SAFETY DATA SHEET

Date of issue/Date of revision : 9 November 2022 Version • 1



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

1.1 Product identifier

Product name : SIGMASHIELD 420 BASE YELLOWGREEN (MY)

Product code : 00254266

Product description

Product type : Liquid. Other means of : Not available.

identification

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

Product use : Professional applications, Used by spraying.

Use of the substance/

mixture

: Coating.

Uses advised against : Product is not intended, labelled or packaged for consumer use.

1.3 Details of the supplier of the safety data sheet

PPG Coatings Belgium BV/SRL Tweemontstraat 104 B-2100 Deurne Belgium Telephone +32-33606311

Fax +32-33606435

e-mail address of person responsible for this SDS

: Product.Stewardship.EMEA@ppg.com

1.4 Emergency telephone number

Supplier

+31 20 4075210

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture Classification according to UK CLP/GHS

Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 **STOT RE 2, H373** Aquatic Acute 1, H400 Aquatic Chronic 1, H410

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

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

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

2.2 Label elements

Hazard pictograms











Signal word : Danger

> 1/16 English (GB) United Kingdom (UK)

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 2: Hazards identification

Hazard statements

: Flammable liquid and vapour.

Causes skin irritation.

May cause an allergic skin reaction. Causes serious eye damage.

May cause damage to organs through prolonged or repeated exposure.

Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

Response

: Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Do not breathe vapour.

: Collect spillage.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national

and international regulations.

P280, P210, P273, P260, P391, P501

Supplemental label

elements

: Contains epoxy constituents. May produce an allergic reaction.

Warning! Hazardous respirable droplets may be formed when sprayed. Do not

breathe spray or mist.

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

Special packaging requirements

Containers to be fitted

with child-resistant

fastenings

: Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a

vPvB.

Other hazards which do not result in classification

: Causes digestive tract burns. Prolonged or repeated contact may dry skin and

cause irritation.

SECTION 3: Composition/information on ingredients

Mixture

3.2 Mixtures

Product/ingredient name	Identifiers	%	Classification	Туре
epoxy resin (MW ≤ 700)	REACH #: 01-2119456619-26 EC: 500-033-5 CAS: 25068-38-6	≥10 - ≤25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥5.0 - ≤10	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304	[1] [2]
crystalline silica, respirable powder (<10 microns)	EC: 238-878-4 CAS: 14808-60-7	≥1.0 - ≤5.0	STOT RE 1, H372 (inhalation)	[1] [2]
4-nonylphenol, branched	REACH #:	≥1.0 - <3.0	Acute Tox. 4, H302	[1] [3]

English (GB) United Kingdom (UK) 2/16

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 3: Composition/information on ingredients

ozomon o. odmpo		rigicalcrits		
	01-2119510715-45 EC: 284-325-5 CAS: 84852-15-3 Index: 601-053-00-8		Skin Corr. 1B, H314 Eye Dam. 1, H318 Repr. 2, H361fd Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)	
2-methylpropan-1-ol	REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1	≥1.0 - ≤3.2	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	[1] [2]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥1.0 - ≤5.0	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	[1] [2]
Nonylphenols	EC: 294-048-1 CAS: 91672-41-2	≤0.10	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Repr. 2, H361 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10) EUH071 See Section 16 for the full text of the H	[1]
			statements declared above.	

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.

Xylene: Several REACH registrations cover the REACH registered substance with xylene isomers, ethylbenzene (and toluene). The other REACH Registrations include: 01-2119555267-33 reaction mass of ethylbenzene and m-xylene and pxylene, 01-2119486136-34 Aromatic hydrocarbons, C8, 01-2119539452-40 reaction mass of ethylbenzene and xylene.

<u>Type</u>

Inhalation

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance of equivalent concern

This mixture contains ≥ 1% of titanium dioxide. The Annex VI classification of titanium dioxide does not apply to this mixture according to Note 10.

