg    |



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SECTION 8. Exposure controls/personal protection .../>>

| TION O. Exposu       | ie conti     | Jis/person    | ai protectio | 11/ **  |          |                 |          |         |          |
|----------------------|--------------|---------------|--------------|---------|----------|-----------------|----------|---------|----------|
|                      |              |               |              | ETHYL   | ACETATE  |                 |          |         |          |
| Threshold Limit Val  | ue           |               |              |         |          |                 |          |         |          |
| Туре                 | Country      | TWA/8h        |              | STEL/15 | min      |                 |          |         |          |
|                      |              | mg/m3         | ppm          | mg/m3   | ppm      |                 |          |         |          |
| AGW                  | DEU          | 1500          | 400          | 3000    | 800      |                 |          |         |          |
| MAK                  | DEU          | 1500          | 400          | 3000    | 800      |                 |          |         |          |
| VLA I                | ESP          | 1460          | 400          |         |          |                 |          |         |          |
| VLEP                 | FRA          | 1400          | 400          |         |          |                 |          |         |          |
| WEL                  | GBR          |               | 200          |         | 400      |                 |          |         |          |
| TLV                  | GRC          | 1400          | 400          |         |          |                 |          |         |          |
| GVI                  | HRV          |               | 200          |         | 400      |                 |          |         |          |
| OEL I                | NLD          | 550           |              | 1100    |          |                 |          |         |          |
| NDS I                | POL          | 734           |              | 1468    |          |                 |          |         |          |
| MAK                  | SWE          | 500           | 150          | 1100    | 300      |                 |          |         |          |
| OEL I                | EU           | 734           | 200          | 1468    | 400      |                 |          |         |          |
| TLV-ACGIH            |              | 1441          | 400          |         |          |                 |          |         |          |
| Predicted no-effect  | concentra    | tion - PNE    | C            |         |          |                 |          |         |          |
| Normal value in fr   | esh water    |               |              |         |          |                 | 0,26     | mg/l    |          |
| Normal value in m    | arine wate   | er            |              |         |          |                 | 0,026    | mg/l    |          |
| Normal value for f   | resh water   | sediment      |              |         |          |                 | 1,25     | mg/kg   |          |
| Normal value for r   | narine wat   | er sediment   |              |         |          |                 | 0,125    | mg/kg   |          |
| Normal value for v   | vater, inter | mittent relea | ase          |         |          |                 | 1,65     | mg/l    |          |
| Normal value of S    | TP microo    | rganisms      |              |         |          |                 | 650      | mg/l    |          |
| Normal value for t   | he terrestr  | ial compartr  | nent         |         |          |                 | 0,24     | mg/kg   |          |
| lealth - Derived no- | effect leve  | el - DNEL /   | DMEL         |         |          |                 |          |         |          |
|                      | Effe         | cts on consu  | ımers        |         |          | Effects on worl | cers     |         |          |
| Route of exposure    | e Acut       | te Acı        | ute          | Chronic | Chronic  | Acute local     | Acute    | Chronic | Chronic  |
|                      | loca         | l sys         | temic        | local   | systemic |                 | systemic | local   | systemic |
| Oral                 |              |               |              | VND     | 4,5      |                 |          |         |          |
|                      |              |               |              |         | mg/kg    |                 |          |         |          |
| Inhalation           | 734          |               | =            | 367     | 367      | 1468            | 1468     | 734     | 734      |
|                      | mg/r         | m3 mg         | /m3          | mg/m3   | mg/m3    | mg/m3           | mg/m3    | mg/m3   | mg/m3    |
| Skin                 |              |               |              | VND     | 37       |                 |          | VND     | 63       |
|                      |              |               |              |         | mg/kg    |                 |          |         | mg/kg    |

|                       | DIFENILMETANODIISOCIANATO, ISOMERI E OMOLOGHI |        |       |         |     |  |  |  |  |  |  |  |
|-----------------------|---|--------|-------|---------|-----|--|--|--|--|--|--|--|
| Threshold Limit Value |   |        |       |         |     |  |  |  |  |  |  |  |
| Type                  | Country                                       | TWA/8h |       | STEL/15 | min |  |  |  |  |  |  |  |
|                       |   | mg/m3  | ppm   | mg/m3   | ppm |  |  |  |  |  |  |  |
| TLV-ACGIH             |   |        | 0,005 |         |     |  |  |  |  |  |  |  |

