

SAFETY DATA SHEET

Date of issue/Date of revision

: 8 November 2021

Version

: 2



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

1.1 Product identifier

Product name : NOVAGUARD 890 LT HARDENER BLACK

Product code : 00436734

Other means of identification

Not available.

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

Product use : Industrial 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

National contact

[PPG Architectural Coatings UK Ltd](#), Huddersfield Road, Birstall, West Yorkshire WF17 9XA, Tel: +44 (0) 1924 354000

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]

Acute Tox. 4, H302

Acute Tox. 3, H311

Acute Tox. 3, H331

Skin Corr. 1A, H314

Eye Dam. 1, H318

Skin Sens. 1, H317

Aquatic Chronic 2, H411

Code : 00436734

Date of issue/Date of revision

: 8 November 2021

NOVAGUARD 890 LT HARDENER BLACK

SECTION 2: Hazards identification

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.

2.2 Label elements

Hazard pictograms

:



Signal word

: Danger

Hazard statements

: Harmful if swallowed.
 Toxic in contact with skin or if inhaled.
 Causes severe skin burns and eye damage.
 May cause an allergic skin reaction.
 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

: Wear protective gloves, protective clothing and eye or face protection. Avoid release to the environment.

Response

: Collect spillage. IF INHALED: Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Storage

: Not applicable.

Disposal

: Not applicable.
 P280, P273, P391, P304 + P310, P301 + P310, P303 + P361 + P353

Hazardous ingredients

: 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)
 N-(3-(trimethoxysilyl)propyl)ethylenediamine
 2,4,6-tris(dimethylaminomethyl)phenol
 3-aminopropyldimethylamine

Supplemental label elements

: Not applicable.

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

: 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

: None known.

Code : 00436734

Date of issue/Date of revision

: 8 November 2021

NOVAGUARD 890 LT HARDENER BLACK

SECTION 3: Composition/information on ingredients

3.2 Mixtures

: Mixture

| Product/ingredient name | Identifiers | % by weight | Classification Regulation (EC) No. 1272/2008 [CLP] | Type |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------|------|
| 2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine) | EC: 229-962-1 CAS: 6864-37-5 Index: 612-110-00-1 | ≥50 - ≤75 | Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Chronic 2, H411 | [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 Acute Tox. 4, H332 Eye Irrit. 2, H319 | [1] |
| Formaldehyde, polymer with N,N- dimethyl-1,3-propanediamine and phenol | CAS: 445498-00-0 | ≥5.0 - ≤10 | Acute Tox. 4, H302 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) | [1] |
| N-(3-(trimethoxysilyl)propyl) ethylenediamine | EC: 217-164-6 CAS: 1760-24-3 | ≥1.0 - ≤5.0 | Acute Tox. 4, H332 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412 | [1] |
| 2,4,6-tris(dimethylaminomethyl) phenol | REACH #: 01-2119560597-27 EC: 202-013-9 CAS: 90-72-2 Index: 603-069-00-0 | ≥1.0 - ≤5.0 | Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 | [1] |
| 3-aminopropyldimethylamine | REACH #: 01-2119486842-27 EC: 203-680-9 CAS: 109-55-7 Index: 612-061-00-6 | ≤0.30 | Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 | [1] |

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

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

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

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

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

SUB codes represent substances without registered CAS Numbers.

| | |
|---------------------------------|---------------------------------------------------------|
| Code : 00436734 | Date of issue/Date of revision : 8 November 2021 |
| NOVAGUARD 890 LT HARDENER BLACK | |

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 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** : Toxic if inhaled.
- Skin contact** : Causes severe burns. Toxic in contact with skin. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

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
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** : 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 an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

Code : 00436734

Date of issue/Date of revision

: 8 November 2021

NOVAGUARD 890 LT HARDENER BLACK

SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
metal oxide/oxides
Formaldehyde.
- 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.
- 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. 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. 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. 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.

Code : 00436734

Date of issue/Date of revision

: 8 November 2021

NOVAGUARD 890 LT HARDENER BLACK

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. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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 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. 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

No exposure limit value known.

