

# COO-VAR®

Paints, Primers and Specialist Coatings

## SAFETY DATA SHEET

### 205/P101 - 2 PACK ANTI-GRAFFITI COATING - HARDENER

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

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

##### 1.1. Product identifier

**Product name** 205/P101 - 2 PACK ANTI-GRAFFITI COATING - HARDENER

**Product number** 205/P101/1 - HARDENER

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

**Identified uses** HARDENER FOR TWO COMPONENT ANTI-GRAFFITI COATING

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

###### Supplier

COO-VAR  
Lockwood Street  
Hull  
HU2 0HN  
+44 (0) 1482 328053(T)  
+44 (0) 1482 219266(F)  
info@coo-var.co.uk

**Contact person** Technical Department -, 08.30 - 16.30 hrs Mon - Thurs, 08.30 - 15.00 hrs Fri, as above

##### 1.4. Emergency telephone number

**Emergency telephone** +44 (0) 1482 328053 (08.30 - 16.30 hrs Mon - Thurs, 08.30 - 15.00 hrs Fri)

**SDS No.** 10751

#### SECTION 2: Hazards identification

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

###### Classification (EC 1272/2008)

**Physical hazards** Flam. Liq. 3 - H226

**Health hazards** Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 STOT SE 3 - H335 STOT RE 2 - H373

**Environmental hazards** Not Classified

**Classification (67/548/EEC or 1999/45/EC)** Xn;R20. Xi;R37. R43. R10.

##### 2.2. Label elements

###### Pictogram



**Signal word**

**Warning**

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<b>Hazard statements</b>	H226 Flammable liquid and vapour. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H373 May cause damage to organs through prolonged or repeated exposure.
<b>Precautionary statements</b>	P102 Keep out of reach of children. P101 If medical advice is needed, have product container or label at hand. P260 Do not breathe vapour/ spray. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 Dispose of contents/ container in accordance with national regulations.
<b>Supplemental label information</b>	EUH204 Contains isocyanates. May produce an allergic reaction.
<b>Contains</b>	HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER, Xylene isomer mixture(with up to 20% Ethylbenzene), HEXAMETHYLENE-DI-ISOCYANATE
<b>Supplementary precautionary statements</b>	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P240 Ground/ bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P312 Call a POISON CENTER/ doctor if you feel unwell. P314 Get medical advice/ attention if you feel unwell. P321 Specific treatment (see medical advice on this label). P332+P313 If skin irritation occurs: Get medical advice/ attention. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P337+P313 If eye irritation persists: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

## 205/P101 - 2 PACK ANTI-GRAFFITI COATING - HARDENER

<b>HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER</b>		<b>60-100%</b>
CAS number: 28182-81-2		
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>	
Acute Tox. 4 - H332	Xn;R20. Xi;R37. R43.	
Skin Sens. 1 - H317		
STOT SE 3 - H335		
<b>2-METHOXY-1-METHYLETHYL ACETATE</b>		<b>10-30%</b>
CAS number: 108-65-6	EC number: 203-603-9	REACH registration number: 01-2119475791-29-xxxx
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>	
Flam. Liq. 3 - H226	R10	
<b>Xylene isomer mixture(with up to 20% Ethylbenzene)</b>		<b>10-30%</b>
CAS number: 1330-20-7	EC number: 215-535-7	REACH registration number: 01-2119488216-32-0000
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>	
Flam. Liq. 3 - H226	R10 Xn;R20/21 Xi;R38	
Acute Tox. 4 - H312		
Acute Tox. 4 - H332		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
STOT SE 3 - H335		
STOT RE 2 - H373		
Asp. Tox. 1 - H304		
<b>HEXAMETHYLENE-DI-ISOCYANATE</b>		<b>&lt;1%</b>
CAS number: 822-06-0	EC number: 212-485-8	REACH registration number: 01-2119457571-37-0000
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>	
Acute Tox. 4 - H302	T;R23 R42/43 Xi;R36/37/38	
Acute Tox. 1 - H330		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
Resp. Sens. 1 - H334		
Skin Sens. 1 - H317		
STOT SE 3 - H335		

