

# Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

### 1.1. Product identifier

Code: RRTb  
 Product name: BRAVA ROYAL TRASPARENTE - BASE  
 UFI: A1NT-R0WM-U007-1SPP

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

Intended use: POLYURETHANE VARNISH FOR NAUTICAL - BASE

| Identified Uses  | Industrial | Professional | Consumer |
|------------------|------------|--------------|----------|
| Boat maintenance | -          | ✓            | ✓        |

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

Name: B.R.A.V.A. SRL  
 Full address: Via B. Parodi 284 a  
 District and Country: 16010 Ceranesi (GE)  
 Italia  
 Tel. +39 010 782864  
 Fax +39 010 783091

e-mail address of the competent person

responsible for the Safety Data Sheet: francesco@brava.it

### 1.4. Emergency telephone number

For urgent inquiries refer to

Informazioni: B.R.A.V.A. S.r.l. +39 010 782864 (lu-ve 8.30-12.30; 14.00-18.00)  
 CAV Osp. Pediat. Bambino Gesù, P.zza Sant' Onofrio 4, Roma. Tel. 06 68593726  
 Az. Osp. Univ. Foggia, V.le Luigi Pinto 1, Foggia. Tel. 800 183459  
 Az. Osp. A. Cardarelli, Via A. Cardarelli 9, Napoli. Tel. 081 5453333  
 CAV Policlinico Umberto I, V.le del Policlinico 155, Roma. Tel. 06 49978000  
 CAV Policlinico A. Gemelli, Largo Agostino Gemelli 8, Roma. Tel. 06 3054343  
 Az. Osp. Careggi U.O. Toss. Medica, Largo Brambilla 3, Firenze. Tel. 055 7947819  
 CAV C.N.I.T., Via Salvatore Maugeri 10, Pavia. Tel. 0382 24444  
 Osp. Niguarda Ca' Granda, Piazza Ospedale Maggiore 3, Milano. Tel. 02 66101029  
 Azienda Ospedaliera Papa Giovanni XXII, Piazza OMS 1, Bergamo. Tel. 800 883300  
 Az. Ospedaliera Integrata Verona, Piazzale Aristide Stefani 1, Verona. Tel. 800 011858

## 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 2020/878. 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:

|  |      |                                   |
|--|------|-----------------------------------|
| Flammable liquid, category 3                                 | H226 | Flammable liquid and vapour.      |
| Specific target organ toxicity - single exposure, category 3 | H335 | May cause respiratory irritation. |

## RRTb - BRAVA ROYAL TRASPARENTE - BASE

Specific target organ toxicity - single exposure, category 3 H336  
 Hazardous to the aquatic environment, chronic toxicity, H412  
 category 3

May cause drowsiness or dizziness.  
 Harmful to aquatic life with long lasting effects.

## 2.2. Label elements

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

Hazard pictograms:



Signal words: Warning

Hazard statements:

H226 Flammable liquid and vapour.  
 H335 May cause respiratory irritation.  
 H336 May cause drowsiness or dizziness.  
 H412 Harmful to aquatic life with long lasting effects.  
 EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P280 Wear protective gloves/ protective clothing / eye protection / face protection.  
 P370+P378 In case of fire: use . . . to extinguish.  
 P261 Avoid breathing dust / fume / gas / mist / vapours / spray.  
 P312 Call a POISON CENTRE / doctor / . . . if you feel unwell.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Contains: SOLVENT NAPHTHA (PETROLEUM), C9 AROMATIC  
 N-BUTYL ACETATE  
 XYLENE (MIXTURE OF ISOMERS)

Product not intended for uses provided for by Directive 2004/42/EC.

