

SAFETY DATA SHEET



H13 Hardener 2K Very Fast

1. Identification of the preparation and of the company

Product name and/or code : H13 Hardener 2K Very Fast
Product use : Vehicle Refinishing Paint
Manufacturer : ADPCC
 Zuiveringweg 89
 8243 PE Lelystad
 the Netherlands
 tel: +31 (0)320 264665
 fax: +31 (0)320 264781
Emergency telephone number of the company : Call: +31 (0)320 292200 (during daytime)

2. Composition/information on ingredients

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC.

Chemical name*	CAS number	%	EC number	Classification
Aliphatic Isocyanate	28182-81-2	25 - 50	500-060-2	Xn; R20/21 R42/43
n-butyl acetate	123-86-4	12.5 - 25	204-658-1	R10 R66, R67
xylene	1330-20-7	12.5 - 25	215-535-7	R10 Xn; R20/21 Xi; R38
Ethyl acetate	141-78-6	12.5 - 25	205-500-4	F; R11 Xi; R36 R66, R67
Aliphatic Isocyanate 2	53880-05-0	5 - 12.5	500-125-5	Xn; R20 R42
Ethylbenzene	100-41-4	1 - 5	202-849-4	F; R11 Xn; R20
Solvent naphtha (petroleum), light arom. A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135 °C to 210 °C (275 °F to 410 °F).	64742-95-6	0 - 1	265-199-0	Xn; R65 Xi; R37 R66, R67 N; R51/53
1,2,4-Trimethylbenzene	95-63-6	0 - 1	202-436-9	R10 Xn; R20 Xi; R36/37/38 N; R51/53
mesitylene	108-67-8	0 - 1	203-604-4	R10 Xi; R37 N; R51/53
See section 16 for the full text of the R-phrases declared above				

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

3. Hazards identification

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

- Classification** : F; R11
Xn; R20/21
R42/43, R66
- Physical/chemical hazards** : Highly flammable.
- Human health hazards** : Harmful by inhalation and in contact with skin.
May cause sensitisation by inhalation and skin contact.
Repeated exposure may cause skin dryness or cracking.
- Additional warning phrases** : Contains isocyanates. See information supplied by the manufacturer. This information is provided by the present Safety Data Sheet.

4. First-aid measures

First-aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
- 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. Give nothing by mouth. If unconscious, place in recovery position and seek medical advice.
- 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.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do not induce vomiting.

5. Fire-fighting measures

- Extinguishing media** : Recommended: alcohol-resistant foam, CO₂, powders, water spray or mist.
Not to be used : water jet.
- Recommendations** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to sewers or waterways.

6. Accidental release measures

- Personal precautions** : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.
- Spill** : 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 (see section 13). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

7. Handling and storage

Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

Handling

- : Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

To dissipate static electricity during transfer, earth drum and connect to receiving container with bonding strap. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Keep container tightly closed. Precautions should be taken to minimise exposure to atmospheric humidity or water. CO₂ will be formed, which, in closed containers, could result in pressurisation. Care should be taken when re-opening partly-used containers. Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

Put on appropriate personal protective equipment (see section 8).

Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

Storage

- : Store in accordance with local regulations. Observe label precautions. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep away from heat and direct sunlight.

Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water.

No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Do not empty into drains..

8. Exposure controls/personal protection

Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

Engineering measures : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn. (See Personal protection.)

