

MATERIAL SAFETY DATA SHEET

Required under OSHA's Hazard Communication Standard 29 CFR 1910.1200

IDENTITY(As Used on Label and List)

NLG Hardener

Section I

Manufacturer's Name NITTA CORPORATION	Emergency Telephone Number 81-6-6563-1211 (NITTA CORPORATION, OSAKA, JAPAN)
Address(Number,Street,City,State,and ZIP Code) 4-26, SAKURAGAWA 4-CHOME, NANIWA-KU	Telephone Number for Information 81-6-6563-1211 (NITTA CORPORATION, OSAKA, JAPAN)
OSAKA, 556-0022, JAPAN	Date Prepared 15. OCT. 2009
	Signature of Preparer(optional)

Section II -Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity ; Common Name(s))	CAS No.	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Methane,Dichloro-:Methylene Chloride (M-C)	75-09-2	TWA 500ppm CL 1000ppm pk 2000ppm/5M/2H	TWA 50ppm•A2 (172mg/m3•A2)	MSHA TWA 500ppm (1750mg/m3) DOT None	60
Eye,Skin : Irritant , Toxic (M-C)				NIOSH-REL TWA 75ppm CL 500ppm/15M	
Isocyanate (NCO)	-	None	None	None	40

Section III - Physical/Chemical Characteristics

Boiling Point	41.6°C (M-C)	Specific Gravity (H2O = 1)	1.34 (M-C)
Vapor Pressure(mm Hg)	350mmHg at 20°C(M-C)	Melting Point	-96 °C(M-C)
Vapor Density(AIR = 1)	2.9 (M-C)	Evaporation Rate (Butyl Acetate = 1)	6.6 (M-C) Not Evaporate under normal condition(NCO)
Solubility in Water	very small (M-C) React with water forming CO2 (NCO)		

Appearance and Odor

Light yellow liquid, Esterlike odor

Section IV - Fire and Explosion Hazard Data

Flash Point(Method Used) Nonflammable (Ignition point 556°C) (M-C)	Flammable Limits Vol. In Oxygen (M-C)	LEL 12.0	UEL 19.0
Extinguishing Media Not applicable			
Special Fire Fighting Procedures Not applicable			

Unusual Fire and Explosion Hazards

None under normal conditions, when exposed to heat or flame, can react with oxidizing Materials, Combustion products may be toxic.

Section V – Reactivity Data			
Stability	Unstable		Condition to Avoid
	Stable	X	

Incompatibility (Materials to Avoid) water, alcohol, amine, acid, and alkali

Hazardous Decomposition or Byproducts
Combustion will produce CO2 (and probably CO), nitrogen oxides and hydrogen chloride.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section VI – Health Hazard Data

Route(s) of Entry:	Inhalation ? X	Skin ? X	Ingestion ? X
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Health Hazards (Acute and Chronic)
Eye ; Irritant Skin ; Irritant
Toxic ; LD50 (oral-rat) 2130mg (1.3ml)/kg (M-C)
LD50 (oral-dog) 3000mg/kg (M-C)

Carcinogenicity:	NTP ? Positive (M-C) (Mouse, Rat)	IARC Monographs? None	OSHA Regulated? None
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Signs and Symptoms of Exposure
Excessive exposure can result in irritating to eyes and skin.

Medical Conditions
 Generally Aggravated by Exposure
Slide narcosis, center, autonomic nerve disturbances.

Emergency and First Aid Procedures In case of contact, immediately flush eyes or skin with plenty of water at least 15minutes, Call a physician. If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Call a physician, if inhaled, remove to fresh air. Call a physician.

Section VII – Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
Remove all sources of ignition. Reduce vapors by ventilation. Take up with sand or absorbent materials. Sweep or shovel into approved disposal container. Flush area with water.

Waste Disposal Method
Incinerate only in officially approved incinerator
(Dispose in accordance with Federal, state and local regulations.)

Precautions to Be Taken in Handling and Storing
Store in cool, dry, dark and well-ventilated place. Avoid moisture.
Keep the bottle closed when not in use.

Other Precautions
Avoid contact with skin and eyes, breathing vapor or mist.

Section VIII – Control Measures

Respiratory Protection (Specify Type) Use adequate ventilation in working area

Ventilation	Local Exhaust	Acceptable	Special	Preferred
	Mechanical(General)	Preferred	Other	Preferred

Protective Gloves	Rubber gloves	Eye Protection	Safety goggles
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Other Protective Clothing or Equipment
Protective clothing

Work/Hygienic Practices
Not Known