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### **General information**

Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

## 205/P101 - 2 PACK ANTI-GRAFFITI COATING - HARDENER

<b>Inhalation</b>	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
<b>Skin contact</b>	It is important to remove the substance from the skin immediately. In the event of any sensitisation symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognised skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

<b>General information</b>	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	A single exposure may cause the following adverse effects: Headache. Exhaustion and weakness. During application and drying, solvent vapours will be emitted. Vapours in high concentrations are narcotic.
<b>Ingestion</b>	May cause sensitisation or allergic reactions in sensitive individuals. Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
<b>Skin contact</b>	May cause skin sensitisation or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin. Discoloration of the skin.
<b>Eye contact</b>	May cause temporary eye irritation.

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

<b>Notes for the doctor</b>	Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.
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## **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

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

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**Specific hazards** Containers can burst violently or explode when heated, due to excessive pressure build-up. Flammable liquid and vapour. Vapours may be ignited by a spark, a hot surface or an ember. Vapours may form explosive mixtures with air. Fire-water run-off in sewers may create fire or explosion hazard. This product is toxic.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

### 5.3. Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

**Personal precautions** No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Evacuate area. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated. Avoid inhalation of dust and vapours. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.

### 6.2. Environmental precautions

**Environmental precautions** Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

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

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Do not allow material to enter confined spaces, due to the risk of explosion. Provide adequate ventilation. Absorb small quantities with paper towels and evaporate in a safe place. Once evaporation is complete, place paper in a suitable waste disposal container and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

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<b>Usage precautions</b>	Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. In use may form flammable/explosive vapour-air mixture. Vapours may accumulate on the floor and in low-lying areas. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
<b>Advice on general occupational hygiene</b>	Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

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

<b>Storage precautions</b>	Eliminate all sources of ignition. Take precautionary measures against static discharges. Earth container and transfer equipment to eliminate sparks from static electricity. Keep away from oxidising materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.
<b>Storage class</b>	Flammable liquid storage.

### 7.3. Specific end use(s)

<b>Specific end use(s)</b>	The identified uses for this product are detailed in Section 1.2.
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## **SECTION 8: Exposure Controls/personal protection**

### 8.1. Control parameters

#### Occupational exposure limits

#### **HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER**

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 0.07 mg/m<sup>3</sup>  
as NCO

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

Long-term exposure limit (8-hour TWA): WEL 50 ppm 274 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 100 ppm 548 mg/m<sup>3</sup>  
Sk

#### **Xylene isomer mixture(with up to 20% Ethylbenzene)**

Long-term exposure limit (8-hour TWA): WEL 50 ppm 220 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 100 ppm 441 mg/m<sup>3</sup>  
Sk

#### **HEXAMETHYLENE-DI-ISOCYANATE**

Long-term exposure limit (8-hour TWA): WEL 0,02 mg/m<sup>3</sup>

Sen

Short-term exposure limit (15-minute): WEL 0,07 mg/m<sup>3</sup>  
as NCO

WEL = Workplace Exposure Limit

Sen = Capable of causing occupational asthma.

Sk = Can be absorbed through the skin.

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### 2-METHOXY-1-METHYLETHYL ACETATE (CAS: 108-65-6)

<b>DNEL</b>	Consumer - Inhalation; Long term systemic effects: 33 mg/m <sup>3</sup>
	Professional - Inhalation; Long term systemic effects: 275 mg/m <sup>3</sup>
	Consumer - Oral; Long term systemic effects: 1.67 mg/kg/day
	Professional - Dermal; Long term systemic effects: 153.5 mg/kg/day
	Consumer - Dermal; Long term systemic effects: 54.8 mg/kg/day

<b>PNEC</b>	- Sediment; 3.29 mg/kg
	- Soil; 0.29 mg/kg
	- Sediment (Marinewater); 0.329 mg/kg
	- Marine water; 0.0635 mg/l
	- Intermittent release; 6.35 mg/l
	- Fresh water; 0.635 mg/l
- STP; 100 mg/l	