|                 | BUMETRIZOLE |        |     |         |     |  |  |  |  |  |  |
|-----------------|-------------|--------|-----|---------|-----|--|--|--|--|--|--|
| Threshold Limit | Value       |        |     |         |     |  |  |  |  |  |  |
| Type            | Country     | TWA/8h |     | STEL/15 | min |  |  |  |  |  |  |
|                 |             | mg/m3  | ppm | mg/m3   | ppm |  |  |  |  |  |  |
| TLV-ACGIH       |             | 10     |     |         |     |  |  |  |  |  |  |

|                         |                | BIS(2,2,6   | ,6-TETRAMETH | IYL-4-PIPERIC | YL)SEBACATE    |          |         |          |  |  |
|-------------------------|----------------|-------------|--------------|---------------|----------------|----------|---------|----------|--|--|
| redicted no-effect cor  | ncentration    | - PNEC      |              |               |                |          |         |          |  |  |
| Normal value in fresh   | water          |             |              |               |                | 0,005    | mg/l    |          |  |  |
| Normal value in marii   | ne water       |             |              |               |                | 0,0005   | mg/l    |          |  |  |
| Normal value for fres   | h water sed    | iment       |              |               |                | 8,02     | mg/kg   |          |  |  |
| Normal value for mar    | ine water se   | ediment     |              |               |                | 0,802    | mg/kg   |          |  |  |
| Normal value of STP     | microorgan     | isms        |              |               |                | 1        | mg/l    |          |  |  |
| Normal value for the    | terrestrial co | ompartment  |              |               |                | 1,6      | mg/kg   |          |  |  |
| lealth - Derived no-eff | ect level - D  | NEL / DMEL  |              |               |                |          |         |          |  |  |
|                         | Effects o      | n consumers |              |               | Effects on wor | kers     | ters    |          |  |  |
| Route of exposure       | Acute          | Acute       | Chronic      | Chronic       | Acute local    | Acute    | Chronic | Chronic  |  |  |
|                         | local          | systemic    | local        | systemic      |                | systemic | local   | systemic |  |  |
| Oral                    | VND            | 1           | VND          | 1             |                |          |         |          |  |  |
|                         |                | mg/kg       |              | mg/kg         |                |          |         |          |  |  |
| Inhalation              | VND            | 1,4         | VND          | 1,4           | VND            | 5,6      | VND     | 5,6      |  |  |
|                         |                | mg/m3       |              | mg/m3         |                | mg/m3    |         | mg/m3    |  |  |
| Skin                    | VND            | 1           | VND          | 1             | VND            | 2        | VND     | 2        |  |  |
|                         |                | mg/kg       |              | mg/kg         |                | mg/kg    |         | mg/kg    |  |  |



# Indasa Abrasives (UK) Ltd **Polyurethane Sealant**

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| <b>SECTION 8.</b> | <b>Exposure</b> | controls/ | personal | protection | / >> |
|-------------------|-----------------|-----------|----------|------------|------|
|-------------------|-----------------|-----------|----------|------------|------|

