SAFETY DATA SHEET

Date of issue/Date of revision : 9 October 2024 Version



: 26.04

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

1.1 Product identifier

Product name : SIGMASHIELD 220/420 LT HARDENER

Product code : 00317027

Other means of identification

Not available.

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/

: Coating.; Hardener.

mixture

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

National advisory body/Poison Centre

Telephone number : Centre Anti-Poisons/Antigifcentrum + 32 70 245 245

Supplier

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition: Mixture

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

Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360F Aquatic Chronic 1, H410

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

English (GB) Belgium 1/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 2: Hazards identification

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

Hazard statements

: Flammable liquid and vapour.

Harmful if swallowed. Causes skin irritation.

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

May damage fertility.

Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

: Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment.

Response

: Collect spillage. IF exposed or concerned: Get medical advice or attention.

Storage

: Not applicable.

Disposal

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

international regulations.

P280, P210, P273, P391, P308 + P313, P501

Supplemental label

elements

: Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Special packaging requirements

Containers to be fitted

with child-resistant

: Not applicable.

fastenings

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB

: 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

: Prolonged or repeated contact may dry skin and cause irritation.

May cause endocrine disruption.

English (GB) Belgium 2/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	% by weight	Classification	Specific Conc. Limits, M-factors and ATEs	Туре
E poxy Amine Resin	CAS: SUB128236	≥25 - ≤50	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317	-	[1]
Propylidynetrimethanol, propoxylated, reaction products with ammonia	REACH #: 01-2119556886-20 EC: 500-105-6 CAS: 39423-51-3	≥10 - ≤25	Acute Tox. 4, H302 Acute Tox. 4, H312 Eye Dam. 1, H318 Aquatic Chronic 2, H411	ATE [Oral] = 500 mg/ kg ATE [Dermal] = 1100 mg/kg	[1]
Phenol, 2,4,6-tris[[[3- (dimethylamino)propyl] amino]methyl]-	CAS: 225795-35-7	≥10 - ≤16	Acute Tox. 4, H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 500 mg/ kg M [Acute] = 1 M [Chronic] = 1	[1]
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥5.0 - ≤10	Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317	ATE [Oral] = 1200 mg/ kg	[1]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥5.0 - <10	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Inhalation (vapours)] = 17.8 mg/l	[1] [2]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7	≥5.0 - ≤7.0	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 Aquatic Chronic 3, H412	ATE [Dermal] = 1700 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
2-methylpropan-1-ol	REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1	≥1.0 - ≤6.4	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	-	[1] [2]
4,4'-isopropylidenediphenol	REACH #: 01-2119457856-23 EC: 201-245-8 CAS: 80-05-7 Index: 604-030-00-0	≥1.0 - ≤6.4	Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360F STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 10	[1] [2] [3]
2,4,6-tris (dimethylaminomethyl) phenol	REACH #: 01-2119560597-27 EC: 202-013-9 CAS: 90-72-2	≥1.0 - <5.0	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1C, H314 Eye Dam. 1, H318	ATE [Oral] = 1200 mg/ kg ATE [Dermal] = 1280 mg/kg	[1]
English (GB)			Belgium		3/20

SIGMASHIELD 220/42	SIGMASHIELD 220/420 LT HARDENER									
SECTION 3: Composition/information on ingredients										
m-phenylenebis (methylamine)	REACH #: 01-2119480150-50 EC: 216-032-5 CAS: 1477-55-0	<1.0	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 3, H412 EUH071 See Section 16 for the full text of the H statements declared	ATE [Oral] = 930 mg/ kg ATE [Inhalation (gases)] = 4500 ppm	[1] [2]					

Date of issue/Date of revision

: 9 October 2024

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

Code

- Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit

: 00317027

[3] Substance with endocrine disrupting properties

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

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.

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.

personne

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.

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

person warm and at rest. Do NOT induce vomiting.

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 : Harmful if swallowed.