### Xylene isomer mixture(with up to 20% Ethylbenzene) (CAS: 1330-20-7)

<b>DNEL</b>	Consumer - Inhalation; Short term : 260 mg/m <sup>3</sup>
	Industry - Dermal; Long term systemic effects: 3182 mg/kg/day
	Industry - Inhalation; Short term : 442 mg/m <sup>3</sup>
	Consumer - Dermal; Long term systemic effects: 1872 mg/kg/day
	Consumer - Oral; Long term systemic effects: 12.5 mg/kg/day
	Consumer - Inhalation; Long term systemic effects: 65.3 mg/m <sup>3</sup>
Industry - Inhalation; Long term systemic effects: 221 mg/m <sup>3</sup>	

<b>PNEC</b>	- Fresh water; 0.327 mg/l
	- Marine water; 0.327 mg/l
	- Intermittent release; 0.327 mg/l
	- STP; 6.58 mg/l
	- Sediment (Freshwater); 12.46 mg/kg
	- Sediment (Marinewater); 12.46 mg/kg
- Soil; 2.31 mg/kg	

## 8.2. Exposure controls

### Protective equipment



### Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilating equipment.

### Personal protection

Unprotected persons should be kept away from treated areas.

### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

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<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
<b>Other skin and body protection</b>	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
<b>Hygiene measures</b>	Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.
<b>Respiratory protection</b>	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### SECTION 9: Physical and Chemical Properties

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

<b>Appearance</b>	Liquid
<b>Colour</b>	Yellowish
<b>Odour</b>	Characteristic. Organic solvents.
<b>Initial boiling point and range</b>	145°C @ 760 mm Hg
<b>Flash point</b>	38 approx. °C CC (Closed cup).
<b>Upper/lower flammability or explosive limits</b>	: Xylene = 1% - 1-methoxypropylacetate-2= 1.5%
<b>Vapour pressure</b>	Xylene ca. 7-9 @ 20 C, Hexamethylene-1,6-diisocyanate 0.014 @ 25 C, Resin <0.001 @ 20 C (Vapour pressure balance/OECD No. 104 mbar @ °C
<b>Relative density</b>	1.06 - 1.08 @ @ 20 °C
<b>Solubility(ies)</b>	Insoluble in water Hardens in contact with water.
<b>Auto-ignition temperature</b>	460 C DIN 51794°C
<b>Viscosity</b>	ca. 225 mPa.s @ 23 C DIN EN ISO 3219/A.3 - ca. 59 s 4mm flow cup to DIN 53211 @ °C

#### 9.2. Other information

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity



## 205/P101 - 2 PACK ANTI-GRAFFITI COATING - HARDENER

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
<b>10.2. Chemical stability</b>	
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
<b>10.3. Possibility of hazardous reactions</b>	
<b>Possibility of hazardous reactions</b>	The following materials may react strongly with the product: Oxidising agents.
<b>10.4. Conditions to avoid</b>	
<b>Conditions to avoid</b>	Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented. Do not pressurise, cut, weld, drill, grind or otherwise expose containers to heat or sources of ignition.
<b>10.5. Incompatible materials</b>	
<b>Materials to avoid</b>	Oxidising materials. Acids - oxidising.
<b>10.6. Hazardous decomposition products</b>	
<b>Hazardous decomposition products</b>	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<b>Toxicological effects</b>	No indication of mutagenic effects. Aromatic hydrocarbons, such as xylene, irritate the skin and mucous membranes and are narcotic if inhaled in high concentrations.
<b>Acute toxicity - dermal</b>	
<b>ATE dermal (mg/kg)</b>	8,800.0
<b>Acute toxicity - inhalation</b>	
<b>Notes (inhalation LC<sub>50</sub>)</b>	Acute Tox. 4 - H332 Harmful if inhaled.
<b>ATE inhalation (gases ppm)</b>	4,573.38
<b>ATE inhalation (vapours mg/l)</b>	22.41
<b>ATE inhalation (dusts/mists mg/l)</b>	1.02
<b>Skin corrosion/irritation</b>	
<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/irritation</b>	
<b>Serious eye damage/irritation</b>	Irritation of eyes is assumed.
<b>Respiratory sensitisation</b>	
<b>Respiratory sensitisation</b>	Based on available data the classification criteria are not met.
<b>Skin sensitisation</b>	
<b>Skin sensitisation</b>	May cause skin sensitisation or allergic reactions in sensitive individuals.
<b>Germ cell mutagenicity</b>	
<b>Genotoxicity - in vitro</b>	Based on available data the classification criteria are not met.
<b>Carcinogenicity</b>	

