

Material Safety Data Sheet

Quick Identifier: Hardener FL-1484

RUCO Druckfarben
A.M. Ramp & Co. Gmbh
D-65814 Eppstein/Ts.

Hazard Ratings: Health 2
Flammability 3
Reactivity 1

Section I

Distributors: ITW Imtran. **Information:** Tel: +49-6198-3040 (RUCO)
Address: 39 Shelley Road Tel: 978-372-3443 (Imtran)
City/State/Zip: Haverhill, MA 01835 Fax: 978-372-9817

Person Responsible for Preparation: Dr. H. Nitschke **Date Prepared:** June 1996

Section II Hazardous Ingredients

Hazardous Component(s) (Chemical & Common name(s))	OSHA PEL (ppm)	ACGIH TLV (ppm)	Other Exposure Limits (ppm)	Range (weight-%)	CAS-No.
1-Methoxypropylacetate-2			50 (MAK)	10-20	108-65-6
Xylene	100 ppm		100 (MAK)	10-20	1330-20-7
Hexamethylendiisocyanate (HDI)	0.005 ppm		0.01 (MAK)	<0.5	822-06-0

The product contains less than 0.5% of HDI, which is being classified toxic according to EU regulations

Section III Physical & Chemical Characteristics

Boiling Point 139 °C (282 °F) **Specific Gravity (H2O = 1)** 1.15 **Vapor Pressure (mbar)** 9.0

Vapor Density Heavier than air (3-4) **VOC (ingredients with vapor pressure > 0.1 mbar)** 288 g/l

Solubility In Water insoluble **Reactivity In Water** yes, forming carbon dioxide

Appearance & Odor Viscous liquid with odor of organic solvents **Melting Point** Unknown

Section IV Fire & Explosion Data

Flash Point 25 °C (77 °F) **Method Used** Closed cup **Flammable Limits** In Air % by Volume **LEL (Lower)** 1.0 **UEL (Upper)** 10.8

Auto-Ignition Temperature 354 °C (669 °F) **Extinguishing Media** Chemical powder, foam, carbon dioxide

Special Fire Fighting Procedures Full protective equipment including self contained breathing apparatus should be used. Foam in large quantities. Cool endangered containers with water.

Unusual Fire & Explosion Hazards Do not inhale fumes or decomposition products. Toxic gases may be generated by burning and thermal decomposition.

Material Safety Data Sheet

continued

Hardener FL-1484

Section V Physical Hazards (Reactivity Data)

Stability	Instable () Stable (X)	Conditions To Avoid
Incompatibility (Materials to Avoid)	Material reacts with water, amines and alcohols	
Hazardous Decomposition Products	Hexamethylendiisocyanate (HDI) vapors and toxic decomposition products can be generated in a fire.	
Hazardous Polymerization	May Occur () Will Not Occur (X)	Conditions To Avoid

Section VI Health Hazards

Acute/Chronic	Isocyanate vapors or mist at concentrations above TLV can irritate the mucous membranes of the respiratory tract. Persons with hyperreactivity may have asthmatic attacks. High concentrations may lead to bronchitis, bronchial spasm and pulmonary edema. Chronic inhalation (overexposures) or single overexposure may cause isocyanate sensitisation. Xylene vapors may cause defects of liver and kidneys when overexposed.		
Signs & Symptoms of Exposure	Dizzy feeling, reddening of the skin, irritation of the eyes and respiratory tract.		
Medical Conditions Generally Aggravated By Exposure	Asthma, skin allergies		
Chemical Listed as Carcinogen or Potential Carcinogen	National Toxicology Program I.A.R.C. Monographs	(X)Yes ()No (X)Yes ()No	OSHA ()Yes (X)No
Emergency & First Aid Procedures	Routes of Entry:		
	Inhalation	Fresh air supply.	
	Eyes	Rinse immediately with plenty of water. See a physician for medical treatment.	
	Skin	Wash immediately with soap and water.	
	Ingestion	Call medical assistance.	

Section VII Special Precautions & Spill/Leak Procedures

Precautions To Be Taken In Handling & Storage	Use only with skin and eye protection. Keep away from ignition sources. Avoid contact with skin, eyes and mucous membranes. Isocyanate reacts with water to form CO ₂ with danger of rupture of the closed container. Use only with adequate ventilation. Keep containers tightly closed when not in use. Do not eat, drink or smoke during handling. Do not empty into drains.		
Steps To Be Taken In Case Material Is Released Or Spilled	Remove sources of ignition and ventilate polluted area. Take up remnants with liquid-binding material like sand, kieseguh, etc. All spills should be cleaned up immediately.		
Waste Disposal Methods (Consult Federal, State & Local Regulations)	Follow federal, state and local regulations to dispose of or incinerate waste material.		

Section VIII Special Protection Information/Control Measures

Respiratory Protection (Specific Type)	Use sufficient ventilation to keep vapor concentration of TDI's and solvents below TLV-value.			
Ventilation	Local Exhaust (yes)	Mechanical (general)	Special ---	Other ---
Protective Gloves	Chemical resistant gloves (rubber)			
Eye Protection	Chemical resistant and splash-proof safety goggles			
Other Protective Clothing or Equipment	none			
Work/Hygienic Practices	Do not eat, drink or smoke during handling. Remove contaminated clothing.			

The information contained herein is based on technical data believed to be reliable. However, since the conditions under which this information may be applied are beyond our control, we can assume no liability for results of its application.