

**HARDENER 5000 2.1 ACRYLIC CLEARCOAT HARDENER**

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING**

**1.1. Product identifier**

**HARDENER 5000 2.1 ACRYLIC CLEARCOAT HARDENER; standard, fast, slow**

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

The hardener standard, fast and slow version (component B) for NOVAKRYL 5000 2.1 For professional use in car refinish.

**1.3. Data of the supplier Safety Data Sheet**

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**1.4. Emergency telephone number** +48 61 810-98-00

**SECTION 2: HAZARD IDENTIFICATION**

**2.1. Classification of the substance or mixture**

The mixture was classified as dangerous pursuant to current regulations - see section 15.

**Classification 1272/2008/WE:**

Sensitisation — Skin, category 1 (Skin Sens. 1). May cause an allergic skin reaction.

Specific target organ toxicity — Single exposure, Hazard Category 3, Respiratory tract irritation (STOT SE 3). May cause respiratory irritation.

Hazardous to the aquatic environment — Chronic Hazard, Category 2 (Aquatic Chronic 2). Toxic to aquatic life with long lasting effects.

Liquid, flammable substances, category 2 (Flam. Liq. 2). Highly flammable liquid and vapour.

**2.2. Label elements:**

Contains:

4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene. Contains isocyanates. May produce an allergic reaction.

Pictograms:



Signal word:

Danger

H225  
H317  
H335  
H411

Highly flammable liquid and vapour.  
May cause an allergic skin reaction.  
May cause respiratory irritation.  
Toxic to aquatic life with long lasting effects.

P102  
P210

Keep out of reach of children.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P235  
P240  
P241  
P242  
P243  
P261  
P271  
P272  
P280

Keep cool.  
Ground, bond container and receiving equipment  
Use ventilating equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Avoid breathing vapours, spray.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves, protective clothing, eye protection, face protection.

P303 + P361 + P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P333 + P313  
P304+P340

If skin irritation or rash occurs: Get medical advice.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312

Call a doctor if you feel unwell.

**HARDENER 5000 2.1 ACRYLIC CLEARCOAT HARDENER**

**SECTION 2: HAZARD IDENTIFICATION**

**2.2. Label elements:**

P363  
P370+P378  
P403 + P233  
P405  
P501

Wash contaminated clothing before reuse.  
In case of fire: Use dry chemical powder for extinction.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Dispose of contents and container in accordance with local, state and federal regulations.

**2.3. Other hazards**

Exothermic reaction with amines and alcohols, slow release of CO<sub>2</sub> in case of contact with water; pressure build-up in closed containers, danger of bursting of the containers.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1. Substances**

Not applicable.

**3.2. Mixtures**

**Product identification**

HARDENER 5000 2.1 ACRYLIC CLEARCOAT HARDENER

<b>Substance name</b>	<b>Identification numbers</b>	<b>Classification and marking</b>	<b>Concentration [wt%]</b>
HDI oligomers, isocyanurate	WE: 931-274-8 CAS: 28182-81-2 Index no.: --- Registration no.: 01-2119485796-17-XXXX	Skin Sens. 1, H317 Acute Tox. 4; H332 STOT SE 3; H335	34-42
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	WE: 202-681-1 CAS: 98-56-6 Index no.: --- Registration no.: 05-2114106385-56-XXXX	Flam. Liq. 3; H226; Skin Sens. 1B, H317 Aquatic Chronic 2; H411	45-52
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers	WE: 500-125-5 CAS: 53880-05-0 Index no.: --- Registration no.: 01-2119488734-24-0002	Skin Sens. 1B; H317 STOT SE 3 H335	10-15
Butyl acetate	WE: 204-658-1 CAS: 123-86-4 Index no.: 607-025-00-1 Registration no.: 01-2119485493-29-XXXX	Flam. Liq. 3; H226; STOT SE 3; H336 EUH066	1-5
Methyl acetate	WE: 201-185-2 CAS: 79-20-9 Index no.: 607-021-00-x Registration no.: 01-2119459211-47-XXXX	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	<9,5
2-butoxyethyl acetate	WE: 203-933-3 CAS: 112-07-2 Index no.: 607-038-00-2 Registration no.: 01-2119475112-47-XXXX	Acute Tox. 4; H332 Acute Tox. 4; H312	<5

**HARDENER 5000 2.1 ACRYLIC CLEARCOAT HARDENER**

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Substance name	Identification numbers	Classification and marking	Concentration [wt%]
Hexamethylene diisocyanate	WE: 212-485-8 CAS: 822-06-0 Index no.: 615-011-00-1 Registration no.: 01-2119457571-37-XXXX	Acute Tox. 3, H331 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317	<0.1

Full text of the phrases identifying the types of hazards is provided in section 16.