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<b>Carcinogenicity</b>	No evidence of carcinogenicity in animal studies.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.
<b>Reproductive toxicity - development</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	STOT SE 3 - H335 May cause respiratory irritation.
<b>Target organs</b>	Respiratory system, lungs
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Prolonged or repeated exposure may cause the following adverse effects: High concentrations may cause severe lung damage.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Based on available data the classification criteria are not met.
<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	A single exposure may cause the following adverse effects: Headache. Exhaustion and weakness. During application and drying, solvent vapours will be emitted. Vapours in high concentrations are narcotic.
<b>Ingestion</b>	May cause sensitisation or allergic reactions in sensitive individuals. Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
<b>Skin contact</b>	May cause skin sensitisation or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin. Discoloration of the skin.
<b>Eye contact</b>	May cause temporary eye irritation.
<b>Acute and chronic health hazards</b>	Over exposure, especially during spraying without the necessary precautions, entails risk of concentration- dependant irritating effects on eyes, nose, throat and respiratory tract. Delayed appearance of the complaints and development of hypersensitivity (difficulty breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from these effects even at low isocyanate concentrations below UK Workplace Exposure Limits (WEL). Prolonged contact with skin may have tanning and irritating effects.
<b>Route of entry</b>	Ingestion Inhalation Skin and/or eye contact
<b>Target organs</b>	Respiratory system, lungs
<b>Medical considerations</b>	Skin disorders and allergies.
<b>Toxicological information</b>	

### HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER

<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	5,100.0
<b>Species</b>	Rat
<b>ATE oral (mg/kg)</b>	5,100.0

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### Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> 2,100.0 mg/kg)

Species Rabbit

ATE dermal (mg/kg) 2,100.0

### Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l) 0.554

Species Rat

ATE inhalation (dusts/mists mg/l) 1.5

### Skin corrosion/irritation

Animal data Slightly irritating.

### Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

### Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties.

Inhalation Irritating to respiratory system.

### 2-METHOXY-1-METHYLETHYL ACETATE

### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> 8,532.0 mg/kg)

Species Rat

ATE oral (mg/kg) 8,532.0

### Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> 5,000.0 mg/kg)

Species Rabbit

ATE dermal (mg/kg) 5,000.0

### Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 35.7

Species Rat

ATE inhalation (vapours mg/l) 35.7

### Skin corrosion/irritation

Animal data Not irritating.

## 205/P101 - 2 PACK ANTI-GRAFFITI COATING - HARDENER

### Skin sensitisation

**Skin sensitisation** Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Ames test: Negative.

### Xylene isomer mixture(with up to 20% Ethylbenzene)

### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 3,523.0

**Species** Rat

**ATE oral (mg/kg)** 3,523.0

### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 12,126.0

**Species** Rabbit

**ATE dermal (mg/kg)** 1,100.0

### Acute toxicity - inhalation

**Acute toxicity inhalation (LC<sub>50</sub> gases ppmV)** 6,700.0

**Species** Rat

**Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l)** 27.0

**Species** Rat

**Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)** 1.5

**Species** Rat

**ATE inhalation (gases ppm)** 6,700.0

**ATE inhalation (vapours mg/l)** 27.0

**ATE inhalation (dusts/mists mg/l)** 1.5

### Serious eye damage/irritation

**Serious eye damage/irritation** Severely irritating to skin. Irritation of eyes is assumed. No testing is needed.

### Respiratory sensitisation

**Respiratory sensitisation** Not sensitising.

### Skin sensitisation

**Skin sensitisation** Not sensitising.

### Carcinogenicity

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<b>Carcinogenicity</b>	There is no evidence that the product can cause cancer.
<b>IARC carcinogenicity</b>	IARC Group 3 Not classifiable as to its carcinogenicity to humans.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	This substance has no evidence of toxicity to reproduction.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Kinematic viscosity <= 20.5 mm <sup>2</sup> /s.
<b>Inhalation</b>	Harmful by inhalation.
<b>Ingestion</b>	Pneumonia may be the result if vomited material containing solvents reaches the lungs.
<b>Skin contact</b>	Harmful in contact with skin.
<b>Target organs</b>	Central nervous system Liver