Over-exposure signs/symptoms

English (GB) Beiglum 4/20	English (GB)	Belgium	4/20
---------------------------	--------------	---------	------

SIGMASHIELD 220/420 LT HARDENER

SECTION 4: First aid measures

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : Adverse symptoms may include the following:

reduced foetal weight increase in foetal deaths skeletal malformations

Skin contact: Adverse symptoms may include the following:

pain or irritation redness dryness cracking

blistering may occur reduced foetal weight increase in foetal deaths skeletal malformations

Ingestion: Adverse symptoms may include the following:

stomach pains reduced foetal weight increase in foetal deaths skeletal malformations

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.

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 nitrogen oxides

5.3 Advice for firefighters

Special precautions 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.

English (GB) Belgium 5/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 5: Firefighting measures

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 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 contractor.

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 non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. 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

English (GB) Belgium 6/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 7: Handling and storage

Advice on general occupational hygiene

ignition source. Use explosion-proof electrical (ventilating, 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

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).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
e thylbenzene	Limit values (Belgium, 5/2021) Absorbed through skin.
	TWA 8 hours: 20 ppm.
	TWA 8 hours: 87 mg/m³.
	STEL 15 minutes: 125 ppm.
	STEL 15 minutes: 551 mg/m³.
xylene	Limit values (Belgium, 5/2021) [Xyleen] Absorbed through skin.
	TWA 8 hours: 50 ppm.
	TWA 8 hours: 221 mg/m³.
	STEL 15 minutes: 100 ppm.
	STEL 15 minutes: 442 mg/m³.
2-methylpropan-1-ol	Limit values (Belgium, 5/2021)
	TWA 8 hours: 50 ppm.
	TWA 8 hours: 154 mg/m³.
4,4'-isopropylidenediphenol	Limit values (Belgium, 5/2021)
	TWA 8 hours: 2 mg/m³.
m-phenylenebis(methylamine)	Limit values (Belgium, 5/2021) Absorbed through skin.
	Limit value - M: 0.1 mg/m³.

English (GB)	Belgium	7/20
Liigiisii (GD)	Deigiuiii	1/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures

: 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.

DNELs

Long term Dermal	1.6 mg/kg bw/day	Workers	Systemic
			- , 5:5:1110
Long term Inhalation	14.1 mg/m³	Workers	Systemic
Long term Oral	4 mg/kg bw/day	General population	Systemic
Long term Dermal	4 mg/kg bw/day	General population	Systemic
Long term Inhalation	5.4 mg/m³	General population	Systemic
Long term Dermal	8 mg/kg bw/day	Workers	Systemic
Short term Oral	20 mg/kg bw/day	General population	Systemic
Short term Dermal	20 mg/kg bw/day	General population	Systemic
Long term Inhalation	22 mg/m³	Workers	Systemic
			Systemic
			Systemic
			Systemic
_			Local
			Systemic
•			Systemic
			Systemic
			Systemic
	0 0		Systemic
			Local
<u> </u>			Systemic
_			Local
			Systemic
_			Systemic
•			Systemic
			Local
_			Systemic
			Local
			Systemic
			Local
			Systemic
			Local
	_		Local
			Systemic
•			Systemic
			Systemic
•			
			Systemic
			Systemic
			Local
			Local
			Systemic
			Systemic
Short term inhalation	∠ mg/m°	vvorkers	Local
	Short term Inhalation Short term Dermal Short term Inhalation Long term Inhalation Short term Inhalation Short term Inhalation Short term Inhalation Short term Inhalation Long term Inhalation Short term Inhalation Long term Inhalation Short term Inhalation Short term Inhalation Long term Inhalation Short term Dermal Long term Dermal Long term Dermal Short term Inhalation Long term Inhalation	Short term Inhalation Short term Dermal Short term Dermal Short term Inhalation Long term Inhalation Long term Oral Long term Inhalation Short term Dermal Long term Dermal Long term Dermal Short term Inhalation Short term Inha	Short term Inhalation Short term Dermal Short term Inhalation Short term Inhalation Long term Inhalation Short term Inhalation Short term Inhalation Long term Inhalation Short term Inhalation Short term Inhalation Long term Inhalation Short term Inhalation Long term Inhalation Short term Inhalation Short term Dermal Long term Dermal Short term Dermal Short term Dermal Short term Dermal Long term Dermal Short term Dermal Short term Dermal Long term Dermal Short term Inhalation Long term Dermal Short term Inhalation Long term Dermal Long term Dermal Short term Inhalation Long term Dermal Short term Inhalation Long term Dermal Long term Dermal Short term Inhalation Long term Inhalation Lon

