MATERIAL SAFETY DATA SHEET

G3010; Curing Solution

1. Identification of the Product and Company

Product Code & Product Name: **G3010; Curing Solution**

Company: Akzo Nobel - Awlgrip North America
2270 Morris Avenue
Union, NJ 07083
Tel. 888 355 3090; Fax 908 686 1752
Health & Safety Information 847 623 4200

Emergency: Emergency telephone (US) CHEMTREC - 800 424 9300
Emergency telephone (Outside US) CHEMTREC - 703 527 3887
NOTE: CHEMTREC numbers to be used only in the event of emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

Product Use: Coating

2. Composition / Information on Ingredients

Chemical Name	CAS Number	WT %	ACGIH TLV TWA	ACGIH TLV STEL	OSHA PEL C	OSHA PEL TWA
1,6-HEXAMETHYLENE DIISOCYANATE BASED POLYISOCYANATE	28182-81-2	30-60	N.D.	N.D.	N.D.	N.D.
2-ETHOXYETHYL ACETATE	111-15-9	10-30	5 ppm	N.D.	N.D.	100 ppm
ETHYL ACETATE	141-78-6	10-30	400 ppm	N.D.	N.D.	400 ppm
TOLUENE	108-88-3	7-13	50 ppm	N.D.	300 ppm	200 ppm
XYLENE	1330-20-7	1-5	100 ppm	150 ppm	N.D.	100 ppm
ETHYLBENZENE	100-41-4	0.1-1.0	100 ppm	125 ppm	N.D.	100 ppm
HEXAMETHYLENE DIISOCYANATE	822-06-0	0.1-1.0	0.005 ppm	N.D.	N.D.	N.D.

3. Hazards Identification

*** Emergency Overview *** ------ clear liquid with solvent odor ------ ------ Class IB - Flammable Liquid ------

Potential Health Effects - Eye: Severe irritation with redness, pain, tearing and the possibility of significant injury after direct splash to eye. Vapors may cause eye irritation with redness and minor discomfort of the eye. Overexposure to isocyanate products can cause eye irritation.

Potential Health Effects - Skin: Moderately irritating with possible redness and discomfort. Prolonged contact may cause burns with redness and pain. May cause dry skin by dissolving skin oils. Contains a component which can be absorbed through the skin in harmful amounts. Overexposure to isocyanate products can cause skin irritation. It can also lead to skin sensitization. The reaction may include rash, itching, hives and swelling of the arms and legs.

Potential Health Effects - Inhalation: Moderately irritating to nose, throat or breathing passages. May cause unconsciousness by depressing the central nervous system after prolonged exposure to high concentrations. May increase risk for sudden death from irregular heart rhythms caused by stressful conditions that increase the levels of adrenalin in the blood. Overexposure to isocyanate products can cause nose, throat, and lung irritation. It can also lead to lung sensitization. Symptoms may include coughing, wheezing, tightness in the chest and shortness of breath. Sensitization may develop as a result of a large single overexposure or from repeated overexposure at lower levels. Respiratory (lung) sensitization can result in strong asthmatic response to future airborne exposures, even at levels well below the TLV.

Potential Health Effects -Ingestion: Moderately irritating to the mouth, stomach, and digestive system. No ingestion exposure expected with normal occupational use.

Potential Health Effects - Chronic Hazards: Chronic exposure can cause redness and irritation of the membrane that covers the eyeball and the inside of the eyelids (conjunctivitis). Frequent or prolonged skin contact may cause irritation or a rash (dermatitis). May cause dry nose and throat, an abnormal sensation of prickling or tingling of the skin, tremors, apprehension, impaired memory, weakness, nervous irritation, dizziness, nausea, loss of appetite, headache, increase liver size and damage to liver, abnormal increase in the number of bone marrow cells, low red blood cell count, and damage to the kidney. May cause damage to hearing or increase sensitivity to noise. Chronic inhalation may lower the count of certain types of blood cells. Chronic alcohol use can increase the potential for toxicity from the repeated exposure to the aromatic hydrocarbon in this product. May accumulate in the body with daily exposure. Chronic ingestion exposure would be unlikely due to the method of use or physical properties of this product.

The components listed in Section 2 may affect the following target organs: Blood. Central Nervous System. Eyes. Gastrointestinal Tract. Hematopoietic System. Kidneys. Liver. Reproductive System. Respiratory System. Skin.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

4. First Aid Measures

First Aid - Eye Contact: If this product contacts the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention.