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

SUB codes represent substances without registered CAS Numbers.

SECTION 4: First aid measures

4.1 Description of first aid measures

: Check for and remove any contact lenses. Immediately flush eyes with running water for Eye contact at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

> : 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 recognised skin cleanser. Do NOT use solvents or thinners.

If swallowed, seek medical advice immediately and show the container or label. Keep

Ingestion person warm and at rest. Do NOT induce vomiting.

3/16 English (GB) United Kingdom (UK)

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 4: First aid measures

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact: Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.

Ingestion : Corrosive to the digestive tract. Causes burns.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

pain or irritation redness dryness

cracking

blistering may occur

Ingestion: Adverse symptoms may include the following:

stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing

media

: Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing

media

: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture

: Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very 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 combustion

products

: Decomposition products may include the following materials:

carbon oxides

halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

English (GB) United Kingdom (UK) 4/16

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 5: Firefighting measures

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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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

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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised 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

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal

Large spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

6.4 Reference to other sections

: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating,

English (GB) United Kingdom (UK)

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 7: Handling and storage

Advice on general occupational hygiene

lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

See Section 1.2 for Identified uses.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Occupational exposure limits

Product/ingredient name	Exposure limit values
xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020). [xylene, o-,m-,p-or mixed isomers] Absorbed through skin. STEL: 441 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
crystalline silica, respirable powder (<10 microns)	EH40/2005 WELs (United Kingdom (UK), 1/2020). [silica, respirable crystalline]
2-methylpropan-1-ol	TWA: 0.1 mg/m³ 8 hours. Form: Respirable fraction EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 231 mg/m³ 15 minutes. STEL: 75 ppm 15 minutes. TWA: 154 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
ethylbenzene	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 552 mg/m³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 441 mg/m³ 8 hours. TWA: 100 ppm 8 hours.

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 appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 8: Exposure controls/personal protection

DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL DNEL Long term Dermal Long term Dermal DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL Long term Dermal 3.571 mg/kg bw/day General population [Consumers] Systemic [Consumers] General population [Consumers] General population [Consumers] General population [Consumers] Systemic [Consumers] Systemi
DNEL DNEL Short term Dermal DNEL Long term Oral DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL Short term Dermal DNEL Long term Oral DNEL DNEL DNEL Long term Inhalation DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL Long term Oral DNEL Short term Inhalation DNEL DNEL Long term Inhalation DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL Long term Oral DNEL Short term Oral DNEL Short term Inhalation DNEL Long te
xylene DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
xylene DNEL Short term Oral DNEL Short term Inhalation DNEL Short term Inhalation DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
xylene DNEL Short term Inhalation DNEL Short term Inhalation DNEL Long term Inhalation DNEL Long term Inhalation DNEL Short term Inhalation DNEL Long term Inhalation DNEL Short term Inhalation DNEL Long term Inhalation DNEL Short term Inhalation DNEL Long term Dremal DNEL Long term Inhalation DNEL Short term Inhalation DNEL Short term Inhalation DNEL Long term Oral DNEL Long term Inhalation DNEL Long term Oral DNEL Long term Inhalation DNEL Long term Inhalation DNEL Long term Inhalation DNEL Long term Oral DNEL Long term Inhalation DNEL DNEL Long term Inhalation DNEL DNEL DNEL DNEL DNET DNEL DNET DNET DNET DNET DNET DNET DNET DNET
xylene DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
xylene DNEL DNEL DNEL Coal DNEL Long term Inhalation DNEL Long term Dermal DNEL Long term Inhalation DNEL DNEL DNEL DNEL DNEL DNEL Long term Inhalation DNEL Short term Inhalation DNEL Long term Inhalation DNEL Long term Inhalation DNEL Long term Inhalation DNEL Short term Inhalation DNEL DNEL Long term Inhalation DNEL Short term Inhalation DNEL DNEL Long term Inhalation DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
xylene DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL Long term Dermal Long term Inhalation DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL Long term Inhalation DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL Long term Oral Long term Inhalation DNEL Short term Inhalation DNEL DNEL DNEL Long term Inhalation DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL Long term Inhalation DNEL Long term Inhalation DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL Short term Inhalation DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
A-nonylphenol, branched DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
4-nonylphenol, branched DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
4-nonylphenol, branched DNEL DNEL Short term Oral DNEL DNEL DNEL DNEL Long term Inhalation DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL
DNEL Short term Oral 0.4 mg/kg bw/day General population Systemic One of the control of the cont
DNEL Long term Inhalation 0.4 mg/m³ General population Systemic
DNEL Long term Inhalation 0.5 mg/m³ Workers Systemic
DNEL Short term Inhalation 0.8 mg/m³ General population Systemic
DNEL Short term Inhalation 1 mg/m³ Workers Systemic
DNEL Long term Dermal 3.8 mg/kg bw/day General population Systemic
DNEL Long term Dermal 7.5 mg/kg bw/day Workers Systemic
DNEL Short term Dermal 7.6 mg/kg bw/day General population Systemic
DNEL Short term Dermal 15 mg/kg bw/day Workers Systemic
2-methylpropan-1-ol DNEL Long term Inhalation 55 mg/m³ General population Local
DNEL Long term Inhalation 310 mg/m³ Workers Local
ethylbenzene DNEL Long term Oral 1.6 mg/kg bw/day General population Systemic
DNEL Long term Inhalation 15 mg/m³ General population Systemic
DNEL Long term Inhalation 77 mg/m³ Workers Systemic
DNEL Long term Dermal 180 mg/kg bw/day Workers Systemic
DNEL Short term Inhalation 293 mg/m³ Workers Local