English (GB) Belgium 8/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 8: Exposure controls/personal protection

	DNEL	Long term Inhalation	2 mg/m³	Workers	Local
	DNEL	Short term Inhalation	2 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	2 mg/m³	Workers	Systemic
2,4,6-tris	DNEL	Long term Oral	0.075 mg/kg bw/day	General population	Systemic
(dimethylaminomethyl)phenol			,		
	DNEL	Short term Dermal	0.075 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.075 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	0.13 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	0.13 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	0.15 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.53 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	0.6 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	2.1 mg/m ³	Workers	Systemic
m-phenylenebis(methylamine)	DNEL	Long term Inhalation	0.2 mg/m ³	Workers	Local
, ,	DNEL	Long term Dermal	0.33 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.2 mg/m³	Workers	Systemic

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
e thylbenzene	-	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	-
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	-
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
4,4'-isopropylidenediphenol	-	Fresh water	0.018 mg/l	Sensitivity Distribution
-	-	Marine water	0.018 mg/l	Sensitivity Distribution
	-	Sewage Treatment Plant	320 mg/l	Assessment Factors
	-	Fresh water sediment	1.2 mg/kg dwt	Assessment Factors
	-	Marine water sediment	0.24 mg/kg dwt	Assessment Factors
	-	Soil	3.7 mg/kg dwt	Assessment Factors

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

English (GB)	Belgium	9/20
	Deigiuiii	3/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 8: Exposure controls/personal protection

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. Use eye protection according to EN 166.

: 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.

Gloves

: butyl rubber

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. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

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

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.

Colour : Yellow.

Odour : Aromatic.

Melting point/freezing point : Not determined.

English (GB) Belgium 10/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 9: Physical and chemical properties

Boiling point or initial boiling

point and boiling range

: >37.78°C

Flammability

: Not determined. There are no data available on the mixture itself.

Lower and upper explosion

limit

: Not available.

Flash point : Closed cup: 36°C

Auto-ignition temperature

Ingredient name	°C	°F	Method
Propylidynetrimethanol, propoxylated, reaction products with ammonia	320	608	EU A.15

Decomposition temperature

рН

: Stable under recommended storage and handling conditions (see Section 7).

: Not applicable. insoluble in water.

Viscosity

: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available.

Kinematic (40°C): >21 mm²/s

Viscosity : **Ø**0 - 100 s (ISO 6mm)

Solubility :

Media	Result
cold water	Not soluble

Partition coefficient n-octanol/

water (log Pow)

: Not applicable.

Vapour pressure

	Vapour Pressure at 20°C			Vapour pressure at 50		
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
methylpropan-1-ol	<12.00102	<1.6	DIN EN 13016-2			

Relative density : 1.01

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

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

: Product does not present an oxidizing hazard.

No additional information.

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.

English (GB) Belgium 11/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 10: Stability and reactivity

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 nitrogen oxides

SECTION 11: Toxicological information

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

The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly.

Harmful if swallowed.

Causes serious eye damage.

Causes skin irritation.

May cause an allergic skin reaction.

May damage fertility.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
reaction products with ammonia	LD50 Dermal	Rabbit	0.4 g/kg	-
•	LD50 Oral	Rat	0.22 g/kg	-
Phenol, 2,4,6-tris[[[3-(dimethylamino) propyl]amino]methyl]-	LD50 Oral	Rat	300 to 2000 mg/ kg	-
benzyl alcohol	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	1200 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	-
xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/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	-
4,4'-isopropylidenediphenol	LD50 Dermal	Rabbit	3600 mg/kg	-
	LD50 Oral	Rat	3.25 g/kg	-
2,4,6-tris(dimethylaminomethyl)phenol	LD50 Dermal	Rat	1280 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-
m-phenylenebis(methylamine)	LC50 Inhalation Gas.	Rat	700 ppm	1 hours
	LD50 Dermal	Rat - Male,	>3100 mg/kg	-
		Female		
	LD50 Oral	Rat	930 mg/kg	-

Acute toxicity estimates

Route	ATE value
Ø ral	1588.14 mg/kg
Dermal	4916.79 mg/kg
Inhalation (vapours)	96.82 mg/l

Conclusion/Summary

: Harmful if swallowed.