## 2.3. Other hazards

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

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

## SECTION 3. Composition/information on ingredients

## 3.2. Mixtures

Contains:

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

## RRTb - BRAVA ROYAL TRASPARENTE - BASE

**2-METHOXY-1-METHYLETHYL  
ACETATE**

INDEX 607-195-00-7                      9 ≤ x &lt; 30                      Flam. Liq. 3 H226

EC 203-603-9

CAS 108-65-6

**SOLVENT NAPHTHA  
(PETROLEUM), C9 AROMATIC**INDEX -                                      20 ≤ x < 25                      Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H335, STOT SE 3 H336,  
Aquatic Chronic 2 H411, EUH066, Classification note according to Annex VI  
to the CLP Regulation: P

EC 918-668-5

CAS -

REACH Reg. 01-2119455851-35-  
xxxx**N-BUTYL ACETATE**

INDEX 607-025-00-1                      10 ≤ x &lt; 20                      Flam. Liq. 3 H226, STOT SE 3 H336, EUH066

EC 204-658-1

CAS 123-86-4

**XYLENE (MIXTURE OF ISOMERS)**INDEX 601-022-00-9                      1 ≤ x < 5                      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  
STA Dermal: 1100 mg/kg, STA Inhalation vapours: 11 mg/l

EC 215-535-7

CAS 1330-20-7

REACH Reg. 01-2119488216-32

**ETHYLBENZENE**INDEX 601-023-00-4                      0 ≤ x < 0,5                      Flam. Liq. 2 H225, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373  
LC50 Inhalation vapours: 17,2 mg/l/4h

EC 202-849-4

CAS 100-41-4

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

**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).

**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.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

**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. Without adequate ventilation, vapours may accumulate at

## RRTb - BRAVA ROYAL TRASPARENTE - BASE

ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

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

Store only in the original container. Store in a cool and 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.

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

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

Regulatory References:

|     |                |  |
|-----|----------------|--|
| DEU | Deutschland    | Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56  |
| ESP | España         | Límites de exposición profesional para agentes químicos en España 2021   |
| FRA | France         | Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS   |
| ITA | Italia         | Decreto Legislativo 9 Aprile 2008, n.81  |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits (Fourth Edition 2020)  |
| EU  | OEL EU         | Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; 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 98/24/EC; Directive 91/322/EEC. |
|     | TLV-ACGIH      | ACGIH 2022   |

**2-METHOXY-1-METHYLETHYL ACETATE****Threshold Limit Value**

| Type | Country | TWA/8h |     | STEL/15min |     | Remarks / Observations |
|------|---------|--------|-----|------------|-----|------------------------|
|      |         | mg/m3  | ppm | mg/m3      | ppm |                        |
| AGW  | DEU     | 270    | 50  | 270        | 50  |                        |
| MAK  | DEU     | 270    | 50  | 270        | 50  |                        |
| VLA  | ESP     | 275    | 50  | 550        | 100 | SKIN                   |
| VLEP | FRA     | 275    | 50  | 550        | 100 | SKIN                   |
| VLEP | ITA     | 275    | 50  | 550        | 100 | SKIN                   |
| WEL  | GBR     | 274    | 50  | 548        | 100 | SKIN                   |
| OEL  | EU      | 275    | 50  | 550        | 100 | SKIN                   |

**ETHYLBENZENE****Threshold Limit Value**

| Type | Country | TWA/8h |     | STEL/15min |     | Remarks / Observations |
|------|---------|--------|-----|------------|-----|------------------------|
|      |         | mg/m3  | ppm | mg/m3      | ppm |                        |
| AGW  | DEU     | 88     | 20  | 176        | 40  | SKIN                   |
| MAK  | DEU     | 88     | 20  | 176        | 40  | SKIN                   |
| VLA  | ESP     | 441    | 100 | 884        | 200 | SKIN                   |
| VLEP | FRA     | 88,4   | 20  | 442        | 100 | SKIN                   |
| VLEP | ITA     | 442    | 100 | 884        | 200 | SKIN                   |

## RRTb - BRAVA ROYAL TRASPARENTE - BASE

|           |     |     |     |     |     |      |
|-----------|-----|-----|-----|-----|-----|------|
| WEL       | GBR | 441 | 100 | 552 | 125 | SKIN |
| OEL       | EU  | 442 | 100 | 884 | 200 | SKIN |
| TLV-ACGIH |     | 87  | 20  |     |     |      |