### HEXAMETHYLENE-DI-ISOCYANATE

#### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 746.0

**Species** Rat

#### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 7,000.0

**Species** Rat

#### Skin corrosion/irritation

**Animal data** Corrosive

#### Respiratory sensitisation

**Respiratory sensitisation** Guinea pig: There is evidence that the material can lead to respiratory hypersensitivity.

#### Skin sensitisation

**Skin sensitisation** Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

#### Germ cell mutagenicity

**Genotoxicity - in vitro** Ames test: Negative.

#### Carcinogenicity

**Carcinogenicity** No evidence of carcinogenicity in animal studies

#### Reproductive toxicity

**Reproductive toxicity - fertility** Fertility: - Dose level: 0 - 0.005 - 0.050 - 0.300 ppm, Inhalation, Rat P This substance has no evidence of toxicity to reproduction.

**Reproductive toxicity - development** Teratogenicity: - Dose level:: 0 - 0.005 - 0.050 - 0.300 ppm, Inhalation, Rat This substance has no evidence of toxicity to reproduction.

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### Specific target organ toxicity - single exposure

**STOT - single exposure** Respiratory irritant effects that impair function with symptoms such as cough, pain, choking, and breathing difficulties.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Not classified as a specific target organ toxicant after repeated exposure.

### Aspiration hazard

**Aspiration hazard** Based on available data the classification criteria are not met.

**Inhalation** May cause sensitisation by inhalation.

**Skin contact** May cause sensitisation by skin contact.

**Acute and chronic health hazards** The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation.

## SECTION 12: Ecological Information

**Ecotoxicity** Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

### Xylene isomer mixture(with up to 20% Ethylbenzene)

**Ecotoxicity** The product is not expected to be hazardous to the environment.

### 12.1. Toxicity

**Toxicity** Based on available data the classification criteria are not met.

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: LC(0) =8.8. LC(100)=25.0 mg/l, Algae

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 100-1000 mg/l, Daphnia magna

### HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER

**Acute toxicity - fish** LC<sub>50</sub>, > 96 hours: 100 mg/l, Brachydanio rerio (Zebra Fish)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, > 48 hours: 100 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** IC<sub>50</sub>, > 72 hours: 100 mg/l, Scenedesmus subspicatus

**Acute toxicity - microorganisms** EC<sub>50</sub>, > 3 hours: 100 mg/l, Activated sludge

### 2-METHOXY-1-METHYLETHYL ACETATE

**Acute toxicity - fish** LC<sub>50</sub>, > 96 hours: 100 mg/l, Oryzias latipes (Red killifish)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, > 48 hours: 500 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, > 72 hours: 1000 mg/l, Scenedesmus subspicatus

## 205/P101 - 2 PACK ANTI-GRAFFITI COATING - HARDENER

**Acute toxicity - microorganisms** EC20, > 30 minutes: 1000 mg/l, Activated sludge

### Xylene isomer mixture(with up to 20% Ethylbenzene)

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 2.6 mg/l, Algae

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 3.62 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** IC<sub>50</sub>, 72 hours: 3.2 mg/l, Fish

### 12.2. Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

### HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER

**Persistence and degradability** The product is not readily biodegradable.

**Biodegradation** Degradation (%)  
- 1%: 28 days

### 2-METHOXY-1-METHYLETHYL ACETATE

**Biodegradation** - 100 Degradation (%): 8 days  
Inherently biodegradable

### Xylene isomer mixture(with up to 20% Ethylbenzene)

**Persistence and degradability** The product is readily biodegradable.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

### Xylene isomer mixture(with up to 20% Ethylbenzene)

**Partition coefficient** log Kow: 3.12 - 3.2

### 12.4. Mobility in soil

**Mobility** Volatile liquid. The product contains organic solvents which will evaporate easily from all surfaces.

### 12.5. Results of PBT and vPvB assessment

### Xylene isomer mixture(with up to 20% Ethylbenzene)

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

### 12.6. Other adverse effects

**Other adverse effects** None known.

## SECTION 13: Disposal considerations

## 205/P101 - 2 PACK ANTI-GRAFFITI COATING - HARDENER

### 13.1. Waste treatment methods

#### **General information**

The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

#### **Disposal methods**

Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible. Vapour from residual product may create a highly flammable or explosive atmosphere inside the container. Containers should be thoroughly emptied before disposal because of the risk of an explosion. Do not cut or weld used containers unless they have been thoroughly cleaned internally.

