

SAFETY DATA SHEET

Liquid hardener

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

Date issued	05.11.2012
Product name	Liquid hardener
Article no.	9008xx, 9012
Use of the substance/preparation	Hardener for polyester resin

Distributor

Company name	Färg-In AB
Postal address	Bodalsvägen 6
Postcode	S-681 43
City	Kristinehamn
Country	SWEDEN
Tel	+46 55010045
Fax	+46 55081001
E-mail	ulf.lundgren@fargin.se
Website	http://www.fargin.se
Enterprise no.	SE-556187-9387
Contact person	Ulf Lundgren
Emergency telephone	Poison control center: See National Telephone Number (112)

2. Hazards identification

Classification according to 67/548/EEC or 1999/45/EC	C, O; R22, R34, R7
Description of hazard	May cause fire. Harmful if swallowed. Causes burns. Vapours are heavier than air and may travel along the floor and in the bottom of containers.
Other hazards	The product can harm organisms in soil and water

3. Composition/information on ingredients

Component name	Identification	Classification	Contents
Metyletylketonperoxid	CAS no.: 1338-23-4 EC no.: 215-661-2	C,E; R2,R22,R34,R7	30 - 37
Dimetylfталат	CAS no.: 131-11-3 EC no.: 205-011-6		55 - 70 %
Butanone	CAS no.: 78-93-3 EC no.: 201-159-0 Index no.: 606-002-00-3	F; R11 Xi; R36 R66 R67 Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	1 - 5 %
Water	CAS no.: 7732-18-5 EC no.: 231-791-2		1 - 3 %
Column headings	CAS no. = Chemical Abstracts Service; EU (Einecs or Elincs number) = European inventory of Existing Commercial Chemical Substances; Ingredient		

	name = Name as specified in the substance list (substances that are not included in the substance list must be translated, if possible). Contents given in; %, %wt/wt, %vol/wt, %vol/vol, mg/m3, ppb, ppm, weight%, vol%
HH/HF/HE	T+ = Very toxic, T = Toxic, C = Corrosive, Xn = Harmful, Xi = Irritating, E = Explosive, O = Oxidizing, F+ = Extremely flammable, F = Very flammable, N = Environmental hazard
Component comments	Methyl ethyl ketone peroxide, solution in dimethyl phthalate

4. First-aid measures

General	Get medical attention immediately!
Inhalation	Move the exposed person to fresh air at once. If respiratory problems, artificial respiration/oxygen. Get medical attention.
Skin contact	Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Continue to rinse for at least 15 minutes and seek medical attention.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Obtain medical attention and bring these instructions.
Ingestion	DO NOT induce vomiting. Get medical attention immediately. Immediately give a couple of glasses of water or milk, provided the victim is fully conscious. Do not give victim anything to drink if he is unconscious. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Information for health personnel	Get medical attention immediately! Remove affected person from source of contamination. NOTE! Keep affected person away from heat, sparks and flames!

5. Fire fighting measures

Suitable extinguishing media	Fire can be extinguished using: Water spray, fog or mist. Foam, carbon dioxide or dry powder.
Improper extinguishing media	Haloner
Fire and explosion hazards	Warning: risk of reignition. Decomposition on heating. Supports the start of a fire. Solvent vapours may form explosive mixtures with air.
Fire fighting procedures	Use pressurised air mask if product is involved in a fire. Self contained breathing apparatus and full protective clothing must be worn in case of fire. Cool containers exposed to flames with water until well after the fire is out. Keep run-off water out of sewers and water sources. Dike for water control. Keep up-wind to avoid fumes. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.

6. Accidental release measures

Personal precautions	For personal protection, see section 8. Avoid inhalation of dust and vapours. Avoid contact with skin and eyes.
Environmental precautions	Do not discharge into drains, water courses or onto the ground.
Methods for cleaning	Keep combustibles away from spilled material. Remove sources of ignition. Beware of the explosion danger. Absorb with inert, damp, non-combustible material, then flush area with water. Absorb in vermiculite, dry sand or earth and place into containers. Dampen spillage with water. Do not close container tightly. Risk of excess pressure build-up.

