SAFETY DATA SHEET

Date of issue/Date of revision : 20 November 2026 **Version** : 3

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

1.1 Product identifier

Product name : SIGMAWELD 120 HARDENER

Product code : 000001011142

Other means of identification

00155826

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.; Hardener.

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

Flam. Liq. 2, H225
Skin Irrit. 2, H315
Eye Dam. 1, H318
Repr. 2, H361d
STOT SE 3, H336
STOT RE 2, H373
Aquatic Chronic 3, H412

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

SECTION 2: Hazards identification

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
Causes skin irritation.
Causes serious eye damage.
May cause drowsiness or dizziness.
Suspected of damaging the unborn child.
May cause damage to organs through prolonged or repeated exposure.
Harmful 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. Do not breathe vapor.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage : Store in a well-ventilated place. Keep container tightly closed.

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

P280, P210, P260, P305 + P351 + P338, P403 + P233, P501

Hazardous ingredients : toluene and Fatty acids, C18-unsatd., dimers, oligomeric reaction products with fatty acids, C16-18 and C18-unsatd., branched and linear and triethylenetetramine

Supplemental label elements : Contains N-(3-(trimethoxysilyl)propyl)ethylenediamine and Amines, polyethylenepoly-, triethylenetetramine fraction. May produce an allergic reaction.

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.

SECTION 2: Hazards identification

Product meets the criteria for endocrine disrupting properties according to Regulation (EC) No. 1907/2006. : Based on available data, the classification criteria are not met.

Other hazards which do not result in classification : Prolonged or repeated contact may dry skin and cause irritation.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	% by weight	Classification	Specific Conc. Limits, M-factors and ATEs	Type
toluene	REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	≥25 - ≤50	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412	-	[1] [2]
propan-2-ol	REACH #: 01-2119457558-25 EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	≥10 - ≤25	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	-	[1] [2]
butanone	REACH #: 01-2119457290-43 EC: 201-159-0 CAS: 78-93-3 Index: 606-002-00-3	≥5.0 - ≤10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	-	[1] [2]
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with fatty acids, C16-18 and C18-unsatd., branched and linear and triethylenetetramine	EC: 500-381-8 CAS: 157707-72-7	≥5.0 - ≤10	Eye Dam. 1, H318	-	[1]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥1.0 - ≤5.0	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]
N-(3-(trimethoxysilyl)propyl) ethylenediamine	REACH #: 01-2119970215-39 EC: 217-164-6 CAS: 1760-24-3	<1.0	Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT SE 3, H335	-	[1]
Amines, polyethylenepoly-, triethylenetetramine fraction	REACH #: 01-2119487919-13	≤0.30	Acute Tox. 4, H302 Acute Tox. 4, H312	ATE [Oral] = 1716 mg/kg	[1]

SECTION 3: Composition/information on ingredients

	EC: 292-588-2 CAS: 90640-67-8		Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412 **See Section 16 for the full text of the H statements declared above.**	ATE [Dermal] = 1465 mg/kg	

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

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.

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.

Ingestion : If swallowed, seek medical advice immediately and show this 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 : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation. Defatting to the skin.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

SECTION 4: First aid measures

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
dryness
cracking
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal 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, CO_2, 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 : Highly flammable liquid and vapor. 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 harmful 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.

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

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 : Avoid dispersal of spilled 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.

6.3 Methods and materials 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 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 spilled 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). 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 vapor 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, lighting and material handling) equipment. Use only non-sparking

SECTION 7: Handling and storage

tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside.

Advice on general occupational hygiene : 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 oxidizing 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
This product contains material which falls under the synthetic polymer microparticle definition. Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

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
toluene	**EU OEL (Europe, 1/2022)** Absorbed through skin. TWA 8 hours: 192 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 384 mg/m³. STEL 15 minutes: 100 ppm.
propan-2-ol	**ACGIH TLV (United States, 1/2026)** A4. TWA 8 hours: 200 ppm. STEL 15 minutes: 400 ppm.
butanone	**EU OEL (Europe, 1/2022)** TWA 8 hours: 200 ppm. TWA 8 hours: 600 mg/m³. STEL 15 minutes: 300 ppm. STEL 15 minutes: 900 mg/m³.
xylene	**EU OEL (Europe, 1/2022) [xylene, mixed isomers]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 221 mg/m³.