|                                       |               |            |            | DIFENILMETAN- | 4.4'-DIISOCI | ANATO          |          |         |          |
|---------------------------------------|---------------|------------|------------|---------------|--------------|----------------|----------|---------|----------|
| Threshold Limit \                     | /alue         |            | _          |               | .,           |                |          |         |          |
| Туре                                  | Country       | TWA        | /8h        | STEL/15r      | nin          |                |          |         |          |
| , , , , , , , , , , , , , , , , , , , |               | mg/m       | n3 ppm     | mg/m3         | ppm          |                |          |         |          |
| AGW                                   | DEU           | 0,05       | •••        | 0,05          | ••           |                |          |         |          |
| MAK                                   | DEU           | 0,05       |            | 0,05          |              | INHAL          |          |         |          |
| MAK                                   | DEU           | 0,05       |            | 0,05          |              | SKIN           |          |         |          |
| VLA                                   | ESP           | 0,052      | 2 0,005    |               |              |                |          |         |          |
| VLEP                                  | FRA           | 0,1        | 0,01       | 0,2           | 0,02         |                |          |         |          |
| TLV                                   | GRC           | 0,2        |            | 0,2           |              |                |          |         |          |
| NDS                                   | POL           | 0,05       |            | 0,2           |              |                |          |         |          |
| MAK                                   | SWE           | 0,03       | 0,002      | 0,05 (C)      | 0,005 (C)    |                |          |         |          |
| TLV-ACGIH                             |               | 0,051      | 1 0,005    |               |              |                |          |         |          |
| Predicted no-effe                     | ct concent    | ration - F | PNEC       |               |              |                |          |         |          |
| Normal value ir                       | n fresh wate  | r          |            |               |              |                | 1,01     | mg/l    |          |
| Normal value ir                       | n marine wa   | ter        |            |               |              |                | 0,11     | mg/l    |          |
| Normal value o                        | f STP micro   | organisn   | ns         |               |              |                | 1,01     | mg/l    |          |
| Normal value for                      | or the terres | trial com  | partment   |               |              |                | 1,01     | mg/kg   |          |
| lealth - Derived i                    | no-effect le  | vel - DNI  | EL / DMEL  |               |              |                |          |         |          |
|                                       | Eff           | ects on c  | onsumers   |               |              | Effects on wor | kers     |         |          |
| Route of expos                        | ure Ac        | ute        | Acute      | Chronic       | Chronic      | Acute local    | Acute    | Chronic | Chronic  |
|                                       | loc           | al         | systemic   | local         | systemic     |                | systemic | local   | systemic |
| Oral                                  | VN            | ID         | 20         |               |              |                |          |         |          |
|                                       |               |            | mg/kg bw/d |               |              |                |          |         |          |
| Inhalation                            | 0,0           | )5         | 0,05       | 0,025         | 0,025        | 0,1            | 0,1      | 0,05    | 0,05     |
|                                       |               | J/m3       | mg/m3      | mg/m3         | mg/m3        | mg/m3          | mg/m3    | mg/m3   | mg/m3    |
| Skin                                  | 17            | •          | 25         |               |              | 28,7           | 50       |         |          |
|                                       | mg            | J/cm2      | mg/kg bw/d |               |              | mg/cm2         | mg/kg/d  |         |          |

|               | 2,  | ,2 - DIMORPHO  | LINODIETHYL   | . ETHER  |  |  |               |  |
|---------------|---|--|---|--|--|--|---------------|--|
| entration -   | PNEC  |  |   |  |  |  |               |  |
| <i>v</i> ater |   |  |   |  | 0,1  | mg/l   |               |  |
| water         |   |  |   |  | 0,01   | mg/l   |               |  |
| water sedin   | nent  |  |   |  | 8,2  | mg/kg  |               |  |
| e water sec   | diment  |  |   |  | 0,82   | mg/kg  |               |  |
| intermitter   | nt release  |  |   |  | 1  | mg/l   |               |  |
| nicroorganis  | sms   |  |   |  | 100  | mg/l   |               |  |
| rrestrial cor | mpartment   |  |   |  | 1,58   | mg/kg  |               |  |
| t level - Di  | NEL / DMEL  |  |   |  |  |  |               |  |
| Effects on    | consumers   |  |   | Effects on worl  | ers  |  |               |  |
| Acute         | Acute   | Chronic  | Chronic   | Acute local  | Acute  | Chronic  | Chronic       |  |
| local         | systemic  | local  | systemic  |  | systemic   | local  | systemic      |  |
|               |   | VND  | 0,5   |  |  |  |               |  |
|               |   |  | mg/kg/d   |  |  |  |               |  |
|               |   | VND  | 1,8   |  |  | VND  | 7,28          |  |
|               |   |  | mg/m3   |  |  |  | mg/m3         |  |
|               |   | VND  | 0,5   |  |  | VND  | 1             |  |
|               |   |  | mg/kg/d   |  |  |  | mg/kg/d       |  |
|               | water water sedir water sedir water sedir water secintermitter icroorganis restrial cor t level - DI Effects on Acute | entration - PNEC vater water water sediment e water sediment intermittent release icroorganisms rrestrial compartment t level - DNEL / DMEL Effects on consumers Acute | entration - PNEC  vater  water water sediment e water sediment intermittent release dicroorganisms restrial compartment t level - DNEL / DMEL Effects on consumers Acute Acute Chronic local systemic local VND | ### Comparison - PNEC  ### PNEC  ### Water  ### Water sediment  ## | water water sediment e water sediment intermittent release icroorganisms restrial compartment t level - DNEL / DMEL Effects on consumers Acute Acute Chronic Chronic Acute local local systemic local systemic VND 0,5 mg/kg/d VND 1,8 mg/m3 VND 0,5 | entration - PNEC           vater         0,1           water sediment         8,2           e water sediment         0,82           intermittent release         1           incroorganisms         100           restrial compartment         1,58           t level - DNEL / DMEL         Effects on consumers           Acute Acute         Chronic         Chronic         Acute local         Acute local         Acute systemic           Iocal         systemic         systemic         systemic           VND         0,5         mg/kg/d           VND         1,8         mg/m3           VND         0,5         mg/m3 | Action - PNEC |  |