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
n-butyl acetate	ACGIH TLV (United States, 1/2005). Notes: 1998 Adoption. STEL: 200 ppm 15 minute/minutes. Form: All forms TWA: 150 ppm 8 hour/hours. Form: All forms
xylene	EU OEL (Europe, 4/2004). Skin Notes: Indicative STEL: 442 mg/m ³ 15 minute/minutes. Form: All forms STEL: 100 ppm 15 minute/minutes. Form: All forms TWA: 221 mg/m ³ 8 hour/hours. Form: All forms TWA: 50 ppm 8 hour/hours. Form: All forms
Ethyl acetate	80/1107/EEC (Europe). TWA: 400 ppm CEIL: 300 ppm TWA: 1440 mg/m ³ CEIL: 1100 mg/m ³
Ethylbenzene	EU OEL (Europe, 4/2004). Skin Notes: Indicative STEL: 884 mg/m ³ 15 minute/minutes. Form: All forms STEL: 200 ppm 15 minute/minutes. Form: All forms TWA: 442 mg/m ³ 8 hour/hours. Form: All forms TWA: 100 ppm 8 hour/hours. Form: All forms
Solvent naphtha (petroleum), light arom. A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135 °C to 210 °C (275 °F to 410 °F).	EU OEL (Europe, 2003). TWA: 20 ppm 8 hour/hours. TWA: 100 mg/m ³ 8 hour/hours.
1,2,4-Trimethylbenzene	80/1107/EEC (Europe). CEIL: 20 ppm CEIL: 100 mg/m ³ EU OEL (Europe, 4/2004). Notes: Indicative TWA: 100 mg/m ³ 8 hour/hours. Form: All forms TWA: 20 ppm 8 hour/hours. Form: All forms
mesitylene	EU OEL (Europe, 4/2004). Notes: Indicative TWA: 100 mg/m ³ 8 hour/hours. Form: All forms TWA: 20 ppm 8 hour/hours. Form: All forms

Personal protective equipment

Respiratory system

: By spraying: air-fed respirator.
By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask.

Skin and body

: Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

8. Exposure controls/personal protection

Hands

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Eyes : Use safety eyewear designed to protect against splash of liquids.

Environmental exposure controls

Do not allow to enter drains or watercourses.

9. Physical and chemical properties

Physical state : Liquid.

Colour : Clear.

Flash point : Closed cup: 10.5°C (50.9°F).

Relative density : 0.963 (Water = 1)

Vapour density : The highest known value is 4 (Air = 1) (n-butyl acetate). Weighted average: 3.64 (Air = 1)

Lower explosion limit : The greatest known range is Lower: 2.2% Upper: 11.5% (ethyl acetate)

Solubility : Insoluble in cold water, hot water.

10. Stability and reactivity

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

Hazardous decomposition products: smoke, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide.

Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids, amines, alcohols, water.

Uncontrolled exothermic reactions occur with amines and alcohols.

The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure build-up could result in distortion, expansion and, in extreme cases, bursting of the container.

11. Toxicological information

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Repeated or prolonged contact with irritants may cause dermatitis. If splashed in the eyes, the liquid may cause irritation and reversible damage.

Contains (Aliphatic Isocyanate, Aliphatic Isocyanate 2). May produce an allergic reaction.

12. Ecological information

There is no data available on the preparation itself.
Do not allow to enter drains or watercourses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 2 for details.

Ecotoxicity data

<u>Product/ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
n-butyl acetate	Pimephales promelas (EC50)	48 hour/hours	19 mg/l
	Pimephales promelas (LC50)	96 hour/hours	18 mg/l
xylene	Lepomis macrochirus (LC50)	96 hour/hours	100 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	3.3 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	8.2 mg/l
	Lepomis macrochirus (LC50)	96 hour/hours	8.6 mg/l
	Lepomis macrochirus (LC50)	96 hour/hours	12 mg/l
	Lepomis macrochirus (LC50)	96 hour/hours	13.3 mg/l
Ethyl acetate	Pimephales promelas (LC50)	96 hour/hours	13.4 mg/l
	Pimephales promelas (EC50)	48 hour/hours	260 mg/l
	Scenedesmus subspicatus (EC50)	48 hour/hours	3300 mg/l
	Scenedesmus subspicatus (EC50)	48 hour/hours	5600 mg/l
	Pimephales promelas (LC50)	96 hour/hours	230 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	425.3 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	484 mg/l
	Daphnia magna (EC50)	48 hour/hours	2.93 mg/l
	Daphnia magna (EC50)	48 hour/hours	2.97 mg/l
	Selenastrum capricornutum (EC50)	48 hour/hours	7.2 mg/l
Ethylbenzene	Oncorhynchus mykiss (LC50)	96 hour/hours	4.2 mg/l
	Pimephales promelas (LC50)	96 hour/hours	9.09 mg/l
	Poecilia reticulata (LC50)	96 hour/hours	9.6 mg/l
	Fish (LC50)	96 hour/hours	18 mg/l
	Daphnia (EC50)	48 hour/hours	21.3 mg/l
Solvent naphtha (petroleum), light arom. A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135 °C to 210 °C (275 °F to 410 °F).			
1,2,4-Trimethylbenzene mesitylene	Pimephales promelas (LC50)	96 hour/hours	7.72 mg/l
	Scenedesmus subspicatus (EC50)	48 hour/hours	25 mg/l
	Scenedesmus subspicatus (EC50)	48 hour/hours	53 mg/l