SECTION 8: Exposure controls/personal protection

	STEL 15 minutes: 100 ppm. STEL 15 minutes: 442 mg/m³.

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/DMELs

Product/ingredient name	Exposure		Value
toluene	DNEL - General population - Long term - Oral	*Systemic*	8.13 mg/kg bw/day
	DNEL - General population - Long term - Inhalation	*Local*	56.5 mg/m³
	DNEL - General population - Long term - Inhalation	*Systemic*	56.5 mg/m³
	DNEL - Workers - Long term - Inhalation	*Local*	192 mg/m³
	DNEL - Workers - Long term - Inhalation	*Systemic*	192 mg/m³
	DNEL - General population - Long term - Dermal	*Systemic*	226 mg/kg bw/day
	DNEL - General population - Short term - Inhalation	*Local*	226 mg/m³
	DNEL - General population - Short term - Inhalation	*Systemic*	226 mg/m³
	DNEL - Workers - Long term - Dermal	*Systemic*	384 mg/kg bw/day
	DNEL - Workers - Short term - Inhalation	*Local*	384 mg/m³
	DNEL - Workers - Short term - Inhalation	*Systemic*	384 mg/m³
propan-2-ol	DNEL - Workers - Long term - Inhalation	*Systemic*	500 mg/m³
	DNEL - Workers - Long term - Dermal	*Systemic*	888 mg/kg bw/day
	DNEL - General population - Long term - Oral	*Systemic*	26 mg/kg bw/day
	DNEL - General population - Short term - Oral	*Systemic*	51 mg/kg bw/day
	DNEL - General population - Long term - Inhalation	*Systemic*	89 mg/m³
	DNEL - General population - Short term - Inhalation	*Systemic*	178 mg/m³
	DNEL - General population - Long term - Dermal	*Systemic*	319 mg/kg bw/day
	DNEL - Workers - Short term - Inhalation	*Systemic*	1000 mg/m³
butanone	DNEL - General population - Long term - Oral	*Systemic*	31 mg/kg bw/day
	DNEL - General population - Long term - Inhalation	*Systemic*	106 mg/m³
	DNEL - General population - Long term - Dermal	*Systemic*	412 mg/kg bw/day
	DNEL - General population - Short term - Inhalation	*Systemic*	450 mg/m³
	DNEL - Workers - Long term - Inhalation	*Systemic*	600 mg/m³
	DNEL - Workers - Short term - Inhalation	*Systemic*	900 mg/m³
	DNEL - Workers - Long term - Dermal	*Systemic*	1161 mg/kg bw/day
xylene	DNEL - General population - Long term - Oral	*Systemic*	5 mg/kg bw/day
	DNEL - General population - Long term - Inhalation	*Local*	65.3 mg/m³
	DNEL - General population - Long term - Inhalation	*Systemic*	65.3 mg/m³
	DNEL - General population - Long term - Dermal	*Systemic*	125 mg/kg bw/day
	DNEL - Workers - Long term - Dermal	*Systemic*	212 mg/kg bw/day

SECTION 8: Exposure controls/personal protection

	DNEL - Workers - Long term - Inhalation	*Local*	221 mg/m³
	DNEL - Workers - Long term - Inhalation	*Systemic*	221 mg/m³
	DNEL - General population - Short term - Inhalation	*Local*	260 mg/m³
	DNEL - General population - Short term - Inhalation	*Systemic*	260 mg/m³
	DNEL - Workers - Short term - Inhalation	*Local*	442 mg/m³
	DNEL - Workers - Short term - Inhalation	*Systemic*	442 mg/m³
N-(3-(trimethoxysilyl) propyl)ethylenediamine	DNEL - General population - Long term - Inhalation	*Local*	0.1 mg/m³
	DNEL - Workers - Long term - Inhalation	*Local*	0.6 mg/m³
	DNEL - General population - Long term - Oral	*Systemic*	4 mg/kg bw/day
	DNEL - General population - Short term - Inhalation	*Local*	4 mg/m³
	DNEL - Workers - Short term - Inhalation	*Local*	5.36 mg/m³
	DNEL - General population - Long term - Inhalation	*Systemic*	26 mg/m³
	DNEL - Workers - Long term - Inhalation	*Systemic*	130 mg/m³
	DNEL - General population - Short term - Inhalation	*Systemic*	26400 mg/m³
Amines, polyethylenepoly-, triethylenetetramine fraction	DNEL - General population - Long term - Inhalation	*Systemic*	0.096 mg/m³
	DNEL - General population - Long term - Oral	*Systemic*	0.14 mg/kg bw/day
	DNEL - Workers - Long term - Inhalation	*Systemic*	0.54 mg/m³