(C) = CEILING; INHAL = Inhalable Fraction; RESP = Respirable Fraction; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

#### 8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

#### HAND PROTECTION

Protect your hands with work gloves, category III (ref. standard EN 374). For the final choice of material you need to assess the type of use. In case of contact for the short term or as protection against splashes, use gloves made of nitrile (0.3mm thickness, permeation time >480 min.). In the event of continued exposure use butyl rubber gloves (0.4mm thickness, permeation time> 480 min.). Contaminated gloves should be removed.

#### SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

#### **EYE PROTECTION**

Wear airtight protective goggles (see standard EN 166).





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#### SECTION 8. Exposure controls/personal protection .../>>

#### RESPIRATORY PROTECTION

In case of exceeding the threshold value (eg, TLV-TWA) of the substance or one or more of the substances present in the product, it is advisable to wear a mask with filter type A for organic vapors, the class (1, 2 or 3) must be chosen according to the limit concentration of use (1000, 5000 or 10000 ppm) (ref. standard EN 14387).

#### **ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

#### 9.1. Information on basic physical and chemical properties

Appearance paste Colour various Odour typical Odour threshold Not available Not available Melting point / freezing point Not available Initial boiling point Not available Boiling range Not available Flash point Not applicable Evaporation rate Not available Flammability (solid, gas) not flammable Lower inflammability limit Not available Not available Upper inflammability limit Lower explosive limit Not available Upper explosive limit Not available Not available Vapour pressure Vapour density Not available Relative density 1.33

Solubility insoluble in water
Partition coefficient: n-octanol/water Not available
Auto-ignition temperature Not available
Decomposition temperature Not available
Viscosity 60000 - 135000 cps
Explosive properties Not available
Oxidising properties Not available

#### 9.2. Other information

VOC (Directive 2010/75/EC): 6,90 % - 91,77 g/litre

#### **SECTION 10. Stability and reactivity**

#### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

#### ETHYL ACETATE

Decomposes slowly into acetic acid and ethanol under the effect of light, air and water.

#### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

#### 10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

#### ETHYL ACETATE

Risk of explosion on contact with: alkaline metals,hydrides,oleum.May react violently with: fluorine,strong oxidising agents,chlorosulphuric acid,potassium tert-butoxide.Forms explosive mixtures with: air.

#### 10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.



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#### SECTION 10. Stability and reactivity .../>>

**ETHYL ACETATE** 

Avoid exposure to: light, sources of heat, naked flames.

#### 10.5. Incompatible materials

**ETHYL ACETATE** 

Incompatible with: acids,bases,strong oxidants,aluminium,nitrates,chlorosulphuric acid.Incompatible materials: plastic materials.

#### 10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

#### **SECTION 11. Toxicological information**

#### 11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

#### **ACUTE TOXICITY**

LC50 (Inhalation) of the mixture: > 20 mg/l

LD50 (Oral) of the mixture: Not classified (no significant component)

LD50 (Dermal) of the mixture: >2000 mg/kg

TRIS(NONYLPHENYL)PHOSPHITE

 LD50 (Oral)
 > 15000 mg/kg Rattus sp.

 LD50 (Dermal)
 > 2000 mg/kg Oryctolagus sp.

DIFENILMETANODIISOCIANATO, ISOMERI E OMOLOGHI

 LD50 (Oral)
 > 10000 mg/kg Rattus sp.

 LD50 (Dermal)
 > 9400 mg/kg Oryctolagus sp.

 LC50 (Inhalation)
 1,5 mg/l/4h Rattus sp.

DIFENILMETAN-4,4'-DIISOCIANATO

 LD50 (Oral)
 > 2000 mg/kg Rattus sp.

 LD50 (Dermal)
 > 9400 mg/kg Oryctolagus sp.

 LC50 (Inhalation)
 1,5 mg/l/4h Rattus sp.

BIS(2,2,6,6-TETRAMETHYL-4-PIPERIDYL)SEBACATE

 LD50 (Oral)
 3700 mg/kg Rattus sp.

 LD50 (Dermal)
 > 3170 mg/kg Rattus sp.