**N-BUTYL ACETATE**  
**Threshold Limit Value**

| Type      | Country | TWA/8h |     | STEL/15min |         | Remarks / Observations |
|-----------|---------|--------|-----|------------|---------|------------------------|
|           |         | mg/m3  | ppm | mg/m3      | ppm     |                        |
| AGW       | DEU     | 300    | 62  | 600 (C)    | 124 (C) |                        |
| VLA       | ESP     | 241    | 50  | 724        | 150     |                        |
| VLEP      | FRA     | 710    | 150 | 940        | 200     |                        |
| VLEP      | ITA     | 241    | 50  | 723        | 150     |                        |
| WEL       | GBR     | 724    | 150 | 966        | 200     |                        |
| OEL       | EU      | 241    | 50  | 723        | 150     |                        |
| TLV-ACGIH |         |        | 50  |            | 150     |                        |

**SOLVENT NAPHTHA (PETROLEUM), C9 AROMATIC**  
**Threshold Limit Value**

| Type      | Country | TWA/8h |     | STEL/15min |     | Remarks / Observations |
|-----------|---------|--------|-----|------------|-----|------------------------|
|           |         | mg/m3  | ppm | mg/m3      | ppm |                        |
| TLV-ACGIH |         | 100    | 19  |            |     |                        |

**Health - Derived no-effect level - DNEL / DMEL**

| Route of exposure | Effects on consumers |                |               | Effects on workers |             |                |               |                  |
|-------------------|----------------------|----------------|---------------|--------------------|-------------|----------------|---------------|------------------|
|                   | Acute local          | Acute systemic | Chronic local | Chronic systemic   | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral              |                      |                |               | 11 mg/kg/d         |             |                |               |                  |
| Inhalation        |                      |                |               | 32 mg/m3           |             |                |               | 150 mg/m3        |
| Skin              |                      |                |               | 11 mg/kg/d         |             |                |               | 25 mg/kg/d       |

**XYLENE (MIXTURE OF ISOMERS)**
**Threshold Limit Value**

| Type      | Country | TWA/8h |     | STEL/15min |     | Remarks / Observations |
|-----------|---------|--------|-----|------------|-----|------------------------|
|           |         | mg/m3  | ppm | mg/m3      | ppm |                        |
| VLEP      | FRA     | 221    | 50  | 442        | 100 | SKIN                   |
| VLEP      | ITA     | 221    | 50  | 442        | 100 | SKIN                   |
| WEL       | GBR     | 220    | 50  | 441        | 100 | SKIN                   |
| OEL       | EU      | 221    | 50  | 442        | 100 | SKIN                   |
| TLV-ACGIH |         | 434    | 100 | 651        | 150 |                        |

**Predicted no-effect concentration - PNEC**

|  |       |       |
|--|-------|-------|
| Normal value in fresh water                  | 0,32  | mg/l  |
| Normal value in marine water                 | 0,32  | mg/l  |
| Normal value for fresh water sediment        | 12,46 | mg/kg |
| Normal value for marine water sediment       | 12,46 | mg/kg |
| Normal value for water, intermittent release | 0,32  | mg/l  |
| Normal value of STP microorganisms           | 6,58  | mg/l  |

## RRTb - BRAVA ROYAL TRASPARENTE - BASE

Normal value for the terrestrial compartment

2,31

mg/kg

**Health - Derived no-effect level - DNEL / DMEL**

| Route of exposure | Effects on consumers |                |               |                  | Effects on workers |                |               |                  |
|-------------------|----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
|                   | Acute local          | Acute systemic | Chronic local | Chronic systemic | Acute local        | Acute systemic | Chronic local | Chronic systemic |
| Oral              |                      | 12.5           |               | 12.5 mg/kg/d     |                    |                |               |                  |
| Inhalation        | 442 mg/kg            |                |               | 65.3 mg/m3       | 442 mg/kg          |                | 221 mg/m3     |                  |
| Skin              |                      |                | 125           | 125 mg/kg/d      |                    |                |               | 212 mg/kg/d      |

## Legend:

(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 ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

**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 hands with category III work gloves.

The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

**SKIN PROTECTION**

Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

**EYE PROTECTION**

Wear airtight protective goggles (see standard EN 166).