Ecological information

Persistence/degradability

12. Ecological information

<u>Product/ingredient name</u>	<u>BOD₅</u>	<u>COD</u>	<u>ThOD</u>
n-butyl acetate	0.15 to 0.5 g O ₂ /g	2.32 g O ₂ /g	2.21 g O ₂ /g
Ethyl acetate	0.293 g O ₂ /g	1.54 g O ₂ /g	-
<u>Product/ingredient name</u>	<u>Aquatic half-life</u>	<u>Photolysis</u>	<u>Biodegradability</u>
n-butyl acetate	-	-	Not readily
Ethyl acetate	-	-	Readily

13. Disposal considerations

Do not allow to enter drains or watercourses. Residues in empty containers should be neutralised with a decontaminant (see section 6).

Dispose of according to all federal, state and local applicable regulations.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

14. Transport information

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.

Land - road/railway

UN number	: 1263
Transport document name	: Paint related material (n-butyl acetate)
Special provision 640	: D
ADR/RID Class	: 3
Packing group	: II
ADR/RID Label	:



Sea

UN number	: 1263
Proper shipping name	: Paint related material (n-butyl acetate)
Special provisions	: Not available.
IMDG Class	: 3
Packing group	: II
IMDG Label	:



Marine pollutant	: No.
Emergency schedules (EmS)	: 3-05

Air

UN number	: 1263
Proper shipping name	: Paint related material (n-butyl acetate)
Special provisions	: Not available.
ICAO/IATA Classification	: 3
Packing group	: II

14. Transport information

The "viscosity exemption" provisions do not apply to air transport.

ICAO/IATA label

:



Inland waterways

UN number

: 1263

Proper shipping name

: Paint related material (n-butyl acetate)

ADNR Classification

: 3

Packing group

: II

ADNR Label

:



15. Regulatory information

EU regulations

: The product is classified and labelled for supply in accordance with the Directive 1999/45/EC as follows:

Hazard symbol/symbols

:



Highly flammable, Harmful

Risk phrases

: R11- Highly flammable.
R20/21- Harmful by inhalation and in contact with skin.
R42/43- May cause sensitisation by inhalation and skin contact.
R66- Repeated exposure may cause skin dryness or cracking.

Safety phrases

: S16- Keep away from sources of ignition - No smoking.
S23- Do not breathe vapour spray.
S36/37- Wear suitable protective clothing and gloves.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S51- Use only in well-ventilated areas.

Contains

: Aliphatic Isocyanate
xylene
Aliphatic Isocyanate 2

Additional warning phrases

: Contains isocyanates. See information supplied by the manufacturer. This information is provided by the present Safety Data Sheet.