7. Handling and storage

Handling	Do not mix in a tightly closed container. Avoid eating, drinking and smoking when using the product. Avoid spilling,
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	<p>skin and eye contact.</p> <p>Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level.</p> <p>Eliminate all sources of ignition.</p> <p>Oxidising material - Keep away from flammable and combustible materials.</p> <p>Flammable/combustible - Keep away from oxidisers, heat and flames.</p> <p>Risk of vapour concentration on the floor and in low-lying areas.</p> <p>Use explosion proof electric equipment. Use spark-proof tools and explosion-proof equipment.</p> <p>Wash hands before breaks and before smoking, eating or drinking. Private clothes and working clothes should be kept separately.</p>
Storage	<p>Oxidiser storage.</p> <p>Store in tightly closed original container in a dry and cool place.</p>

8. Exposure controls/personal protection

Exposure limit values

Component name	Identification	Value	Year
Metyetylketonperoxid	CAS no.: 1338-23-4	15 min.: 0,2 ppm	
	EC no.: 215-661-2	15 min.: 1,5 mg/3 ppm	
Dimetylfталат	CAS no.: 131-11-3	8 h.: 5 mg/m ³	
	EC no.: 205-011-6	15 min.: 10 mg/m ³	
Butanone	CAS no.: 78-93-3	8 h.: 200 ppm	2011
	EC no.: 201-159-0	8 h.: 600 mg/m ³	
	Index no.: 606-002-00-3	15 min.: 300 ppm	
		15 min.: 899 mg/m ³	

Exposure controls

Other Information about threshold limit values	<p>According to National regulations.</p> <p>Note: Methyl Ethyl Ketone Peroxide refers to the TGV value</p>
Occupational exposure controls	<p>Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.</p> <p>Provide explosion proof ventilation for high concentrations. All handling to take place in well-ventilated area.</p> <p>Provide eyewash station.</p>
Respiratory protection	<p>At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.</p> <p>Chemical respirator with specific cartridge and full facepiece providing protection against the compound of concern.</p>
Hand protection	Use protective gloves made of: Neoprene, nitrile, polyethylene or PVC.
Eye protection	Use approved safety goggles or face shield.
Skin protection (other than of the hands)	Wear appropriate clothing to prevent reasonably probable skin contact. Provide eyewash station and safety shower.
Other Information	Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke. Isolate contaminated clothing and wash before reuse.

9. Physical and chemical properties

Physical state	Clear liquid.
Odour	Slight odour.
Colour	Colourless.
Solubility description	Mixes with phthalate (20 C/68 F)
Solubility in water	Partially mixes with water (20 C/68 F)

Specific gravity	Value: 1180 kg/m ³ Method of testing: (20 C/ 68 F)
Comments, Melting point / melting range	No data recorded.
Comments, Boiling point / boiling range	Not relevant.
Comments, pH (as supplied)	Under 7
Comments, Flash point	Over SADT
Explosive properties	Properties: No
Flammability (solid, gas)	Decomposition products may be flammable
Comments, Partition coefficient: n-octanol / water	No data recorded.
Vapour pressure	Value: 0,10 kPa Method of testing: 84C/183F
Comments, Vapour density	No data recorded.
Viscosity	Value: 24 mPa.s Method of testing: (20 C/ 68 F)

Other physical and chemical properties

Physical and chemical properties	Volatile 5%. Peroxide content 30-37% Active oxygen content 8,8-9,0 % SADT 60 C
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10. Stability and reactivity

Conditions to avoid	Avoid exposure to high temperatures or direct sunlight.
Materials to avoid	Massive, solid metal. Powdered metal. Strong acids. Strong reducing agents. Organic peroxides/hydroperoxides. Inorganic peroxides.
Hazardous decomposition products	Toxic gases/vapours/fumes of: Syror och ketoner
Stability	Stable under normal temperature conditions. Polymerises generating heat.
Other Information	Emergency Plan must be available - contact Färg-In AB if questions.

11. Toxicological information

Toxicological Information:

LD50 oral	Value: 2737 mg/kg Test animal species: rat Comments: Experimental toxicological data is not available for the preparation. The above data applies to the component metyletylketon.
LD50 oral	Value: > 2400 mg/kg Test animal species: rat Comments: Experimental toxicological data is not available for the preparation. The above data applies to the component dimetylfталat.
LD50 oral	Value: 1017 mg/kg Test animal species: rat Comments: Experimental toxicological data is not available for the preparation. The above data applies to the component methyl ethyl ketone peroxide, 40% in dimethyl phthalate.
LD50 dermal	Value: 4000 mg/kg Test animal species: rat Comments: Experimental toxicological data is not available for the preparation. The above data applies to the component methyl ethyl ketone peroxide, 40% in dimethyl phthalate.
LD50 dermal	Value: 6480 mg/kg Test animal species: rabbit Comments: Experimental toxicological data is not available for the preparation.