**SECTION 4: FIRST AID MEASURES**

**4.1. Description of first aid measures**

General information:  
See section 11 of the Safety Data Sheet.

**Inhalation:**

Take the victim outside into fresh air, ensure quiet surrounding; in case of no breath, apply artificial respiration. Call a doctor.

**Skin:**

Take off contaminated clothing. Rinse contaminated skin with plenty of lukewarm water for about 15 minutes. If irritation persists, consult a doctor.

**Eyes:**

Rinse immediately with plenty of lukewarm water for about 15 minutes, avoid strong water jet-risk of cornea damage, consult a doctor.

**Alimentary tract:**

Do not provoke vomiting (choking risk). Call a doctor.  
Person giving first aid should wear medical gloves.

**4.2. Most important symptoms and effects, both acute and delayed**

May cause irritation by inhalation. Irritating to skin. May cause sensitization by skin contact. Repeated exposure may cause skin dryness or cracking. Flammable product. Vapours may cause drowsiness and dizziness.

**4.3. Indications of any immediate medical attention and special treatment needed**

Special measures allowing for specialist and immediate aid should be available in the place of work.

**SECTION 5: FIREFIGHTING MEASURES**

**5.1. Extinguishing media**

Powder, foam resistant to alcohols, carbon dioxide, water mist.

**5.2. Special hazards arising from the substance or mixture**

Fire may cause generation of carbon dioxide and other toxic gases.

**5.3. Advice for firefighters**

Fire-fighting teams should wear self-contained breathing apparatus and light protective clothing. Cool adjacent tanks by spraying water at a safe distance.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1. Personal precautions, protective equipment and emergency procedures**

For persons not being the members of aid giving staff:

Eliminate sources of ignition. Ensure sufficient ventilation of the room. Avoid direct contact with the released substance. Avoid contact with skin and eyes. Personal protection measures - section 8 of the Safety Data Sheet.

For persons giving aid:

Persons giving aid should wear protective clothing made of coated, impregnated fabric, protective gloves (viton), tight protective glasses and breathing apparatus: gas mask with A type absorber.

**6.2. Environmental precautions**

Prevent leakage to the sewage system, surface waters, underground waters and soil.

**6.3. Methods and materials for containment and cleaning up**

Stop the leakage (close the liquid inflow, seal), place damaged container in an emergency container, remove the liquid mechanically and place it in an emergency container. In case of large leakage, embank the area. In case of small amounts, collect with the use of a binding agent (e.g. mica, diatomaceous earth, sand). After approx. 1 hour put into a waste container. Do not close the container (CO<sub>2</sub> is being released). Leave for several days in a secure place outdoor.

**6.4. Reference to other sections**

Personal protection measures - see section 8 of the Safety Data Sheet.

Disposal considerations - see section 13 of the Safety Data Sheet.

**SECTION 7: HANDLING AND STORAGE**

**7.1. Precautions for safe handling**

Keep away from heat and fire sources. Prevent leakage to the sewage system, surface waters, underground waters and soil. Use in well ventilated rooms. Do not smoke. Do not inhale fumes. Avoid contact with skin and eyes. Take precaution measures against electrostatic discharge. Use personal protection measures - section 8 of the Safety Data Sheet.

**7.2. Conditions for safe storage, including any incompatibilities**

Store in tightly sealed, original containers. Do not store near large amounts of organic peroxides and other strong oxidants. Take precaution measures against electrostatic discharge. Store in cool, well ventilated rooms. Protect from low temperatures, the influence of sunrays and heat sources.

**7.3. Special end use(s)**

For professional use in car refinish taking into consideration the information included in subsections 7.1 and 7.2.

**SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION**

**8.1. Control parameters**

Hexamethylene diisocyanate CAS 822-06-0 according to:

- TRGS 900: MAK: 0.005ppm, 0.035mg/m<sup>3</sup>, 1;=2;(I),DFG, 12

Methyl acetate CAS 79-20-9 according to:

- Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]: TWA 500 ppm: 250 mg/m<sup>3</sup>, STEL 600 mg/m<sup>3</sup>

**8.2. Exposure control**

Respiratory tract protection:

Gas mask with A2-P2 type absorber (EN 141).

Hand protection:

Protective gloves PN-EN 374-3 (viton, 0.7 mm thick, penetration time > 480 min, natural rubber, thickness >0,35 mm in the short-time exposure)

Eye protection:

Tight protective glasses.