#### **Waste class**

When this coating, in its liquid state, as supplied, becomes a waste, it is categorised as hazardous waste, with code 08 01 11\* (SOLVENT BASED LIQUID WASTE). Part-used containers, not drained and/or rigorously scraped out and containing dried residues of the supplied coating, are categorised as hazardous waste, with code 08 01 11\* (SOLVENT BASED LIQUID WASTE). Used containers, drained and/or rigorously scraped out and containing dry residues of the supplied coating, are categorised as non-hazardous waste, with code 15 01 02 (plastic packaging) or 15 01 04 (metal packaging). If mixed with other wastes, the above waste code may not be applicable. Neutralised empty packages, are categorised as non-hazardous waste, with code 15 01 02(plastic packaging) or 15 01 04 (metal packaging)

### **SECTION 14: Transport information**

#### **General**

This product is packed in accordance with the Limited Quantity Provisions of CDGCPL2, ADR and IMDG.

#### 14.1. UN number

<b>UN No. (ADR/RID)</b>	1866
<b>UN No. (IMDG)</b>	1866
<b>UN No. (ICAO)</b>	1866

#### 14.2. UN proper shipping name

<b>Proper shipping name (ADR/RID)</b>	RESIN SOLUTION, FLAMMABLE
<b>Proper shipping name (IMDG)</b>	RESIN SOLUTION, FLAMMABLE
<b>Proper shipping name (ICAO)</b>	RESIN SOLUTION, FLAMMABLE
<b>Proper shipping name (ADN)</b>	RESIN SOLUTION, FLAMMABLE

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

<b>ADR/RID class</b>	1866
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#### 14.4. Packing group

#### 14.5. Environmental hazards

#### **Environmentally hazardous substance/marine pollutant**

No.



## 205/P101 - 2 PACK ANTI-GRAFFITI COATING - HARDENER

### 14.6. Special precautions for user

Hazard Identification Number 31C  
(ADR/RID)

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

#### SECTION 15: Regulatory information

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

<b>National regulations</b>	Health and Safety at Work etc. Act 1974 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.
<b>EU legislation</b>	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 453/2010 of 20 May 2010. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Dangerous Preparations Directive 1999/45/EC. Dangerous Substances Directive 67/548/EEC.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

#### SECTION 16: Other information

<b>Classification procedures according to Regulation (EC) 1272/2008</b>	Acute Tox. 4 - H332: STOT SE 3 - H335: Skin Sens. 1 - H317: : Calculation method. Flam. Liq. 3 - H226: : Expert judgement.
<b>Training advice</b>	Read and follow manufacturer's recommendations.
<b>Revision comments</b>	Issued in new format for Reach compliance in accordance with EC 1272/2008 Issued in accordance with Annex II to REACH, as amended by Commission Regulation (EU) No. 453/2010 Additional toxicology and eco-toxicology data added.
<b>Revision date</b>	02/03/2017
<b>Revision</b>	7
<b>Supersedes date</b>	26/01/2015
<b>SDS number</b>	10751
<b>Risk phrases in full</b>	R10 Flammable. R11 Highly flammable R20 Harmful by inhalation. R20/21 Harmful by inhalation and in contact with skin. R23 Toxic by inhalation. R36/37/38 Irritating to eyes, respiratory system and skin. R37 Irritating to respiratory system. R42/43 May cause sensitisation by inhalation and skin contact. R43 May cause sensitisation by skin contact. R65 Harmful: may cause lung damage if swallowed.

## 205/P101 - 2 PACK ANTI-GRAFFITI COATING - HARDENER

### Hazard statements in full

H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H330 Fatal if inhaled.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H373 May cause damage to organs (Respiratory system, lungs) through prolonged or repeated exposure.  
EUH208 Contains HEXAMETHYLENE-DI-ISOCYANATE. May produce an allergic reaction.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.