Recommended monitoring procedures

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

DNELs

Code : 00436734

Date of issue/Date of revision

: 8 November 2021

NOVAGUARD 890 LT HARDENER BLACK

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|---------------------------------------------------|------|-----------------------|------------------------|--------------------|----------|
| 2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine) | DNEL | Long term Dermal | 0.06 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 0.6 mg/m ³ | Workers | Systemic |
| benzyl alcohol | DNEL | Long term Inhalation | 0.96 mg/m ³ | Workers | Local |
| | DNEL | Long term Oral | 4 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 4 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 5.4 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 8 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Oral | 20 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 20 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 22 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 27 mg/m ³ | General population | Systemic |
| | DNEL | Short term Dermal | 40 mg/kg bw/day | Workers | Systemic |
| N-(3-(trimethoxysilyl)propyl) ethylenediamine | DNEL | Short term Inhalation | 110 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Oral | 2.5 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 2.5 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 5 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 5 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 8.7 mg/m ³ | General population | Systemic |
| | DNEL | Short term Dermal | 17 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 35.3 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 4.9 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 9.8 mg/m ³ | Workers | Systemic |
| 3-aminopropyldimethylamine | DNEL | Long term Inhalation | 9.8 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 9.8 mg/m ³ | Workers | Systemic |

PNECs

| Product/ingredient name | Type | Compartment Detail | Value | Method Detail |
|----------------------------|------|------------------------|-----------------|--------------------------|
| 3-aminopropyldimethylamine | - | Fresh water | 0.034 mg/l | Assessment Factors |
| | - | Marine water | 0.003 mg/l | Assessment Factors |
| | - | Sewage Treatment Plant | 69.5 mg/l | Assessment Factors |
| | - | Fresh water sediment | 0.221 mg/kg dwt | Equilibrium Partitioning |
| | - | Marine water sediment | 0.022 mg/kg dwt | Equilibrium Partitioning |
| | - | Soil | 0.024 mg/kg dwt | Equilibrium Partitioning |

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.

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

Skin protection

Hand protection :

Code : 00436734

Date of issue/Date of revision

: 8 November 2021

NOVAGUARD 890 LT HARDENER BLACK

SECTION 8: Exposure controls/personal 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** : nitrile neoprene
- 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.
- 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** : Black.
- Odour** : Amine-like.
- Odour threshold** : Not available.
- pH** : insoluble in water.
- Melting point/freezing point** : May start to solidify at the following temperature: -7.1°C (19.2°F) This is based on data for the following ingredient: 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine). Weighted average: -8.57°C (16.6°F)
- Initial boiling point and boiling range** : >37.78°C
- Flash point** : Closed cup: 105°C
- Evaporation rate** : 0.007 (benzyl alcohol) compared with butyl acetate
- Flammability (solid, gas)** : liquid

Code : 00436734

Date of issue/Date of revision

: 8 November 2021

NOVAGUARD 890 LT HARDENER BLACK

SECTION 9: Physical and chemical properties

Upper/lower flammability or explosive limits : Greatest known range: Lower: 1.3% Upper: 13% (benzyl alcohol)

Vapour pressure :

| Ingredient name | Vapour Pressure at 20°C | | | Vapour pressure at 50°C | | |
|--------------------------------------------------------------------------------|-------------------------|------|--------|-------------------------|-----|--------|
| | mm Hg | kPa | Method | mm Hg | kPa | Method |
| <input checked="" type="checkbox"/> (3-(trimethoxysilyl)propyl)ethylenediamine | 0.3000246 | 0.04 | | | | |

Vapour density : Highest known value: 3.7 (Air = 1) (benzyl alcohol).

Relative density : 0.97

Solubility(ies) : Insoluble in the following materials: cold water.

Partition coefficient: n-octanol/ water : Not applicable.