Skin protection:

Proper protective clothing (coated impregnated fabrics).

Workplace:

Fixed fume extraction and general ventilation.

Environmental exposure control:

Prevent leakage to the sewage system, surface waters, underground waters and soil.

**HARDENER 5000 2.1 ACRYLIC CLEARCOAT HARDENER**

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

Physical state	liquid
Colour	colourless
Odour	strong, powerful
Odour threshold	no data
pH	not applicable
Melting/freezing point	not applicable
Boiling point	no data
Flash point	-13°C, 8,6 °F
Autoignition point	Approx. 465°C, 869°F
Breakdown point	not specified
Evaporation rate	not specified
Flammability (solid, gas)	not applicable
Explosion limits	not specified
Vapour pressure	not specified
Vapour density (with regard to air)	not specified
Density 20°C	about 1.2 g/cm <sup>3</sup> , 10,01 lb/gal
Solubility (in water)	insoluble
N-octanol/water division ratio	not specified
Viscosity	no data
Explosive properties	not applicable
Oxidizing properties	not applicable

**9.2 Other informations**

No available data.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1. Reactivity**

The product is not reactive under normal conditions.

**10.2. Chemical stability**

The product remains stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Carbon monoxide and other toxic gases are generated as a result of thermal decomposition. Exothermic reaction with amines and alcohols, slow release of CO<sub>2</sub> in case of contact with water; pressure build-up in closed containers, danger of bursting of the containers.

**10.4. Conditions to be avoided**

Highly flammable liquid and vapour. Avoid contact with strongly oxidizing agents, peroxides, strong acids and bases. Avoid generation and accumulation of static electricity. Protect from the influence of sunrays and heat sources.

**10.5. Incompatible materials**

Avoid contact with large amounts of organic peroxides, strong acids and bases as well as other strong oxidants.

**10.6. Hazardous decomposition products**

Carbon monoxide nitric oxides, isocyanate fumes, trace amounts of hydrogen cyanide and other toxic gases are generated as a result of thermal decomposition.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1. Information on toxicological effects**

No experimental data available on the preparation. Evaluation was performed based on the data on dangerous ingredients included in the preparation.

**a) Acute toxicity**

No data.

**b) Skin corrosion/irritation**

No available data confirming the hazard class.

**c) serious eye damage/irritation**

No available data confirming the hazard class.

**HARDENER 5000 2.1 ACRYLIC CLEARCOAT HARDENER**

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1. Information on toxicological effects**

**d) respiratory or skin sensitisation**

May cause an allergic skin reaction.

**e) germ cell mutagenicity**

The mixture has not been classified as mutagenic. No available data confirming the hazard class.

**f) carcinogenicity**

The mixture has not been classified as cancerogenic. No available data confirming the hazard class.

**g) reproductive toxicity**

The mixture has not been classified as having any harmful effect on reproduction. No available data confirming the hazard class.

**h) STOT-single exposure**

May cause respiratory irritation.

**i) STOT- repeated exposure**

No available data confirming the hazard class.

**j) aspiration hazard**

No available data confirming the hazard class.

**Exposure methods:**

Inhalation: May cause respiratory irritation.

Skin: May cause sensitization by skin contact.

Eyes: May cause irritation.

If swallowed, the substance may cause irritation of the alimentary tract, nausea, vomiting and diarrhoea.

**Poisoning symptoms:**

Headache and vertigo, fatigue, decreased muscle power, drowsiness and, in exceptional instances, loss of consciousness.

May cause drowsiness or dizziness. Repeated exposure may cause skin dryness or cracking.

**SECTION 12: ECOLOGICAL INFORMATION**

No experimental data available on the preparation. Evaluation was performed based on the data on dangerous ingredients included in the preparation.

**12.1. Toxicity**

No data.

**12.2. Persistence and degradability**

No data.

**12.3. Bioaccumulative potential**

No data.

**12.4. Mobility in soil**

Product very poorly soluble in water. The product in the contact with water changes in solid, insoluble substance (polycarbamide).

CO<sub>2</sub> is released at the same time.

**12.5. Results of PBT and vPvB assessment**

No available data.

**12.6. Other adverse effects**

Toxic to aquatic life with long lasting effects.

**HARDENER 5000 2.1 ACRYLIC CLEARCOAT HARDENER**

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment methods**

The product must be disposed of in compliance with proper local and statutory regulations with regard to waste - see point 15. The product should be disposed with entities which are authorised to conduct activity in the area of collecting, recycling or utilization of waste.

