

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

1.1 Product identifier

Product code : VW379E2SXSBJ
 Product name : XCURA EVO Process;Process Black

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

Product use : Printing ink or Additive
 Uses advised against : None known.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Distributor : Flint Group UK Ltd
 Old Heath Road
 GB Wolverhampton
 WVI 2QT
 UNITED KINGDOM
 e-mail address of person responsible for this SDS : MSDS.UnitedKingdom.Wolverhampton.SF@flintgrp.com

1.4 Emergency telephone number (with hours of operation)

+44 (1902) 87 10 28 (8:00 h - 17:00 h)

History

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
 SKIN CORROSION/IRRITATION - Category 2
 SKIN SENSITIZATION - Category 1
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 AQUATIC HAZARD (LONG-TERM) - Category 2

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms : 

Signal word : Warning

Hazard statements : H315 - Causes skin irritation.
 H319 - Causes serious eye irritation.
 H317 - May cause an allergic skin reaction.
 H335 - May cause respiratory irritation.
 H411 - Toxic to aquatic life with long lasting effects.

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SECTION 2: Hazards identification

- Precautionary statements** : P280 - Wear protective gloves or clothing and eye or face protection.06P305 + P351 - IF IN EYES: Rinse cautiously with water for several minutes.06P338 - Remove contact lenses, if present and easy to do. Continue rinsing.06P333 + P313 - If skin irritation or rash occurs: Get medical attention.06P403 + P233 - Store container tightly closed in well-ventilated place.06P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : Not applicable.
- Hazardous ingredients** : ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide
polyol acrylate;RD433-0090
bisphenol-A- epoxy diacrylate
Glycerol propoxylated, esters with acrylic acid
- Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

2.3 Other hazards

- PBT** : P: Not available. B: Not available. T: Not available.
- vPvB** : vP: Not available. vB: Not available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	
			Regulation (EC) No. 1272/2008 [CLP]	Type
Pentaerythritol, ethoxylated, esters with acrylic acid	EC: 500-111-9 CAS: 51728-26-8	≥10 - ≤25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411	[1]
Acrylated resin		≤10	Eye Irrit. 2, H319 Aquatic Chronic 2, H411	[1]
2-benzyl-2-dimethylamino-4-morpholinobutyrophenone	REACH #: 01-2119382381-40 EC: 404-360-3 CAS: 119313-12-1 Index: 606-047-00-9	≤5	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
EMK	EC: 202-025-4 CAS: 90-93-7	≤5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1)	[1]
ethyl phenyl(2,4,6-trimethylbenzoyl) phosphinate	REACH #: 01-2119987994-10 EC: 282-810-6 CAS: 84434-11-7	≤5	Skin Sens. 1B, H317 Aquatic Chronic 2, H411	[1]
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	REACH #: 01-2119489401-38 EC: 423-340-5 CAS: 162881-26-7 Index: 015-189-00-5	≤5	Skin Sens. 1, H317 Aquatic Chronic 4, H413	[1]
2-ethylhexyl 4-(dimethylamino)benzoate	EC: 244-289-3 CAS: 21245-02-3	≤3	Eye Irrit. 2, H319	[1]
		≤3	Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]

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SECTION 3: Composition/information on ingredients

bisphenol-A- epoxy diacrylate	REACH #: 01-2119490020-53 CAS: 55818-57-0	<1	Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]
Glycerol propoxylated, esters with acrylic acid	REACH #: 01-2119487948-12 EC: 500-114-5 CAS: 52408-84-1	<1	Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]

See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. In case of accidental skin contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of skin.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention/advice.
- Ingestion** : Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Use suitable protective equipment (section 8).

4.2 Most important symptoms and effects, both acute and delayed

See toxicological information (Section 11)

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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SECTION 4: First aid measures

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable Extinguishing media : Recommended:, alcohol-resistant foam, CO₂, powders, water spray

Extinguishing media not to be used : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
phosphorus oxides
halogenated compounds
metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and materials for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.

6.4 Reference to other sections Reference to other sections

See Section 1 for emergency contact information.

See Section 13 for additional waste treatment information.

See Section 8 for information on appropriate personal protective equipment.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Persons with a history of skin sensitization problems should not be employed in any process in which this product is used.

Use only in well-ventilated areas. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8). Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with all local, regional, national and international regulations.

Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).

Observe label precautions. Keep container tightly closed and in a well-ventilated place.

Keep away from sources of ignition - No smoking. Prevent unauthorized access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Storage temperature: 20 to 25°C

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E2: Hazardous to the aquatic environment - Chronic 2	200	500
9ii: Toxic for the environment	200	500

7.3 Specific end use(s)

Not applicable.

7.4 Additional information

Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredient name	Occupational exposure limits
Carbon black	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 7 mg/m ³ 15 minutes. TWA: 3.5 mg/m ³ 8 hours.
Silica, amorphous fumed	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 6 mg/m ³ 8 hours. Form: Inhalable fraction TWA: 2.4 mg/m ³ 8 hours. Form: Respirable dust
Talc, containing asbestiform fibres	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 1 mg/m ³ 8 hours. Form: Respirable dust

Other Exposure limits : CMR: See toxicological information (Section 11)

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere 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. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

SECTION 8: Exposure controls/personal protection

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available.