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
epoxy resin (MW ≤ 700)	Fresh water	0.006 mg/l	Assessment Factors
	Marine water	0.001 mg/l	Assessment Factors
	Sewage Treatment Plant	10 mg/l	Assessment Factors
	Fresh water sediment	0.996 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	0.1 mg/kg dwt	Equilibrium Partitioning
xylene	Fresh water	0.327 mg/l	-
	Marine water	0.327 mg/l	-
	Sewage Treatment Plant	6.58 mg/l	-
	Fresh water sediment	12.46 mg/kg dwt	-
	Marine water sediment	12.46 mg/kg dwt	-
	Soil	2.31 mg/kg	-

English (GB) United Kingdom (UK) 7/16

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 8: Exposure controls/personal protection

2-methylpropan-1-ol	Fresh water	0.4 mg/l	Assessment Factors
	Marine water	0.04 mg/l	Assessment Factors
	Sewage Treatment Plant	10 mg/l	Assessment Factors
	Fresh water sediment	1.56 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	0.156 mg/kg dwt	-
	Soil	0.076 mg/kg dwt	Equilibrium Partitioning
ethylbenzene	Fresh water	0.1 mg/l	Assessment Factors
	Marine water	0.01 mg/l	Assessment Factors
	Sewage Treatment Plant	9.6 mg/l	Assessment Factors
	Fresh water sediment	13.7 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	1.37 mg/kg dwt	Equilibrium Partitioning
	Soil	2.68 mg/kg dwt	Equilibrium Partitioning
	Secondary Poisoning	20 mg/kg	-

8.2 Exposure controls

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection
Skin protection
Hand protection

: Chemical splash goggles and face shield.

butyl rubber

: 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

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. When there is a risk of ignition from static electricity, wear antistatic protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and 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.

Respiratory protection

: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and particulate filter P3

English (GB) United Kingdom (UK) 8/16

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 8: Exposure controls/personal protection

Environmental exposure controls

: 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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid. : Various Colour **Odour** Characteristic. **Odour threshold** : Not available.