**RESPIRATORY PROTECTION**

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

**ENVIRONMENTAL EXPOSURE CONTROLS**

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

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

**SECTION 9. Physical and chemical properties**

## RRTb - BRAVA ROYAL TRASPARENTE - BASE

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

| Properties                             | Value                             | Information   |
|--|-----------------------------------|---|
| Appearance                             | liquid                            |   |
| Colour                                 | transparent                       |   |
| Odour                                  | characteristic of solvent         |   |
| Melting point / freezing point         | not available                     |   |
| Initial boiling point                  | not available                     |   |
| Flammability                           | flammable liquid                  |   |
| Lower explosive limit                  | not available                     |   |
| Upper explosive limit                  | not available                     |   |
| Flash point                            | > 23 °C                           |   |
| Auto-ignition temperature              | not available                     |   |
| Decomposition temperature              | not available                     |   |
| pH                                     | not applicable                    | Reason for missing data:substance/mixture is non-soluble (in water) |
| Kinematic viscosity                    | >20,5 mm <sup>2</sup> /sec (40°C) |   |
| Solubility                             | partially miscible                |   |
| Partition coefficient: n-octanol/water | not available                     |   |
| Vapour pressure                        | not available                     |   |
| Density and/or relative density        | 1 kg/dm <sup>3</sup>              |   |
| Relative vapour density                | not available                     |   |
| Particle characteristics               | not applicable                    |   |

**9.2. Other information**

## 9.2.1. Information with regard to physical hazard classes

Information not available

## 9.2.2. Other safety characteristics

|                              |                          |
|------------------------------|--------------------------|
| Total solids (250°C / 482°F) | 38,50 %                  |
| VOC (Directive 2010/75/EU)   | 61,50 % - 616,08 g/litre |
| VOC (volatile carbon)        | 41,49 % - 415,58 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.

## 2-METHOXY-1-METHYLETHYL ACETATE

Stable in normal conditions of use and storage.

With the air it may slowly develop peroxides that explode with an increase in temperature.



## RRTb - BRAVA ROYAL TRASPARENTE - BASE

N-BUTYL ACETATE

Decomposes on contact with: 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.

2-METHOXY-1-METHYLETHYL ACETATE

May react violently with: oxidising substances, strong acids, alkaline metals.

ETHYLBENZENE

Reacts violently with: strong oxidants. Attacks various types of plastic materials. May form explosive mixtures with: air.

N-BUTYL ACETATE

Risk of explosion on contact with: strong oxidising agents. May react dangerously with: alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with: air.

XYLENE (MIXTURE OF ISOMERS)

Stable in normal conditions of use and storage. Reacts violently with: strong oxidants, strong acids, nitric acid, perchlorates. May form explosive mixtures with: air.

Stable under normal conditions of use and storage. Reacts violently with: strong oxidants, strong acids, nitric acid, perchlorates. May form explosive mixtures with: air.

#### 10.4. Conditions to avoid

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

N-BUTYL ACETATE

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

#### 10.5. Incompatible materials

2-METHOXY-1-METHYLETHYL ACETATE

Incompatible with: oxidising substances, strong acids, alkaline metals.

N-BUTYL ACETATE

Incompatible with: water, nitrates, strong oxidants, acids, alkalis, zinc.

#### 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.

ETHYLBENZENE

May develop: methane, styrene, hydrogen, ethane.

## SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Metabolism, toxicokinetics, mechanism of action and other information

##### 2-METHOXY-1-METHYLETHYL ACETATE

The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

#### Information on likely routes of exposure

##### 2-METHOXY-1-METHYLETHYL ACETATE

WORKERS: inhalation; contact with the skin.

##### ETHYLBENZENE

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; contact with the skin of products containing the substance.

##### N-BUTYL ACETATE

WORKERS: inhalation; contact with the skin.

##### XYLENE (MIXTURE OF ISOMERS)

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

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

##### 2-METHOXY-1-METHYLETHYL ACETATE

Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

**RRTb - BRAVA ROYAL TRASPARENTE - BASE****ETHYLBENZENE**

As the counterparts of benzene, may have an acute effect on the central nervous system, with depression, narcosis, often preceded by dizziness and associated with headache (Ispešl). Is irritating for skin, conjunctiva and respiratory tract.

**N-BUTYL ACETATE**

In humans, the substance's vapours cause irritation of the eyes and nose. In the event of repeated exposure, skin irritation, dermatitis (dryness and cracking of the skin) and keratitis appear.

**XYLENE (MIXTURE OF ISOMERS)**

Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

Interactive effects**N-BUTYL ACETATE**

A case of acute intoxication been reported involving a 33 year old worker while cleaning a tank with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The person had irritation of the conjunctiva and upper respiratory tract, drowsiness and motor coordination disorders, which disappeared within 5 hours. The symptoms are attributed to poisoning by mixed xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis are reported in workers exposed to a mixture of butyl acetate and isobutanol vapours, but with uncertainty concerning the responsibility of a particular solvent (INRC, 2011).

**XYLENE (MIXTURE OF ISOMERS)**

Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers. Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xylenes.

ACUTE TOXICITY

|  |   |
|--|---|
| ATE (Inhalation - vapours) of the mixture: | > 20 mg/l                                 |
| ATE (Oral) of the mixture:                 | Not classified (no significant component) |
| ATE (Dermal) of the mixture:               | >2000 mg/kg                               |

**2-METHOXY-1-METHYLETHYL ACETATE**

|                |                  |
|----------------|------------------|
| LD50 (Dermal): | > 5000 mg/kg Rat |
| LD50 (Oral):   | 8530 mg/kg Rat   |

**ETHYLBENZENE**

|                            |                    |
|----------------------------|--------------------|
| LD50 (Dermal):             | 15354 mg/kg Rabbit |
| LD50 (Oral):               | 3500 mg/kg Rat     |
| LC50 (Inhalation vapours): | 17,2 mg/l/4h Rat   |

**N-BUTYL ACETATE**

|                            |                     |
|----------------------------|---------------------|
| LD50 (Dermal):             | > 5000 mg/kg Rabbit |
| LD50 (Oral):               | > 6400 mg/kg Rat    |
| LC50 (Inhalation vapours): | 21,1 mg/l/4h Rat    |

**RRTb - BRAVA ROYAL TRASPARENTE - BASE****SOLVENT NAPHTHA (PETROLEUM), C9 AROMATIC**

LD50 (Dermal): > 3160 mg/kg Coniglio  
LD50 (Oral): 3492 mg/kg Ratto  
LC50 (Inhalation vapours): > 6193 mg/m<sup>3</sup> 4h. ratto

**XYLENE (MIXTURE OF ISOMERS)**

LD50 (Dermal): 4350 mg/kg Rabbit  
STA (Dermal): 1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP  
(figure used for calculation of the acute toxicity estimate of the mixture)  
LD50 (Oral): 3523 mg/kg Rat  
LC50 (Inhalation vapours): 26 mg/l/4h Rat  
STA (Inhalation vapours): 11 mg/l estimate from table 3.1.2 of Annex I of the CLP  
(figure used for calculation of the acute toxicity estimate of the mixture)

**SKIN CORROSION / IRRITATION**

Repeated exposure may cause skin dryness or cracking.