	The above data applies to the component metyletylketon.
LD50 dermal	Value: > 10 000 mg/kg Test animal species: rabbit Comments: Experimental toxicological data is not available for the preparation. The above data applies to the component dimetylfталat.
LC50 inhalation	Value: 235000 mg/m ³ Test animal species: rat Comments: Experimental toxicological data is not available for the preparation. The above data applies to the component metyletylketon.
LC50 inhalation	Value: 17 mg/l Test animal species: rat Duration: 4 hours Comments: Experimental toxicological data is not available for the preparation. The above data applies to the component methyl ethyl ketone peroxide, 40% in dimethyl phthalate.
LC50 inhalation	Value: 9300 mg/m ³ Duration: 6,5 hours Comments: Experimental toxicological data is not available for the preparation. The above data applies to the component dimetylfталat.

Components' toxicological data

Other information regarding health hazards

General	Causes burns.
Inhalation	Harmful by inhalation. In high concentrations, vapours may irritate throat and respiratory system and cause coughing.
Skin contact	Causes burns. Defatting, drying and cracking of skin.
Eye contact	Dust or splashes from the mixture may cause permanent eye damage. Immediate first aid is necessary.
Ingestion	Corrosive. Even small amounts may cause serious damage.

12. Ecological information

Toxicological Information:

Acute aquatic, fish	Value: 44,2 mg/l Method of testing: 96h-LCSO Fish, species: Poecilia reticulata
Aquatic, comments	Experimental toxicological data is not available for the preparation. The above data applies to the component methyl ethyl ketone peroxide, 40% in dimethyl phthalate.

Components' toxicological data

Other ecological information

Ecotoxicity	The product may have adverse effects on organisms in soil and water.
Comments	Easily biodegradable ("Closed bottle test")
Persistence and degradability	The product is biodegradable, but it must not be discharged into drains without permission from the authorities.

13. Disposal considerations

Specify the appropriate methods of disposal	Dispose of waste and residues in accordance with local authority requirements. Make sure containers are empty before discarding (explosion risk).
Other Information	When handling waste, consideration should be made to the safety precautions applying to handling of the product.

14. Transport information

Product name (national)	ORGANIC PEROXIDE TYPE D, LIQUID
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Dangerous goods ADR	Status: Yes UN no.: 3105 Class: 5.2 Proper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID Other applicable information.: Tunnel code: D. Klassifikation Code : P1.
Dangerous goods RID	Status: Yes UN no.: 3105 Class: 5.2 Proper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID Other applicable information.: Tunnel code: D
Dangerous goods IMDG	Status: Yes UN no.: 3105 Class: 5.2 EmS: F-J, S-R Proper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID Other applicable information.: Packing Group II
Dangerous goods ICAO/IATA	Status: Yes UN no.: 3105 Class: 5.2 Proper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID Other applicable information.: Packing Group: II
Other applicable information.	Labeling: Organic peroxide, liquid. Label Symbol: "Corrosive" (C), "Oxidizing" (O)

15. Regulatory information

Hazard symbol



Corrosive



Oxidizing

Composition on the label	Metyletylketonperoxid: 30 - 37 , Dimetylfalal: 55 - 70 % , Butanone: 1 - 5 % , Water: 1 - 3 %
R phrases	R7 May cause fire. R22 Harmful if swallowed. R34 Causes burns.
S phrases	S3/7 Keep container tightly closed in a cool place. S14 Keep away from other chemicals. 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 lable where possible). S50 Do not mix with peroxide accelerators or with a reducing agent.
Other Label Information	Produkt Register Number, SWEDEN: 289384-0. Substance and / or product listed in Directive 96/82/EC.

16. Other information

List of relevant H-phrases (Section 2 and 3).	H225 Highly flammable liquid and vapour. H319 Causes Serious eye irritation. H336 May cause drowsiness or dizziness.
List of relevant R phrases (under headings 2 and 3).	R11 Highly flammable. R2 Risk of explosion by shock, friction, fire or other sources of ignition. R22 Harmful if swallowed. R34 Causes burns. R36 Irritating to eyes. R66 Repeated exposure may cause skin dryness or cracking.

	R67 Vapours may cause drowsiness and dizziness. R7 May cause fire.
Checking quality of information	This information is based on the information we knew at the time of preparation and they have been given in good faith and provided that the product is used under normal conditions and in accordance with the specified conditions of use. Any other use of the date indicated, eventually together with other products or processes, is at your own risk.
Responsible for safety data sheet	Färg-In AB