Product remains:

Do not dispose the product into the sewage system. Do not store with communal waste. Remove the remains of the mixture carefully and harden with the use of the proper A component, included in the set. The hardened product is not harmful waste.

**CAUTION:** harden the remains in small portions and keep them away from flammable products. High amounts of heat are released during chemical reaction!

Contaminated container:

A container containing unhardened remains of the product is harmful waste. Do not store with communal waste. The contaminated container should be disposed with entities which are authorized to collection, recover or disposal.

**SECTION 14: TRANSPORT INFORMATION**

	ADR/RID	IMO/IMGD	IATA-DGR
<b>14.1. UN number</b>	1866	1866	1866
<b>14.2. UN proper shipping name</b>	RESIN SOLUTION, flammable		
<b>14.3. Transport hazard class(es)</b>	3	3	3
<b>14.4. Packaging group</b>	II	II	II
<b>14.5. Environmental hazards</b>	yes	yes	no
<b>14.6. Special precautions for user</b>	Do not transport together with materials of class 1 (excluding materials of class 1.4S) and some materials of classes 4.1 and 5.2. During transport, avoid direct contact with materials of classes 5.1 and 5.2. Do not use an open flame and do not smoke.		
<b>14.7. Transport in bulk according to Annex II of MARPOL Convention and the IBC Code</b>	Not applicable.		

**SECTION 15: REGULATORY INFORMATION**

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

REACH - Regulation 2006/1907/WE  
CLP - Regulation 1272/2008/WE

**15.2. Chemical safety assessment**

Not performed

**SECTION 16: OTHER INFORMATION**

**Full text of the phrases identifying the types of hazards mentioned in sections 2-15**

H226 Flammable liquid and vapour.  
STOT SE 3 Specific target organ toxicity– single exposure, Category 3  
H335 May cause respiratory irritation.  
H336 Might cause drowsiness or or dizziness.  
Acute Tox. 4. Acute toxicity, Category 4  
H332 Harmful if inhaled.  
H312 Harmful in contact with skin.  
Skin Irrit. 2 Caustic/irritating effect on skin, Category 2  
H315 Causes skin irritation.  
Eye Irrit. 2 Serious eye damage/eye irritation, Hazard Category 2  
H319 Causes serious eye irritation.  
Resp. Sens. 1 Sensitisation — Respirat., Hazard Category 1  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Skin Sens. 1 Skin sensation, Category 1.  
H317 May cause an allergic skin reaction.

**HARDENER 5000 2.1 ACRYLIC CLEARCOAT HARDENER**

**SECTION 16: OTHER INFORMATION**

**Full text of the phrases identifying the types of hazards mentioned in sections 2-15**

Acute Tox.3 Acute toxicity (inhal.), Hazard Category 3

H331 Toxic if inhaled

Aquatic Chronic 2 Hazardous to the aquatic environment — Chronic Hazard, Category 2

H411 Toxic to aquatic life with long lasting effects.

**Explanation of the abbreviations and acronyms used in the Safety Data Sheet**

**CAS no** – numerical symbol ascribed to a chemical substance by the American organization, Chemical Abstracts Service (CAS).

**EC no.** – a number ascribed to a chemical substance in the European List of Notified Chemical Substances (ELINCS) or a number in the European Inventory of Existing Chemical Substances mention in "No-longer polymers" publication (EINECS)

**MPC** – maximum permissible concentration of health hazardous substances in the work place

**MPIC** – maximum permissible instantaneous concentration

**MPCC** - maximum permissible ceiling concentration

**PCB** - permissible concentration in biological material

**UN number** - four-digit identification number of a substance, preparation or product pursuant to UN model regulations

**ADR** – European agreement on international road transport of hazardous materials

**IMO** – International Marine Organization

**RID** – Regulations for international rail transport of hazardous materials

**IMDG-Code** – International marine code for hazardous materials

**ICAO /IATA** – Technical Instructions for Safe Air Transport of Hazardous Materials

The information is based on our current knowledge. This document shall not constitute warranty for product characteristics. Classification was made by calculation method according to the classification rules contained in Regulation 1272/2008/WE.

**Other sources of information**

**ECHA** European Chemicals Agency

**TOXNET** Toxicology Data Network

**IUCLID** International Uniform Chemical Information Database

Changes: General update

Trainings:

With regard to handling, health and safety while working with hazardous substances and mixtures.

With regard to transport of hazardous goods pursuant to the requirements of ADR regulations.

Issued by: NOVOL Sp. z o.o.