**SERIOUS EYE DAMAGE / IRRITATION**

Does not meet the classification criteria for this hazard class

**RESPIRATORY OR SKIN SENSITISATION**

Does not meet the classification criteria for this hazard class

**GERM CELL MUTAGENICITY**

Does not meet the classification criteria for this hazard class

**CARCINOGENICITY**

Does not meet the classification criteria for this hazard class

**ETHYLBENZENE**

Classified in Group 2B (possible human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 2000).  
Classified in Group D (not classifiable as a human carcinogen) by the US Environmental Protection Agency (EPA) - (US EPA file on-line 2014).

**XYLENE (MIXTURE OF ISOMERS)**

**RRTb - BRAVA ROYAL TRASPARENTE - BASE**

Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC).  
The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause respiratory irritation

May cause drowsiness or dizziness

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 Viscosity: >20,5 mm<sup>2</sup>/sec (40°C)

**11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

**SECTION 12. Ecological information**

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

**12.1. Toxicity**

SOLVENT NAPHTHA (PETROLEUM), C9  
AROMATIC

|                                   |   |
|-----------------------------------|---|
| LC50 - for Fish                   | 9,2 mg/l/96h Oncorhynchus mykiss (trota iridea) |
| EC50 - for Crustacea              | 3,2 mg/l/48h Dafnia                             |
| EC50 - for Algae / Aquatic Plants | 2,9 mg/l/72h                                    |

**12.2. Persistence and degradability**

2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water > 10000 mg/l

Rapidly degradable  
ETHYLBENZENE

## RRTb - BRAVA ROYAL TRASPARENTE - BASE

|                                       |                   |
|---------------------------------------|-------------------|
| Solubility in water                   | 1000 - 10000 mg/l |
| Rapidly degradable<br>N-BUTYL ACETATE |                   |
| Solubility in water                   | 1000 - 10000 mg/l |

## SOLVENT NAPHTHA (PETROLEUM), C9 AROMATIC

|   |                 |
|---|-----------------|
| Rapidly degradable<br>XYLENE (MIXTURE OF ISOMERS) |                 |
| Solubility in water                               | 100 - 1000 mg/l |
| Rapidly degradable                                |                 |

**12.3. Bioaccumulative potential**

## SOLVENT NAPHTHA (PETROLEUM), C9 AROMATIC

Test: Kow - Partition coefficient 1.2

|  |     |
|--|-----|
| 2-METHOXY-1-METHYLETHYL ACETATE        |     |
| Partition coefficient: n-octanol/water | 1,2 |

|  |     |
|--|-----|
| ETHYLBENZENE                           |     |
| Partition coefficient: n-octanol/water | 3,6 |

|  |      |
|--|------|
| N-BUTYL ACETATE                        |      |
| Partition coefficient: n-octanol/water | 2,3  |
| BCF                                    | 15,3 |

|  |      |
|--|------|
| XYLENE (MIXTURE OF ISOMERS)            |      |
| Partition coefficient: n-octanol/water | 3,12 |
| BCF                                    | 25,9 |

**12.4. Mobility in soil**

|                                   |     |
|-----------------------------------|-----|
| N-BUTYL ACETATE                   |     |
| Partition coefficient: soil/water | < 3 |

|                                   |      |
|-----------------------------------|------|
| XYLENE (MIXTURE OF ISOMERS)       |      |
| Partition coefficient: soil/water | 2,73 |

**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  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

## RRTb - BRAVA ROYAL TRASPARENTE - BASE

**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.

Waste transportation may be subject to ADR restrictions.