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Gloves : For prolonged or repeated handling, use the following type of gloves:
4 - 8 hours polyethylene (PE) or Viton® Gloves.

References: <http://www.esig.org/en/library/publications/best-practice-guides>

Not recommended : PVC gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye/face protection : Use safety eyewear designed to protect against splash of liquids.

Environmental exposure controls

Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Color : Black.

Odor : Characteristic.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : ≥ 168 °C

Flash point : Closed cup: > 100 °C [theoretical]

Evaporation rate : Not available.

Flammability (solid, gas) : Not applicable.

Burning time : Not applicable.

Burning rate : Not applicable.

Explosion limits

Lower: : Not applicable.

Upper: : Not available.

Vapor pressure : 4.6 hPa

Vapor density : Not available.

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SECTION 9: Physical and chemical properties

Density	: 1.1 g/cm ³
Solubility	: insoluble in water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (20°C (68°F)): >2.2 cm ² /s (>220 cSt)
Explosive properties	: Not available.
Oxidizing properties	: Not available.

9.2 Other information

SADT : Not available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Not available.

10.2 Chemical stability

This mixture contains materials which are unstable under the following conditions: exposure to heat strong UV sources

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

When exposed to high temperatures may produce hazardous decomposition products. These could cause the product to polymerize exothermically. Unintentional contact with them should be avoided.

10.5 Incompatible materials

Keep away from:

strong alkalis, free radical initiators, peroxides, reactive metals

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself. The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended. See sections 2 and 3 for details.

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Acrylate components of the mixture have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. May cause allergic skin reactions with repeated exposure. If splashed in the eyes, the liquid may cause irritation and reversible damage. The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract. Ingestion may cause nausea, weakness and central nervous system effects.

Substances / Mixtures

Acute toxicity : Not available.

Acute toxicity estimates

Not available.

Irritation/Corrosion : Causes eye irritation. Irritating to skin.

Sensitization : May produce an allergic reaction. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Mutagenicity : Not available.

Carcinogenicity : Not available.

Reproductive toxicity : Not available.

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SECTION 11: Toxicological information

Specific target organ toxicity (single exposure) : Not available.
 Specific target organ toxicity (repeated exposure) : Not available.
 Aspiration hazard : Not available.
 Chronic toxicity : Not available.
 Teratogenicity : Not available.

Other information

Toxicokinetics

Absorption : Not available.
 Distribution :
 Metabolism : Not available.
 Elimination : Not available.

SECTION 12: Ecological information

There are no data available on the mixture itself. This material is toxic to aquatic life with long lasting effects. Do not empty into drains or watercourses. See Sections 2 and 3 for details.

12.1 Toxicity

Not available.

12.2 Persistence and degradability

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
EMK phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	- -	- -	Not readily Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2-benzyl-2-dimethylamino-4-morpholinobutyrophenone	2.91	-	low
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	5.77	<5	low
Glycerol propoxylated, esters with acrylic acid	2.52	-	low

12.4 Mobility in soil

Not available.

12.5 Results of PBT and vPvB assessment

PBT : P: Not available. B: Not available. T: Not available.
 vPvB : vP: Not available. vB: Not available.

12.6 Other adverse effects

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Do not allow to enter drains or watercourses.
 Dispose of according to all federal, state and local applicable regulations.

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SECTION 13: Disposal considerations

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
08 03 12*	waste ink containing dangerous substances

SECTION 14: Transport information

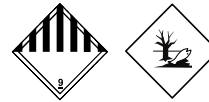
Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

International transport regulations

14.1 UN number : UN3082

14.2 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Pentaerythritol, ethoxylated, esters with acrylic acid, Acrylated resin)

14.3 Transport hazard class(es) : 9



14.4 Packing group : III

14.5 Environmental hazards : Hazardous to aquatic environment

14.6 Special precautions for user : Not applicable.

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

Not applicable.

Additional information

ADR ADN

Classification code : M6
Special provisions : 274, 335, 601
Hazard identification number : 90
ADR Tunnel Code: : (E)
Limited quantity : 5 L

IMDG

Emergency schedules (EmS) : F-A, S-F
Marine pollutant : Yes.
Marine pollutant substances : 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone
Limited quantity : 5 L

IATA

	Max. Qty	Packaging instruction
Passenger and Cargo Aircraft	450 L	964
Cargo Aircraft Only	450 L	964
Limited quantity	30 L	Y964

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SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

VOC content : < 0,1 %

Europe inventory : All components are listed or exempted.

National regulations

Industrial use : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

4

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Eye Irrit. 2, H319	Calculation method
Skin Irrit. 2, H315	Calculation method
Skin Sens. 1, H317	Calculation method
STOT SE 3, H335 (Respiratory tract irritation)	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements :	H315 H317 H319 H335 H400 H410 H411 H413	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Toxic to aquatic life with long lasting effects. May cause long lasting harmful effects to aquatic life.
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SECTION 16: Other information

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Notice to reader

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.