PNECs

Product/ingredient name	Compartment Detail - Method	Value
toluene	Fresh water - Sensitivity Distribution	0.68 mg/l
	Marine water - Sensitivity Distribution	0.68 mg/l
	Sewage Treatment Plant - Sensitivity Distribution	13.61 mg/l
	Fresh water sediment - Equilibrium Partitioning	16.39 mg/kg dwt
	Marine water sediment	16.39 mg/kg dwt
propan-2-ol	Fresh water - Assessment Factors	140.9 mg/l
	Marine water - Assessment Factors	140.9 mg/l
	Secondary Poisoning	160 mg/kg
	Fresh water sediment	552 mg/kg dwt
	Marine water sediment	552 mg/kg dwt
	Sewage Treatment Plant - Assessment Factors	2251 mg/l
	Soil	28 mg/kg dwt
butanone	Fresh water - Sensitivity Distribution	55.8 mg/l
	Marine water - Sensitivity Distribution	55.8 mg/l
	Sewage Treatment Plant - Sensitivity Distribution	709 mg/l
	Fresh water sediment - Equilibrium Partitioning	284.74 mg/kg dwt
	Marine water sediment - Equilibrium Partitioning	284.7 mg/kg dwt
	Soil - Equilibrium Partitioning	22.5 mg/kg dwt
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

8.2 Exposure controls

SECTION 8: Exposure controls/personal protection

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, vapor 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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Chemical splash goggles and face shield. Use eye protection according to EN 166.

Skin protection

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. 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 : For prolonged or repeated handling, use the following type of gloves:

Recommended: butyl rubber, polyvinyl alcohol (PVA), Viton®
May be used: nitrile 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 anti-static 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 vapor (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.

Color : Colorless.

Odor : Amine-like.

Melting point/freezing point : Not determined.

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: 2°C

Auto-ignition temperature : 399°C (750.2°F)

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

pH : Not applicable. insoluble in water.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): >21 mm^2/s

Solubility :

Media	Result
cold water	Not soluble

Partition coefficient n-octanol/water (log Pow) : Not applicable.

Vapor pressure :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
butanone	78.7564	10.5				

Relative density : 0.88

Relative vapor density : Not available.

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 vapor or dust with air is possible.

Oxidizing 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.

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products : Evolves hydrogen on contact with water. 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.

Causes serious eye damage.
Causes skin irritation.
Suspected of damaging fertility. Suspected of damaging the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Acute toxicity

Product/ingredient name	Result	Dose / Exposure
toluene	Rat - Oral - LD50	5580 mg/kg
	Rat - Inhalation - LC50 Vapor	49 g/m³ [4 hours]
propan-2-ol	Rat - Oral - LD50	5045 mg/kg
	Toxic effects: Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Somnolence (general depressed activity)	
	Rabbit - Dermal - LD50	12800 mg/kg
	Toxic effects: Behavioral - Somnolence (general depressed activity)Behavioral - IrritabilityGastrointestinal - Nausea or vomiting	
	Rat - Inhalation - LC50 Vapor	72600 mg/m³ [4 hours]
butanone	Rabbit - Dermal - LD50	6480 mg/kg
	Rat - Oral - LD50	2737 mg/kg
xylene	Rat - Oral - LD50	4.3 g/kg
	Rabbit - Dermal - LD50	1.7 g/kg
N-(3-(trimethoxysilyl)propyl) ethylenediamine	Rat - Oral - LD50	2413 mg/kg
	Toxic effects: Behavioral - Tremor Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes	
	Rabbit - Dermal - LD50	>2000 mg/kg
Amines, polyethylenepoly-, triethylenetetramine fraction	Rat - Oral - LD50	1716 mg/kg
	Rabbit - Dermal - LD50	1465 mg/kg

Acute toxicity estimates

SECTION 11: Toxicological information

Route	ATE value
Dermal Inhalation (vapors)	37924.31 mg/kg 245.39 mg/l

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Product/ingredient name	Result
xylene	Rabbit - Skin - Moderate irritant Amount/concentration applied: 500 mg Duration of treatment/exposure: 24 hours

Conclusion/Summary

Skin : Causes skin irritation.