 LC50 (Inhalation)
 0,5 mg/l Rattus sp.

REACTIVE MIXTURE OF ETHYLBENZENE, m-XYLENE AND p-XYLENE
LD50 (Oral) 5627 mg/kg Mus sp.
LD50 (Dermal) > 5000 ml/kg Oryctolagus sp.
LC50 (Inhalation) 6700 ppm/4h Rattus sp.

ETHYL ACETATE

LD50 (Oral) 5620 mg/kg Rattus sp.
LD50 (Dermal) > 20000 mg/kg Oryctolagus sp.
LC50 (Inhalation) 1600 mg/kg Oryctolagus sp.

XYLENE (BENZENE < 0.01%)

5627 mg/kg Mus sp.





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#### SECTION 11. Toxicological information .../>>

LD50 (Oral) LD50 (Dermal) LC50 (Inhalation)

> 5000 mg/kg Oryctolagus sp. 6700 ppm/4h Rattus sp.

#### SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

#### SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

#### RESPIRATORY OR SKIN SENSITISATION

Sensitising for the respiratory system May produce an allergic reaction. Contains:

#### **GERM CELL MUTAGENICITY**

Does not meet the classification criteria for this hazard class

#### **CARCINOGENICITY**

Does not meet the classification criteria for this hazard class

#### REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

#### STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

#### STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

#### **ASPIRATION HAZARD**

Does not meet the classification criteria for this hazard class

#### **SECTION 12. Ecological information**

#### 12.1. Toxicity

TRIS(NONYLPHENYL)PHOSPHITE

LC50 - for Fish 7,1 mg/l/96h Danio rerio

#### DIFENILMETANODIISOCIANATO, ISOMERI E OMOLOGHI

LC50 - for Fish > 1000 mg/l/96h Danio rerio

EC50 - for Algae / Aquatic Plants > 1640 mg/l/72h Scenedesmus subspicatus

Chronic NOEC for Crustacea > 10 mg/l Daphnia magna

DIFENILMETAN-4,4'-DIISOCIANATO

LC50 - for Fish > 1000 mg/l/96h Danio rerio

EC50 - for Algae / Aquatic Plants > 1640 mg/l/72h Scenedesmus subspicatus

Chronic NOEC for Crustacea > 10 mg/l Daphnia magna

Chronic NOEC for Algae / Aquatic Plants 1640 mg/l Desmodesmus subspicatus

#### BIS(2,2,6,6-TETRAMETHYL-4-PIPERIDYL)SEBACATE

LC50 - for Fish 4,4 mg/l/96h Brachydanio rerio EC50 - for Crustacea 0,57 mg/l/48h Daphnia sp.

EC50 - for Algae / Aquatic Plants 1,9 mg/l/72h Scenedesmus subspicatus



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#### SECTION 12. Ecological information .../>>

REACTIVE MIXTURE OF ETHYLBENZENE, m-XYLENE AND p-XYLENE

LC50 - for Fish 2,6 mg/l/96h Salmo gairdneri

EC10 for Algae / Aquatic Plants 1,9 mg/l/72h Selenastrum capricornutum

ETHYL ACETATE

LC50 - for Fish > 212 mg/l/96h

EC50 - for Crustacea 260 mg/l/48h Daphnia pulex

XYLENE (BENZENE < 0.01%)

LC50 - for Fish 2,6 mg/l/96h Oncorhynchus mykiss

EC50 - for Algae / Aquatic Plants 4,36 mg/l/72h Pseudokirchneriella subcapitata

Chronic NOEC for Fish > 1,3 mg/l Oncorhynchus mykiss Chronic NOEC for Crustacea 1,57 mg/l Daphnia magna

#### 12.2. Persistence and degradability

TRIS(NONYLPHENYL)PHOSPHITE

NOT rapidly degradable

DIFENILMETANODIISOCIANATO, ISOMERI E OMOLOGHI

NOT rapidly degradable

BIS(2,2,6,6-TETRAMETHYL-4-PIPERIDYL)SEBACATE

NOT rapidly degradable

ETHYL ACETATE

Solubility in water > 10000 mg/l

Rapidly degradable

XYLENE (BENZENE < 0.01%)

Rapidly degradable

#### 12.3. Bioaccumulative potential

ETHYL ACETATE

Partition coefficient: n-octanol/water 0,68 BCF 30

#### 12.4. Mobility in soil

Information not available

#### 12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

#### 12.6. Other adverse effects

Information not available

#### **SECTION 13. Disposal considerations**

#### 13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

#### **SECTION 14. Transport information**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.



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#### SECTION 14. Transport information ... / >>