Auto-ignition temperature :

| Ingredient name | °C | °F | Method |
|--------------------------------------------------------------------------------------|-----|-----|--------|
| <input checked="" type="checkbox"/> 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) | 275 | 527 | |

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

Viscosity : Kinematic (40°C): >21 mm²/s

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.

9.2 Other information

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: 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 Formaldehyde. metal oxide/oxides

SECTION 11: Toxicological information**11.1 Information on toxicological effects**Acute toxicity

Code : 00436734

Date of issue/Date of revision

: 8 November 2021

NOVAGUARD 890 LT HARDENER BLACK

SECTION 11: Toxicological information

| Product/ingredient name | Result | Species | Dose | Exposure |
|---------------------------------------------------|---------------------------------|---------|-------------------------|----------|
| 2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine) | LC50 Inhalation Dusts and mists | Rat | 420 mg/m ³ | 4 hours |
| benzyl alcohol | LD50 Dermal | Rabbit | >0.2 g/kg | - |
| | LD50 Oral | Rat | >0.32 g/kg | - |
| N-(3-(trimethoxysilyl)propyl) ethylenediamine | LC50 Inhalation Dusts and mists | Rat | >4178 mg/m ³ | 4 hours |
| | LD50 Dermal | Rabbit | 2000 mg/kg | - |
| 2,4,6-tris(dimethylaminomethyl)phenol | LD50 Oral | Rat | 1.23 g/kg | - |
| | LD50 Oral | Rat | 2413 mg/kg | - |
| 3-aminopropyldimethylamine | LD50 Dermal | Rabbit | 1.28 g/kg | - |
| | LD50 Dermal | Rat | 1280 mg/kg | - |
| | LD50 Oral | Rat | 1200 mg/kg | - |
| | LD50 Oral | Rabbit | >1000 mg/kg | - |
| | LD50 Oral | Rat | 410 mg/kg | - |

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

Acute toxicity estimates

| Route | ATE value |
|------------------------------|--------------|
| Oral | 574.39 mg/kg |
| Dermal | 407.59 mg/kg |
| Inhalation (vapours) | 347.22 mg/l |
| Inhalation (dusts and mists) | 0.66 mg/l |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---------------------------------------|-------------------------|---------|-------|----------|-------------|
| 2,4,6-tris(dimethylaminomethyl)phenol | Skin - Visible necrosis | Rabbit | - | 4 hours | 7 days |

Conclusion/Summary

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

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

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

Sensitisation

| Product/ingredient name | Route of exposure | Species | Result |
|---------------------------------------|-------------------|------------|-------------|
| 2,4,6-tris(dimethylaminomethyl)phenol | skin | Guinea pig | Sensitising |

Conclusion/Summary

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

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

Mutagenicity

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

Carcinogenicity

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)

Code : 00436734

Date of issue/Date of revision

: 8 November 2021

NOVAGUARD 890 LT HARDENER BLACK

SECTION 11: Toxicological information

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : Not available.

Potential acute health effects

Inhalation : Toxic if inhaled.

Ingestion : Harmful if swallowed.

Skin contact : Causes severe burns. Toxic in contact with skin. May cause an allergic skin reaction.

Eye contact : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.

Ingestion : Adverse symptoms may include the following:
stomach pains

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

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

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Not available.

General : 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.

Code : 00436734

Date of issue/Date of revision

: 8 November 2021

NOVAGUARD 890 LT HARDENER BLACK

SECTION 11: Toxicological information

Repeated exposure to 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. Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. Contains a substance that may emit formaldehyde if stored beyond its shelf life and/or during cure at curing temperatures greater than 60C/140F.

