Conforms to 91/155/EEC - 2001/58/EC - Europe

SAFETY DATA SHEET

Hardener 2550

1. Identification of the substance/preparation and of the company/undertaking

Product name : **Hardener 2550**

Manufacturer : Casco Products AB
P.O. Box 11538
SE-100 61 Stockholm
SWEDEN

Supplier : Casco Products AB
P.O. Box 11538
SE-100 61 Stockholm
SWEDEN

Emergency telephone number : +46 8 33 70 43

Material Uses : Wood Adhesives

Code : **2550**

Chemical Family : Hardener.

2. Composition/information on ingredients

Substance/Preparation : Preparation

Chemical name*	CAS no.	%	EC Number	Classification
Formic acid Ethanediol Methanol **See Section 16 for the full text of the R Phrases declared above**	64-18-6 107-21-1 67-56-1	10-30 1-5 0.1-1	200-579-1 203-473-3 200-659-6	C; R35 Xn; R22 F; R11 T; R23/24/25, 39/23/24/25

*** Occupational Exposure Limit(s), 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 : C; R34
R34- Causes burns.

Effects and symptoms

Inhalation : Overexposure by inhalation may cause respiratory irritation.

Ingestion : May be fatal if swallowed. May cause burns to mouth, throat and stomach.

Skin contact : Irritation of the product in case of skin contact: Not available. Sensitisation of the product: Not available.
Corrosive to skin on contact. Skin contact may produce burns.

Eye Contact : Corrosive to eyes.

Aggravating conditions : Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation, leading to frequent attacks of bronchial infection.

4. First aid measures

First-Aid measures

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Obtain medical attention immediately.

Ingestion : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : In case of contact, immediately flush skin copiously with water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms appear.

Eye Contact : Check for and remove any contact lenses. In case of contact, immediately flush eyes with a copious amount of water for at least 15 minutes. Obtain medical attention immediately.

5. Fire-fighting measures

Extinguishing Media

Suitable : In case of fire, use water spray (fog), foam, dry chemical, or CO_2.

Special fire-fighting procedures : Fire-fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.

Protection of fire-fighters : Be sure to use an approved/certified respirator or equivalent.

6. Accidental release measures

Personal Precautions : Splash goggles. Full suit. Boots. Gloves (plastic).

Environmental precautions and cleanup methods : Stop leak if without risk. Absorb with dry earth, sand or other noncombustible material. Do not touch spilled material. Use water spray curtain to divert vapour drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. **Neutralize the residue with a dilute solution of sodium carbonate.**

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

7. Handling and storage

Handling : Do not breathe gas/fumes/vapour/spray. Wear suitable protective clothing, gloves and eye/face protection. If ingested, seek medical advice immediately and show the container or the label.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area. Store between 10 to 30°C (50 to 86°F).

Packaging materials

Recommended use : Use original container.

8. Exposure controls/personal protection

Engineering measures : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Hygiene measures : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Ingredient Name	Occupational Exposure Limits
Formic acid	**EU OEL (Europe, 1991). Notes: Indicative** TWA: 9 mg/m^3 8 hour(s). TWA: 5 ppm 8 hour(s).
Ethanediol	**2000/39/EC (Europe, 2000). Skin** TWA: 20 ppm 8 hour(s). STEL: 40 ppm 15 minute(s). TWA: 52 mg/m^3 8 hour(s). STEL: 104 mg/m^3 15 minute(s). **EU OEL (Europe, 2000). Skin Notes: Indicative** STEL: 104 mg/m^3 15 minute(s). STEL: 40 ppm 15 minute(s). TWA: 52 mg/m^3 8 hour(s). TWA: 20 ppm 8 hour(s).
Methanol	**EU OEL (Europe, 1991). Notes: Indicative** TWA: 260 mg/m^3 8 hour(s). TWA: 200 ppm 8 hour(s).

Personal protective equipment

Respiratory system : Wear appropriate respirator when ventilation is inadequate. as filter A2

Skin and body : Protective Clothing

Hands : Butyl gloves. Neoprene gloves. Nitrile gloves. PVC gloves. Always check with the manufacturer of the gloves if their quality fulfils the requrements for the chemical composition.

Eyes : Face shield.

9. Physical and chemical properties

Physical state : Liquid.

Colour : White.

Odour : Not available.

pH : 1.4 to 1.7 (Conc. (% w/w): 100) [Acidic.]

Boiling point : The lowest known value is 99°C (210.2°F) (water). Weighted average: 108.32°C (227°F)

Melting point : May start to solidify at 0°C (32°F) based on data for: water. Weighted average: -2.02°C (28.4°F)

Flash point : Closed cup: Higher than 93.3°C (200°F).

Auto-ignition temperature : The lowest known value is 298.79°C (569.8°F) (diethylene glycol monobutyl ether acetate).

Explosive properties : Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Lower explosion limit : The greatest known range is LOWER: 3.2% UPPER: 15.3% (Ethanediol)

Oxidising properties : Not available.

Vapour pressure : The highest known value is 0.01 kPa (0.08 mm Hg) (at 20°C) (diethylene glycol monobutyl ether acetate). Weighted average: 0.004 kPa (0.03 mm Hg) (at 20°C)

Density : 1.08 g/cm^3

Solubility : Partially soluble in cold water.