Irritation/Corrosion

English (GB)	Belaium	12/20
	Doigiann	

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878

Code : 00317027 Date of issue/Date of revision : 9 October 2024

SIGMASHIELD 220/420 LT HARDENER

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
⊮ylene	Skin - Moderate irritant	Rabbit		24 hours 500 mg	-
m-phenylenebis(methylamine)	Skin - Severe irritant	Rat		4 hours	4 hours

Conclusion/Summary

Skin : Causes skin irritation.

Eyes: Zauses serious eye damage.

Respiratory : Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Product/ingredient name	Route of exposure	Species	Result
m-phenylenebis(methylamine)	skin	Mouse	Sensitising

Conclusion/Summary

Skin : May cause an allergic skin reaction.

Respiratory: Based on available data, the classification criteria are not met.

Mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

May damage fertility.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
vylene 2-methylpropan-1-ol	Category 3 Category 3	-	Respiratory tract irritation Respiratory tract irritation
4,4'-isopropylidenediphenol	Category 3 Category 3		Narcotic effects Respiratory tract irritation

Conclusion/Summary

Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs

Conclusion/Summary

Based on available data, the classification criteria are not met.

Aspiration hazard

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

Conclusion/Summary

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

: Not available.

English (GB) Belgium 13/20

Date of issue/Date of revision Code : 00317027 : 9 October 2024

SIGMASHIELD 220/420 LT HARDENER

SECTION 11: Toxicological information

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : Harmful if swallowed.

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

Eve contact : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : Adverse symptoms may include the following:

> reduced foetal weight increase in foetal deaths skeletal malformations

Ingestion Adverse symptoms may include the following:

> stomach pains reduced foetal weight increase in foetal deaths skeletal malformations

Skin contact : Adverse symptoms may include the following:

pain or irritation

redness dryness cracking

blistering may occur reduced foetal weight increase in foetal deaths skeletal malformations

Eye contact : Adverse symptoms may include the following:

> watering redness

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

Short term exposure

Potential immediate

effects

: No known significant effects or critical hazards.

Potential delayed effects: No known significant effects or critical hazards.

Long term exposure

Potential immediate

effects

: No known significant effects or critical hazards.

Potential delayed effects: No known significant effects or critical hazards.

Potential chronic health effects

Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or **General**

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 May damage fertility.

Frolonged or repeated contact may dry skin and cause irritation. Repeated exposure to Other information

> high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Exposure to amine vapor has been reported to cause transient corneal edema described as blue haze, halo effect, foggy or blurred vision for several hours. This condition is typically

English (GB) 14/20 **Belgium**

SIGMASHIELD 220/420 LT HARDENER

SECTION 11: Toxicological information

temporary and does not cause permanent visual effects. When the proper eye protection specified in Section 8 is worn, exposure is significantly reduced and the condition has not been observed.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

May cause endocrine disruption.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

There are no data available on the mixture itself.

Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Phenol, 2,4,6-tris[[[3-(dimethylamino)propyl]amino] methyl]-	Acute EC50 >0.219 mg/l	Algae	72 hours
	Acute EC50 24 mg/l	Daphnia	48 hours
	Acute LC50 40 mg/l	Fish	96 hours
ethylbenzene	Acute EC50 1.8 mg/l Fresh	Daphnia	48 hours
	water		
	Chronic NOEC 1 mg/l Fresh	Daphnia -	-
	water	Ceriodaphnia dubia	
2-methylpropan-1-ol	Acute EC50 1100 mg/l	Daphnia	48 hours
4,4'-isopropylidenediphenol	Acute LC50 0.885 mg/l Fresh water	Crustaceans	48 hours
	Acute LC50 8.11 mg/l Fresh water	Daphnia - <i>Daphnia</i> <i>magna</i> - Neonate	48 hours
	Acute LC50 4.6 mg/l Fresh water	Fish	96 hours
	Chronic NOEC 0.000174 mg/ I Fresh water	Fish	5 months
2,4,6-tris(dimethylaminomethyl)phenol	Acute LC50 >100 mg/l Acute LC50 >100 mg/l	Daphnia Fish	48 hours 96 hours