Eyes : Causes serious eye damage.

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

Respiratory or skin sensitization

Conclusion/Summary

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

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

Suspected of damaging fertility. Suspected of damaging the unborn child.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
toluene	Category 3	-	Narcotic effects
propan-2-ol	Category 3	-	Narcotic effects
butanone	Category 3	-	Narcotic effects
xylene	Category 3	-	Respiratory tract irritation
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Category 3	-	Respiratory tract irritation

Conclusion/Summary :

May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure)

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

Conclusion/Summary :

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

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

Conclusion/Summary :

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

SECTION 11: Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Ingestion : Can cause central nervous system (CNS) depression.

Skin contact : Causes skin irritation. Defatting to the skin.

Eye contact : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
dryness
cracking
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Delayed and immediate effects and also 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

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.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

SECTION 11: Toxicological information

Reproductive toxicity : Suspected of damaging the unborn child.

Other information : Prolonged or repeated contact may dry skin and cause irritation. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/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.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

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	Dose / Exposure
toluene	EC50	Daphnia	3.78 mg/l [48 hours]
	LC50	Fish	5.5 mg/l [96 hours]
propan-2-ol	Acute - EC50 - Fresh water	Daphnia - Water flea - *Daphnia magna*	10.1 g/l [48 hours]
N-(3-(trimethoxysilyl)propyl) ethylenediamine	EC50	Fish	597 mg/l [96 hours]
Amines, polyethylenepoly-, triethylenetetramine fraction	Acute - LC50	Fish - *Pimephales promelas*	330 mg/l [96 hours]
	Acute - EC50	Daphnia - *Daphnia magna*	31.1 mg/l [48 hours]
	Acute - EC50	Aquatic plants - *Daphnia magna*	20 mg/l [72 hours]
	Acute - NOEC	Crustaceans	2.5 mg/l [72 hours]

Conclusion/Summary : Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

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

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
toluene	-	-	Readily
xylene	-	-	Readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
toluene	2.73	90	Low
propan-2-ol	0.05	-	Low
butanone	0.3	-	Low
xylene	3.12	7.4 to 18.5	Low
Amines, polyethylenepoly-, triethylenetetramine fraction	-2.65	-	Low

12.4 Mobility in soil

Soil/Water partition coefficient

Product/ingredient name	logKoc	Koc
toluene	2.1	117.115
propan-2-ol	0.54	3.4364
butanone	1.2	15.8984
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1.5	34.5002

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

The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

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 minimized wherever possible. Avoid release to the environment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Do not dispose paint or rinse painting tools in sinks or drains. 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 :

European waste catalogue (EWC)

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

Packaging

SECTION 13: Disposal considerations

Methods of disposal : The generation of waste should be avoided or minimized 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. Vapor 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 spilled 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	II	II	II	II
14.5 Environmental hazards	No.	Yes.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Additional information

ADR/RID : None identified.

Tunnel code : (D/E)

ADN : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.

IMDG : None identified.

IATA : None identified.

14.6 Special precautions for user : **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 Maritime transport in bulk according to IMO instruments : Not applicable.

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

Product/ingredient name	Entry Number (REACH)
SIGMAWELD 120 HARDENER toluene	3 48

Labeling : Not applicable.

Synthetic polymer microparticles - Entry 78

The synthetic polymer microparticles supplied is subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council.

Other EU regulations

Explosive precursors : Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c

15.2 Chemical Safety Assessment : No Chemical Safety Assessment has been carried out.

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

SECTION 16: Other information

Full text of abbreviated H statements

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
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.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - 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	TOXIC TO REPRODUCTION - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
Skin Sens. 1B	SKIN SENSITIZATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

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