Viscosity : Dynamic: 2000 to 2800 cP
Kinematic: The highest known value is 18 cSt (Ethanediol)

Vapour density : The highest known value is 2.14 (Air = 1) (Ethanediol). Weighted average: 1.18 (Air = 1)

Evaporation rate (butyl acetate = 1) : The highest known value is 1.14 (Formic acid) Weighted average: 0.24compared to Butyl acetate.

10. Stability and reactivity

Stability : The product is stable.

11. Toxicological information

Acute toxicity

Ingredient Name	Test	Result	Route	Species
Formic acid	LD50	1100 mg/kg	Oral	Rat
	LD50	700 mg/kg	Oral	Mouse
Ethanediol	LD50	4700 mg/kg	Oral	Rat
	LD50	1650 mg/kg	Oral	Cat
	LD50	5500 mg/kg	Oral	Mouse
	LDLo	398 mg/kg	Oral	human
	LDLo	786 mg/kg	Oral	human
Methanol	LD50	5628 mg/kg	Oral	Rat
	LD50	14200 mg/kg	Oral	Rabbit
	LD50	7300 mg/kg	Oral	Mouse
	LD50	15800 mg/kg	Dermal	Rabbit
	LDLo	143 mg/kg	Oral	human
	LDLo	428 mg/kg	Oral	human
	LDLo	6422 mg/kg	Oral	man
	LDLo	393 mg/kg	Dermal	Monkey

Local effects

Skin irritation : Hazardous in case of skin contact (corrosive).

Eye irritation : Hazardous in case of eye contact (corrosive).

Chronic toxicity : Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation, leading to frequent attacks of bronchial infection.

GENERAL INFORMATION : Not available.

12. Ecological information

Ecotoxicity Data

Ingredient Name	Species	Period	Result
Formic acid	Daphnia magna (EC50)	48 hour(s)	151.2 mg/l
Ethanediol	Pimephales promelas (LC50)	96 hour(s)	8050 mg/l
	Pimephales promelas (LC50)	96 hour(s)	>10000 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	27540 mg/l
	Oncorhynchus mykiss (LC50)	96 hour(s)	41000 mg/l
	Pimephales promelas (LC50)	96 hour(s)	49000 mg/l
	Pimephales promelas (LC50)	96 hour(s)	53000 mg/l
Methanol	Daphnia magna (EC50)	48 hour(s)	>10000 mg/l
	Oncorhynchus mykiss (EC50)	48 hour(s)	13200 mg/l
	Lepomis macrochirus (EC50)	48 hour(s)	16000 mg/l
	Pimephales promelas (LC50)	96 hour(s)	>100 mg/l
	Daphnia magna (LC50)	96 hour(s)	>100 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	15400 mg/l

Ecological information

Ingredient Name	Persistence/degradability						Bioaccumulative potential		
	BOD_5	COD	ThOD	Aquatic Half-life	Photolysis	Biodegradability	$LogP_{ow}$	BCF	Potentia
Hardener 2550						Readily			

GENERAL INFORMATION : Not available.

13. Disposal considerations

Methods of disposal ; Waste of residues ; Contaminated packaging : Type: Hazardous chemical waste.
Location: not available
Classification: not available
Disposal.: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Storage: not available
Recycling: not available
.
Liquid residues and packages contaminated with those shall be treated as hazardous waste.
Instructions for emptying of different packages are available.
For Schützcontainers see Euroticket on the container.

Waste Classification : Not applicable.

European Waste Catalogue (EWC) : 080409*

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

14. Transport information

International transport regulations

Regulatory Information	UN number	Proper shipping name	Class	Packing group	Label	Additional Information
ADR/RID Class	UN1760	Corrosive liquid, N.O.S.(formic acid)	8	III		**Hazard identification number** **80**
ADN Class	UN1760	Corrosive liquid, N.O.S.(formic acid)	8	III		-
IMDG Class	UN1760	Corrosive liquid, N.O.S.(formic acid)	8	III		**Emergency Schedules (EmS)** **F-A, S-B**

IATA-DGR Class	UN1760	Corrosive liquid, N.O.S.(formic acid)	8	IIIIIIIII		-

15. Regulatory information

EU Regulations

Hazard symbol(s) :

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).

Contains : Formic acid 200-579-1

Product Use : Classification and labelling have been performed according to EU directives 67/548/EEC, 1999/45/EC, including amendments and the intended use.
- Industrial applications.

16. Other information

Full text of R phrases referred to in Sections 2 and 3 - Europe :
R11- Highly flammable.
R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
R39/23/24/25- Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R22- Harmful if swallowed.
R34- Causes burns.
R35- Causes severe burns.

Full text of classifications referred to in Sections 2 and 3 - Europe :
F - Highly flammable
T - Toxic
C - Corrosive
Xn - Harmful

HISTORY

Date of printing : **2004-01-09.**

Date of issue : **2004-01-09.**

Date of previous issue : **No Previous Validation.**

Version : **1**

Prepared by : **Anna de Verdier**

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.