**CONTAMINATED PACKAGING**

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

**SECTION 14. Transport information****14.1. UN number or ID number**

ADR / RID, IMDG, IATA: 1263

**14.2. UN proper shipping name**

ADR / RID: PAINT or PAINT RELATED MATERIAL

IMDG: PAINT or PAINT RELATED MATERIAL

IATA: PAINT or PAINT RELATED MATERIAL

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

ADR / RID: Class: 3 Label: 3

IMDG: Class: 3 Label: 3

IATA: Class: 3 Label: 3

**14.4. Packing group**

ADR / RID, IMDG, IATA: III

**14.5. Environmental hazards**

ADR / RID: NO

IMDG: NO

IATA: NO

**14.6. Special precautions for user**

ADR / RID: HIN - Kemler: 30

Special provision: 163, 367, 650

Limited  
Quantities: 5  
L

Tunnel  
restriction  
code: (D/E)

## RRTb - BRAVA ROYAL TRASPARENTE - BASE

|       |                      |                        |                             |
|-------|----------------------|------------------------|-----------------------------|
| IMDG: | EMS: F-E, <u>S-E</u> | Limited Quantities: 5  |                             |
| IATA: | Cargo:               | L                      | Packaging instructions: 366 |
|       | Passengers:          | Maximum quantity: 220  |                             |
|       | Special provision:   | L                      | Packaging instructions: 355 |
|       |                      | Maximum quantity: 60 L |                             |
|       |                      | A3, A72, A192          |                             |

**14.7. Maritime transport in bulk according to IMO instruments**

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/EU: P5c

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

Point 3 - 40

Contained substance

Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 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**

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

**SECTION 16. Other information**

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

|                          |  |
|--------------------------|--|
| <b>Flam. Liq. 2</b>      | Flammable liquid, category 2                                       |
| <b>Flam. Liq. 3</b>      | Flammable liquid, category 3                                       |
| <b>Acute Tox. 4</b>      | Acute toxicity, category 4   |
| <b>Asp. Tox. 1</b>       | Aspiration hazard, category 1                                      |
| <b>STOT RE 2</b>         | Specific target organ toxicity - repeated exposure, category 2     |
| <b>Eye Irrit. 2</b>      | Eye irritation, category 2   |
| <b>Skin Irrit. 2</b>     | Skin irritation, category 2  |
| <b>STOT SE 3</b>         | Specific target organ toxicity - single exposure, category 3       |
| <b>Aquatic Chronic 2</b> | Hazardous to the aquatic environment, chronic toxicity, category 2 |
| <b>Aquatic Chronic 3</b> | Hazardous to the aquatic environment, chronic toxicity, category 3 |
| <b>H225</b>              | Highly flammable liquid and vapour.                                |
| <b>H226</b>              | Flammable liquid and vapour.                                       |
| <b>H312</b>              | Harmful in contact with skin.                                      |
| <b>H332</b>              | Harmful if inhaled.  |
| <b>H304</b>              | May be fatal if swallowed and enters airways.                      |
| <b>H373</b>              | May cause damage to organs through prolonged or repeated exposure. |
| <b>H319</b>              | Causes serious eye irritation.                                     |
| <b>H315</b>              | Causes skin irritation.  |
| <b>H335</b>              | May cause respiratory irritation.                                  |
| <b>H336</b>              | May cause drowsiness or dizziness.                                 |
| <b>H411</b>              | Toxic to aquatic life with long lasting effects.                   |
| <b>H412</b>              | Harmful to aquatic life with long lasting effects.                 |
| <b>EUH066</b>            | Repeated exposure may cause skin dryness or cracking.              |

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%

**RRTb - BRAVA ROYAL TRASPARENTE - BASE**

- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: 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: Regulation (EC) 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: Time-weighted average exposure limit
- TWA STEL: Short-term 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) 2020/878 (II Annex of REACH Regulation)
  4. Regulation (EC) 790/2009 (I Atp. CLP) 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
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
  14. Regulation (EU) 2018/669 (XI Atp. CLP)
  15. Regulation (EU) 2019/521 (XII Atp. CLP)
  16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
  17. Regulation (EU) 2019/1148
  18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
  19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
  20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
  21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
  22. Delegated Regulation (UE) 2022/692 (XVIII 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
  - ECHA 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.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

01 / 02 / 04 / 08 / 09 / 11 / 12 / 14 / 16