

SAFETY DATA SHEET

HARDENER 2526



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

1.1 Product identifier

Product name : HARDENER 2526
Product code : 2526
Product description : Hardener

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

Identified uses

Hardener

1.3 Details of the supplier of the safety data sheet

CASCO ADHESIVES AB
 Box 11538
 SE-100 61 Stockholm, Sweden
 Phone: + 46 8 743 40 00
 hse.adhesives@akzonobel.com

1.4 Emergency telephone number

Telephone number : +46 8 33 70 43 (Poison center)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Directive 1999/45/EC [DPD]

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

Classification : C; R34

Human health hazards : Causes burns.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard symbol or symbols :



Indication of danger : Corrosive

Risk phrases : R34- Causes burns.

Safety phrases : S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
 S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Hazardous ingredients : formic acid

2.3 Other hazards

Other hazards which do not result in classification : No known significant effects or critical hazards.

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	Type
			67/548/EEC	
formic acid	REACH #: 01-2119491174-37 EC: 200-579-1 CAS: 64-18-6 Index: 607-001-00-0	10-25	C; R35 See Section 16 for the full text of the R-phrases declared above.	[1] [2]

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 or vPvBs 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

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

SECTION 4: First aid measures**4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician.
- Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. Get medical attention if irritation occurs.
- Skin contact** : Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Remove contaminated clothing and shoes. Chemical burns must be treated promptly by a physician.
- Ingestion** : Wash out mouth with water. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If affected person is conscious, give plenty of water to drink. Seek medical attention.
- Protection of first-aiders** : Put on appropriate personal protective equipment (see Section 8).

4.2 Most important symptoms and effects, both acute and delayedPotential acute health effects

- Eye contact** : Corrosive to eyes. Causes burns.
- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : Corrosive to the skin. Causes burns.
- Ingestion** : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.

SECTION 4: First aid measures

- 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** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : No specific fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Not applicable.
- Special protective equipment for fire-fighters** : Be sure to use an approved/certified respirator or equivalent.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel** : Do not breathe vapour or mist. Wear appropriate respirator when ventilation is inadequate. Use suitable protective equipment (section 8). Avoid contact with eyes, skin and clothing.
- 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 Section 8 for additional information on hygiene measures.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

- Small spill** : Absorb with an inert material and place in an appropriate waste disposal container. Contaminated absorbent material may pose the same hazard as the spilt product.
- Large spill** : Stop leak if without risk. Move containers from spill area. 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). Prevent entry into sewers, water courses, basements or confined areas. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.

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SECTION 6: Accidental release measures

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous.

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 : Keep container tightly closed. Keep container in a cool, well-ventilated area. Keep away from heat and direct sunlight. Separate from alkalis.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
formic acid	EU OEL (Europe, 12/2009). Notes: list of indicative occupational exposure limit values TWA: 9 mg/m ³ 8 hours. TWA: 5 ppm 8 hours.

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.

Derived effect levels

No DELs available.

Predicted effect concentrations

No PECs available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, 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 : Ensure that eyewash stations and safety showers are close to the workstation location. 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. Wash contaminated clothing before reusing.

Eye/face protection : Tightly-fitting goggles

SECTION 8: Exposure controls/personal protectionSkin protection

- Hand protection** : Neoprene gloves. Nitrile gloves. PVC gloves.
- Body protection** : Protective clothing.
- Respiratory protection** : Wear appropriate respirator when ventilation is inadequate. Organic vapour (Type A) and acid gas (Type E) filter
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**Appearance

- Physical state** : Liquid.
- Colour** : White.
- Odour** : Pungent.
- Odour threshold** : Not available.
- pH** : 1,3 to 2
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: >100°C [Product does not sustain combustion.]
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Upper/lower flammability or explosive limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Density** : 1,1 g/cm³
- Solubility(ies)** : Easily soluble in the following materials: cold water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.
- Viscosity** : Dynamic: 1700 to 2700 mPa·s
- Explosive properties** : Not available.
- Oxidising properties** : Not available.

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.

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SECTION 10: Stability and reactivity**10.4 Conditions to avoid** : No specific data.**10.5 Incompatible materials** : Reactive or incompatible with the following materials:
alkalis**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.**SECTION 11: Toxicological information****11.1 Information on toxicological effects**Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
formic acid	LC50 Inhalation Vapour	Rat	7400 mg/m ³	4 hours
	LD50 Oral	Rat	730 mg/kg	-

Conclusion/Summary : Not available.Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
formic acid	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-

Sensitisation**Skin** : Not available.Potential acute health effects**Eye contact** : Corrosive to eyes. Causes burns.**Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.**Skin contact** : Corrosive to the skin. Causes burns.**Ingestion** : May cause burns to mouth, throat and stomach.Symptoms related to the physical, chemical and toxicological characteristics**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 painsPotential chronic health effects**General** : No known significant effects or critical hazards.**Carcinogenicity** : No known significant effects or critical hazards.**Mutagenicity** : No known significant effects or critical hazards.**Teratogenicity** : No known significant effects or critical hazards.**Developmental effects** : No known significant effects or critical hazards.**Fertility effects** : No known significant effects or critical hazards.

SECTION 12: Ecological information**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
formic acid	Acute LC50 80 to 90 mg/l Marine water	Crustaceans - Carcinus maenas	48 hours

Conclusion/Summary : No known significant effects or critical hazards.

12.2 Persistence and degradability

Conclusion/Summary : No known significant effects or critical hazards.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
formic acid	-0,54	-	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

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**





Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal should be in accordance with applicable regional, national and local laws and regulations. Liquid residues and packages contaminated with those shall be treated as hazardous waste. Consult the local waste contractor and the local authority about the best way of handling cured adhesive.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances

SECTION 14: Transport information

	ADR/RID	ADN/ADNR	IMDG	IATA
14.1 UN number	UN3412	UN3412	UN3412	UN3412
14.2 UN proper shipping name	FORMIC ACID MIXTURE	FORMIC ACID MIXTURE	FORMIC ACID mixture	Formic acid mixture
14.3 Transport hazard class(es)	8 	8 	8 	8 
14.4 Packing group	II	II	II	II

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SECTION 14: Transport information

14.5 Environmental hazards	No.	No.	No.	No.
14.6 Special precautions for user	-	-	-	-
Additional information	Hazard identification number 80 Limited quantity 1 L Tunnel code (E)	-	Emergency schedules (EmS) F-A, S-B	

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : 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

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.

Other EU regulations

Europe inventory : All components are listed or exempted.

SECTION 16: Other information

Abbreviations and acronyms : DPD = Dangerous Preparations Directive [1999/45/EC]
 PBT = Persistent, Bioaccumulative and Toxic
 vPvB = Very Persistent and Very Bioaccumulative
 DNEL = Derived No Effect Level
 PNEC = Predicted No Effect Concentration
 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

Full text of abbreviated R phrases : R34- Causes burns.
 R35- Causes severe burns.

Full text of classifications [DSD/DPD] : C - Corrosive

Date of issue/ Date of revision : 2012-02-15.

Date of previous issue : No previous validation.

Version : 1

Indicates information that has changed from previously issued version.

Date of issue/Date of revision : 2012-02-15.