Industrial use

: The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

16. Other information

CEPE Classification	: 5
Full text of R-phrases referred to in sections 2 and 3 - Europe	: R11- Highly flammable. R10- Flammable. R20- Harmful by inhalation. R20/21- Harmful by inhalation and in contact with skin. R65- Harmful: may cause lung damage if swallowed. R36- Irritating to eyes. R36/37/38- Irritating to eyes, respiratory system and skin. R37- Irritating to respiratory system. R38- Irritating to skin. R42- May cause sensitisation by inhalation. R42/43- May cause sensitisation by inhalation and skin contact. R66- Repeated exposure may cause skin dryness or cracking. R67- Vapours may cause drowsiness and dizziness. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The information in this Safety Data Sheet is required pursuant to EU Directive 91/155/EEC and its amendments.

Date of issue : 1/12/2006.

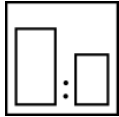
Version : 1.6

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

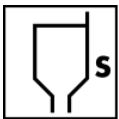
H13 Hardener 2K Very Fast

APPLICATION DATA



Mixing Ratio

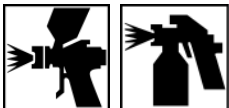
: See info Series 400/700, C60 and the Surfacers/Fillers.



Application viscosity
DINCUP 4mm/20°C

: Airspray (sec) : -
 Pressure tank (sec) : -
 Airless (sec) : -

(*) Once opened a tin can be kept for not longer than one week, depending on temperatures and humidity. The tin should be closed immediately after use.



Gravity feed
 Suction feed
 Pressure tank
 Airless
 HVLP / LVLP
 HR

Nozzle diameter (mm)

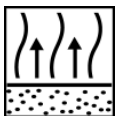
Spraying pressure (bar)

-	-
-	-
-	-
-	-
-	See info manufacturer
-	See info manufacturer



Spray coats / Layer thickness
(µm)

: - / -



Flash-off (min)

: -



Drying time (min)

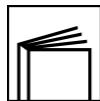
20°C : -
 60°C Obj. : -



Potlife (min)

20°C : -

The technical data in these publications are based on our present knowledge and give you an idea of the various applications without obligations.

H13 Hardener 2K Very Fast**PRODUCT INFO**

- Area of application** : Car repair and commercial vehicles.
- Chemical base** : Non-yellowing, highly durable isocyanate resin
- General qualities** : 2K Hardener Very Fast : Spot repair, small objects; 12-18°C
- Product group according to CEPE.** : Multi layer finishing: Base layer and Clear. Max.VOC-amount in this group 420 g/L: average weight of the Base layer and Clear layer (ready to use) according to European legislation; Apart from that what must apply is: 480 g/L: ready to use Base layer or Clear as loose components. Primer Surfacer (1 / 2 Components).
Max. VOC content in this group in accordance with European legislation. Max.VOC-amount in this group 540 g/L (ready to use) according to European legislation EU. 1 / 2 Component paints 1 Layer. Max.VOC-amount in this group 420 g/L (ready to use) according to European legislation.
- Auxiliary materials** : Series 400, Series 700, C60, C65, PF131, PF132, PF135, TA900/TA910/TA920
- VOC content (ASTM-D3960-69) (g/l)** : >420 (ready to use clear). <540 (ready to use PF131/PF132). >540 (ready to use PF135)
- | | | |
|----------------------------|--------------------------------|--------------------------------|
| Physical properties | Specific gravity (kg/l) | : 0.963 (Water = 1) |
| | Flash point | : Closed cup: 10.5°C (50.9°F). |
| | Vol.% solids | : 35 |
| | Economy | : 7 m ² /L/50 µm |
| | Gloss | : |
| | Colour | : Clear. |
- Substrates** : See info Series 400/700, C60 and Surfacer/Fillers.
- Undercoats** : See Info Series 400/700, C60 and the Surfacer/Fillers.
- Finishing materials** : See info Series 400/700, C60 and the Surfacer/Fillers.
- Cleaning the equipment** : TR51 Gun Cleaner
- Storage life (years)** : min. 1 (*)
(Under normal storage conditions and unopened tins).

The technical data in these publications are based on our present knowledge and give you an idea of the various applications without obligations.