SECTION 12: Ecological information**12.1 Toxicity**

| Product/ingredient name | Result | Species | Exposure |
|---------------------------------------|---------------------|---------|----------|
| 2,4,6-tris(dimethylaminomethyl)phenol | Acute LC50 175 mg/l | Fish | 96 hours |
| 3-aminopropyldimethylamine | Acute LC50 122 mg/l | Fish | 96 hours |

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

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|----------------------------|-----------|--------------------------|------|----------|
| 3-aminopropyldimethylamine | OECD 301D | 69 % - Readily - 20 days | - | - |

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

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|----------------------------|-------------------|------------|------------------|
| benzyl alcohol | - | - | Readily |
| 3-aminopropyldimethylamine | - | - | Readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--------------------------------------------------|--------------------|-----|-----------|
| 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) | 1.8 | - | low |
| benzyl alcohol | 0.87 | - | low |
| 2,4,6-tris(dimethylaminomethyl)phenol | 0.219 | - | low |
| 3-aminopropyldimethylamine | -0.352 | - | low |

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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.

Code : 00436734

Date of issue/Date of revision

: 8 November 2021

NOVAGUARD 890 LT HARDENER BLACK

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 : Yes.

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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

| | ADR/RID | ADN | IMDG | IATA |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 14.1 UN number | UN2922 | UN2922 | UN2922 | UN2922 |
| 14.2 UN proper shipping name | CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine), 2,4,6-tris(dimethylaminomethyl)phenol) | CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine), 2,4,6-tris(dimethylaminomethyl)phenol) | CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine), 2,4,6-tris(dimethylaminomethyl)phenol) | CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine), 2,4,6-tris(dimethylaminomethyl)phenol) |
| 14.3 Transport hazard class(es) | 8 (6.1) | 8 (6.1) | 8 (6.1) | 8 (6.1) |
| 14.4 Packing group | II | II | II | II |
| 14.5 Environmental hazards | Yes. | Yes. | Yes. | Yes. The environmentally hazardous substance mark is not required. |

| | |
|---------------------------------|--------------------------------------------------|
| Code : 00436734 | Date of issue/Date of revision : 8 November 2021 |
| NOVAGUARD 890 LT HARDENER BLACK | |

14. Transport information

| | | | | |
|-----------------------------|-----------------|-----------------|---------------------------------------------------------------------------------------------------------------------------|-----------------|
| Marine pollutant substances | Not applicable. | Not applicable. | (2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine), Formaldehyde, polymer with N,N-dimethyl-1,3-propanediamine and phenol) | Not applicable. |
|-----------------------------|-----------------|-----------------|---------------------------------------------------------------------------------------------------------------------------|-----------------|

Additional information

- ADR/RID** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- ADN** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

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 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 authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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

Ozone depleting substances (1005/2009/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria


| |
|-----------------|
| Category |
| H2 E2 |

| | |
|----------------------------------------|---------------------------------------------------------|
| Code : 00436734 | Date of issue/Date of revision : 8 November 2021 |
| NOVAGUARD 890 LT HARDENER BLACK | |

SECTION 15: Regulatory information

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


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

| Classification | Justification |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1A, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method |

Full text of abbreviated H statements

| | |
|------|-------------------------------------------------------|
| H226 | Flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H311 | Toxic in contact with skin. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H331 | Toxic if inhaled. |
| H332 | Harmful if inhaled. |
| 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. |

Full text of classifications [CLP/GHS]

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  Acute Tox. 3 Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 2 Aquatic Chronic 3 Eye Dam. 1 Eye Irrit. 2 Flam. Liq. 3 Skin Corr. 1A Skin Corr. 1B | ACUTE TOXICITY - Category 3 ACUTE TOXICITY - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 1A SKIN CORROSION/IRRITATION - Category 1B |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| | |
|----------------------------------------|---------------------------------------------------------|
| Code : 00436734 | Date of issue/Date of revision : 8 November 2021 |
| NOVAGUARD 890 LT HARDENER BLACK | |

SECTION 16: Other information

| | |
|---------------|-----------------------------------------|
| Skin Corr. 1C | SKIN CORROSION/IRRITATION - Category 1C |
| Skin Sens. 1 | SKIN SENSITISATION - Category 1 |
| Skin Sens. 1B | SKIN SENSITISATION - Category 1B |

History

Date of issue/ Date of revision : 8 November 2021

Date of previous issue : 21 February 2020

Prepared by : EHS

Version : 2

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.