Melting point/freezing point : May start to solidify at the following temperature: <-7°C (<19.4°F) This is based on

data for the following ingredient: 4-nonylphenol, branched. Weighted average:

-78.68°C (-109.6°F)

Initial boiling point and

boiling range

: >37.78°C (>100°F)

Flammability (solid, gas) : liquid

Upper/lower flammability or

explosive limits

Greatest known range: Lower: 1.7% Upper: 10.9% (2-methylpropan-1-ol)

Closed cup: 33.1°C (91.6°F) Flash point

Auto-ignition temperature

Decomposition temperature

pН

: Not applicable.

460°C (860°F)

Not applicable. insoluble in water. **Viscosity** Kinematic (40°C): >21 mm²/s

Solubility(ies) Method

		Method
Media	Result	
cold water	Not soluble	

Miscible with water No.

Partition coefficient: n-octanol/ : Not applicable.

water

Vapour pressure

	Vapour Pressure at 20°C		Vap	oour pressure at 50°C	
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa
2-methylpropan-1-ol	<12	<1.6	DIN EN 13016-2		

Relative density 1.74

Vapour density : Highest known value: 7.59 (Air = 1) (4-nonylphenol, branched). Weighted average:

4.31 (Air = 1)

Explosive properties The product itself is not explosive, but the formation of an explosible mixture of

vapour or dust with air is possible.

Oxidising properties

Particle characteristics

: Product does not present an oxidizing hazard.

Median particle size : Not applicable.

> 9/16 **United Kingdom (UK)** English (GB)

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

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.

Refer to protective measures listed in sections 7 and 8.

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions:

oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products

: Depending on conditions, decomposition products may include the following materials: carbon oxides halogenated compounds metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
epoxy resin (MW ≤ 700)	LD50 Dermal	Rabbit	>2 g/kg	-
	LD50 Oral	Rat	>2 g/kg	-
xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
4-nonylphenol, branched	LD50 Dermal	Rabbit	2.14 g/kg	-
	LD50 Oral	Rat	1300 mg/kg	-
2-methylpropan-1-ol	LC50 Inhalation Vapour	Rat	24.6 mg/l	4 hours
	LD50 Dermal	Rabbit	2460 mg/kg	-
	LD50 Oral	Rat	2830 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-

Conclusion/Summary Acute toxicity estimates

: There are no data available on the mixture itself.

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
SIGMASHIELD 420 BASE YELLOWGREEN (MY)	51188.5	21867.1	N/A	127.3	N/A
xylene	4300	1700	N/A	11	N/A
4-nonylphenol, branched	1300	2140	N/A	N/A	N/A
2-methylpropan-1-ol	2830	2460	N/A	24.6	N/A
ethylbenzene	3500	17800	N/A	17.8	N/A
Nonylphenols	500	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
epoxy resin (MW ≤ 700)	Eyes - Mild irritant	Rabbit	-	-	1
	Skin - Mild irritant	Rabbit	-	-	-
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500	-
				mg	
4-nonylphenol, branched	Skin - Erythema/Eschar	Rabbit	4	-	-

Conclusion/Summary

: Not available.

Skin : There are no data available on the mixture itself.

English (GB) United Kingdom (UK) 10/16

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 11: Toxicological information

Eyes : There are no data available on the mixture itself. : There are no data available on the mixture itself. Respiratory

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
epoxy resin (MW ≤ 700)	skin	Mouse	Sensitising

Conclusion/Summary

: There are no data available on the mixture itself. Skin : There are no data available on the mixture itself. Respiratory

Mutagenicity

Conclusion/Summary

: There are no data available on the mixture itself.

Carcinogenicity

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

Conclusion/Summary : There are no data available on the mixture itself.

Reproductive toxicity

Conclusion/Summary

: There are no data available on the mixture itself.

Teratogenicity

Conclusion/Summary

There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
crystalline silica, respirable powder (<10 microns) ethylbenzene	Category 1	inhalation	-
	Category 2	-	hearing organs

Aspiration hazard

Product/ingredient name	Result
xylene ethylbenzene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on likely routes: Not available.

of exposure

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.