Conclusion/Summary

: Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Phenol, 2,4,6-tris[[[3- (dimethylamino)propyl]amino] methyl]-	-	3 % - 28 days	-	-
ethylbenzene 2,4,6-tris (dimethylaminomethyl)phenol	- OECD 301D Ready Biodegradability - Closed Bottle Test	79 % - Readily - 10 days 4 % - Not readily - 28 days	-	-

English (GB) Belgium 15/20

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878

Code : 00317027 Date of issue/Date of revision : 9 October 2024

SIGMASHIELD 220/420 LT HARDENER

SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Phenol, 2,4,6-tris[[[3-(dimethylamino)propyl]amino] methyl]-	-	-	Not readily
benzyl alcohol	-	-	Readily
ethylbenzene	-	-	Readily
xylene	-	-	Readily
4,4'-isopropylidenediphenol 2,4,6-tris(dimethylaminomethyl)phenol	-	-	Readily Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Propylidynetrimethanol, propoxylated, reaction products with ammonia	-1.13	-	Low
benzyl alcohol	0.87	-	Low
ethylbenzene	3.6	79.43	Low
xylene	3.12	7.4 to 18.5	Low
2-methylpropan-1-ol	1	-	Low
4,4'-isopropylidenediphenol	3.4	43.65	Low
2,4,6-tris(dimethylaminomethyl)phenol	0.219	-	Low
m-phenylenebis(methylamine)	0.18	2.69	Low

12.4 Mobility in soil

Soil/water partition

: Not available.

coefficient (Koc)

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 Endocrine disrupting properties

May cause endocrine disruption.

12.7 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

English (GB)	Belgium	16/20
Liigiisii (OD)	Deigiani	10,20

SIGMASHIELD 220/420 LT HARDENER

SECTION 13: Disposal considerations

European waste catalogue (EWC)

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	European waste catalogue (EWC)	
Container	15 01 06	mixed packaging

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 or ID 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.	(Polyoxy propylene diamine)	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)

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

≤5 kg.

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.

English (GB) **Belgium** 17/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 14: Transport information

14.7 Maritime transport in bulk according to IMO

: Not applicable.

instruments

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 authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Toxic to reproduction Endocrine disrupting properties for human health	4,4'-isopropylidenediphenol 4,4'-isopropylidenediphenol	Recommended Recommended	ED/01/2018 ED/01/2018	10/1/2019 10/1/2019
Endocrine disrupting properties for environment	4,4'-isopropylidenediphenol	Recommended	ED/01/2018	10/1/2019

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	Entry Number (REACH)
SIGMASHIELD 220/420 LT HARDENER	3
	30
4,4'-isopropylidenediphenol	30
	66

Labelling: Restricted to professional users.

Explosive precursors : Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category	
P5c	
E1	

15.2 Chemical safety assessment

: No Chemical Safety Assessment has been carried out.

English (GB) Belgium 18/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 16: Other information

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]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

PBT = Persistent, Bioaccumulative and Toxic

vPvB = Very Persistent and Very Bioaccumulative

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

IMDG = International Maritime Dangerous Goods

IATA = International Air Transport Association

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

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H302	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Repr. 1B, H360F	Calculation method
Aquatic Chronic 1, H410	Calculation method

Full text of abbreviated H statements

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.
H360F	May damage fertility.
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 [CLP/GHS]

English (GB)	Belgium	19/20
Liigiisii (OD)	Doigiain	10/20

SIGMASHIELD 220/420 LT HARDENER

SECTION 16: Other information

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. Lig. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE -
	Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE -
	Category 3
	Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE -

History

Date of issue/ Date of : 9 October 2024

revision

Date of previous issue : 25 October 2023

Prepared by : EHS Version : 26.04

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) Belgium 20/20