#### 14.1. UN number

Not applicable

#### 14.2. UN proper shipping name

Not applicable

#### 14.3. Transport hazard class(es)

Not applicable

#### 14.4. Packing group

Not applicable

#### 14.5. Environmental hazards

Not applicable

#### 14.6. Special precautions for user

Not applicable

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

Information not relevant

#### **SECTION 15. Regulatory information**

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

Seveso Category - Directive 2012/18/EC: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

**Product** 

Point 3

Contained substance

Point 52 DIISONONYL PHTHALATE

Point 56 DIFENILMETANODIISOCIANATO, ISOMERI E OMOLOGHI

Point 56 DIFENILMETAN-4,4'-DIISOCIANATO

Reg. no.: 01-2119457014-47-XXXX

#### Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

#### Substances subject to authorisation (Annex XIV REACH)

None

#### Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

#### Substances subject to the Rotterdam Convention:

None

#### Substances subject to the Stockholm Convention:

None

#### Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.



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#### **SECTION 16. Other information**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flammable liquid, category 2 Flam. Liq. 2 Flam. Liq. 3 Flammable liquid, category 3 Carc. 2 Carcinogenicity, category 2 Acute toxicity, category 4 Acute Tox. 4 Aspiration hazard, category 1 Asp. Tox. 1

Specific target organ toxicity - repeated exposure, category 2 STOT RE 2

Eye Dam. 1 Serious eye damage, category 1 Eye Irrit. 2 Eye irritation, category 2 Skin Irrit 2 Skin irritation, category 2

STOT SE 3 Specific target organ toxicity - single exposure, category 3

Respiratory sensitization, category 1 Resp. Sens. 1 Skin Sens. 1 Skin sensitization, category 1

**Aquatic Acute 1** Hazardous to the aquatic environment, acute toxicity, category 1 Hazardous to the aquatic environment, chronic toxicity, category 1 **Aquatic Chronic 1 Aquatic Chronic 2** Hazardous to the aquatic environment, chronic toxicity, category 2

H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. Suspected of causing cancer. H351 H312 Harmful in contact with skin.

H332 Harmful if inhaled.

May be fatal if swallowed and enters airways. H304

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

H318 Causes serious eye damage. Causes serious eve irritation. H319 H315 Causes skin irritation.

May cause respiratory irritation. H335

May cause allergy or asthma symptoms or breathing difficulties if inhaled. H334

May cause an allergic skin reaction. H317 H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects. H410 H411 Toxic to aquatic life with long lasting effects.

**EUH066** Repeated exposure may cause skin dryness or cracking. **EUH204** Contains isocyanates. May produce an allergic reaction.

#### Use descriptor system:

Formulation of preparations **ERC** 

FRC 5 Industrial use resulting in inclusion into or onto a matrix

**ERC** Wide dispersive indoor use of reactive substances in open systems

PC 1 Adhesives, sealants PC 21 Laboratory chemicals PROC 10 Roller application or brushing PROC 15 Use as laboratory reagent

PROC 3 Use in closed batch process (synthesis or formulation)

PROC 4 Use in batch and other process (synthesis) where opportunity for exposure arises

PROC 5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant

contact)

PROC 8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated

Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated

facilities

Transfer of substance or preparation into small containers (dedicated filling line, including weighing) Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment

SU Building and construction work

SU

PROC 8b

PROC 9

10

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule



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#### SECTION 16. Other information .../>>

- GHS: Globally Harmonized System of classification and labeling of chemicals- IATA DGR: International Air Transport Association **Dangerous Goods Regulation**
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

#### **GENERAL BIBLIOGRAPHY**

- 1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
- 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
- 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
- 4. Regulation (EU) 2015/830 of the European Parliament
- 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
- 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
- 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
- 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
- 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
- 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
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- 13. Regulation (EU) 2017/776 (X Atp. CLP)
- The Merck Index. 10th Edition
- Handling Chemical Safety
- INRS Fiche Toxicologique (toxicological sheet)
- Patty Industrial Hygiene and Toxicology
- N.I. Sax Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- FCHA website
- Database of SDS models for chemicals Ministry of Health and ISS (Istituto Superiore di Sanità) Italy

#### Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 07 / 08 / 09 / 10 / 11 / 12 / 14 / 15 / 16.