: Corrosive to the digestive tract. Causes burns. Ingestion

Symptoms related to the physical, chemical and toxicological characteristics

11/16 United Kingdom (UK) English (GB)

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 11: Toxicological information

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness dryness cracking

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

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

Short term exposure

Potential immediate

: Not available.

effects

Potential delayed effects

: Not available.

Long term exposure

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary: Not available.

General: May cause damage to organs through prolonged or repeated exposure. Prolonged

or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when

subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.
 Mutagenicity : No known significant effects or critical hazards.
 Reproductive toxicity : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
epoxy resin (MW ≤ 700)	Acute LC50 1.8 mg/l	Daphnia	48 hours
	Chronic NOEC 0.3 mg/l	Daphnia	21 days
4-nonylphenol, branched	Acute EC50 0.044 mg/l	Crustaceans - Water flea -	48 hours
		Moina macrocopa	
	Acute LC50 0.221 mg/l	Fish	96 hours
2-methylpropan-1-ol	Acute EC50 1100 mg/l	Daphnia	48 hours
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - Ceriodaphnia dubia	-
Nonylphenols	Acute LC50 0.017 mg/l	Fish - Pleuronectes americanus	96 hours

Conclusion/Summary: Not available.

12.2 Persistence and degradability

English (GB)	United Kingdom (UK)	12/16

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 12: Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
epoxy resin (MW ≤ 700)	OECD 301F	5 % - 28 days	-	-
ethylbenzene	-	79 % - Readily - 10 days	-	-

Conclusion/Summary: Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
epoxy resin (MW ≤ 700)	-	-	Not readily
xylene	-	-	Readily
ethylbenzene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
epoxy resin (MW ≤ 700) xvlene	3 3.12	31 7.4 to 18.5	low low
4-nonylphenol, branched	5.4	251.19	low
2-methylpropan-1-ol ethylbenzene	3.6	- 79.43	low low

12.4 Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects: No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal

: The generation of waste should be avoided or minimised wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste

Waste catalogue

: Yes.

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

Packaging

Methods of disposal

: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	Waste catalogue	
Container	15 01 06	mixed packaging

English (GB)	United Kingdom (UK)	13/16

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 13: Disposal considerations

Special precautions

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Marine pollutant substances	Not applicable.	Not applicable.	(Epoxy resin (MW ≤ 700), 4-nonylphenol, branched)	Not applicable.

Additional information

ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or

≤5 kg.

Tunnel code : (D/E)

ADN : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

: The environmentally hazardous substance mark may appear if required by other transportation **IATA**

regulations.

user

14.6 Special precautions for : 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.

14.7 Transport in bulk according to IMO instruments

: Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture UK (GB) /REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

14/16 English (GB) United Kingdom (UK)

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 15: Regulatory information

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Substance of equivalent concern for environment	4-nonylphenol, branched and linear substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof	Candidate	-	12/19/2012

Ozone depleting substances

Not listed.

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

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category	
P5c E1	
E1	

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
Quartz (SiO2)	Exposure Limits EH40	silica, respirable crystalline respirable fraction	Carc.	-

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate

GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and

Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019

No. 720 and amendments

DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level

EUH statement = GB CLP-specific Hazard statement

N/A = Not available

PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number

SGG = Segregation Group

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
STOT RE 2, H373	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

Full text of abbreviated H statements

English (GB) United Kingdom (UK)	English (GB)	United Kingdom (UK)	15/16
----------------------------------	--------------	---------------------	-------

SIGMASHIELD 420 BASE YELLOWGREEN (MY)

SECTION 16: Other information

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Full text of classifications

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

<u>History</u>

Date of issue/ Date of : 11/9/2022

revision

Date of previous issue : No previous validation

Prepared by : EHS Version : 1

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by us, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

English (GB) United Kingdom (UK) 16/16