First Aid - Skin Contact: If this product contacts the skin, promptly wash the contaminated skin with soap & water. If this product penetrates the clothing, promptly remove the clothing and wash the skin with soap & water. If irritation persists after washing, get medical attention. Launder clothing before reuse.

First Aid - Inhalation: If a person breathes large amounts of this product, move the exposed person to fresh air at once. If breathing is difficult, get medical attention.

First Aid - Ingestion: If this product has been swallowed, get medical attention immediately.

5. Fire-Fighting Measures

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Flash Point (F): 25

LOWER EXPLOSIVE LIMIT: 1.0

UPPER EXPLOSIVE LIMIT: 12.7

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: Flammable Liquid. Vapors are heavier than air and may travel to a source of ignition and flash back.

Special Fire Fighting Procedures: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.

6. Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Eliminate all ignition sources. Stop or control the spill, if this can be done without undue risk. Do not allow material to enter sewers or ground. Isolate discharged material for proper disposal. Wear appropriate personal protective equipment.

7. Handling and Storage

Handling: Grounding or bonding of containers is recommended before material transfer.

Storage: Storage areas should be dry and well-ventilated.

8. Exposure Controls / Personal Protection

Engineering Controls: It is recommended that work be done in an adequately ventilated area (i.e., ventilation sufficient to maintain concentrations below one half of the PEL and other relevant standards). Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.

Respiratory Protection: Appropriate respirators must be used, and a program that follows 29 CFR 1910.134 or other applicable regulatory requirements must be followed, when workplace hazards warrant the use of a respirator. NIOSH-approved or other appropriate respirators must be used when respiratory protection is necessary.

Eye Protection: Wear appropriate goggles, face shields or other PPE, which will be effective under the circumstances if the possibility of contact exists. A program meeting 29 CFR 1910.133 or other applicable regulatory requirements must be followed when PPE is necessary.

Other Protective Equipment: Use impermeable gloves and protective clothing as necessary to prevent skin contact.

Hygienic Practices: Do not eat, drink, chew tobacco or gum, or apply cosmetics while working with this product. Wash hands before performing any of these activities.

9. Physical and Chemical Properties

Theoretical Values

Boiling Range (F): 172 - 313

VOC (g/l)(less water & exempt): 591

Freeze Point (F):	N.D.	VOC (lb/gal)(less water & exempt):	4.9
Specific Gravity:	1.0	% Solids By Weight:	41
Appearance:	clear	% Solids By Volume:	36
Physical State:	liquid	Density (lb/gal):	8.3
Odor:	solvent		

10. Stability and Reactivity

Conditions To Avoid: Avoid contact with heat, open flame, sparks, or ignition sources. If moisture enters the container, carbon dioxide gas may form and cause the container lid to bulge or pop off.

Hazardous Polymerization: May occur.

Stability: Stable.

11. Toxicological Information

Chemical Name	LD50	LC50	IARC	NTP	OSHA
1,6-HEXAMETHYLENE DIISOCYANATE BASED POLYISOCYANATE	Oral Rat: >10000 mg/kg	N.D.			
2-ETHOXYETHYL ACETATE	Oral Rat: 2700 mg/kg	Inhalation Rat: 12100 mg/m3/8H			
ETHYL ACETATE	N.D.	Inhalation Rat: 200 gm/m3			
TOLUENE	N.D.	Inhalation Rat: 49 gm/m3/4H			
XYLENE	Oral Rat: 4300 mg/kg	Inhalation Rat: 5000 ppm/4H;			
ETHYLBENZENE	Oral Rat: 3500 mg/kg	N.D.	Group 2B		
HEXAMETHYLENE DIISOCYANATE	Oral Rat: 710 mg/kg	Inhalation Rat: 310-350 mg/m3/1-4H			

12. Ecological Information

Akzo Nobel has not conducted specific studies on the eco toxicity or environmental fate of this product. Commonly available data on certain ingredients indicate that acute or chronic effects could result from uncontrolled releases to soil, ground water, storm waters, or air. Appropriate measures should be taken to prevent uncontrolled releases. Prompt containment and clean up should be performed if releases do occur.

13. Disposal Considerations

Legal disposition of wastes is the responsibility of the owner/generator of the waste. Applicable federal, state, and/or local regulations must be followed during treatment, storage, or disposal of waste containing this product. Do not dispose of in an uncontrolled manner.

14. Transport Information

DOT Proper Shipping Name:	Paint	IATA Proper Shipping Name:	Paint	IMO Proper Shipping Name:	Paint
DOT Hazard Class:	3	IATA Hazard Class:	3	IMO Hazard Class:	3
DOT UN Number:	UN1263	IATA UN Number:	UN1263	IMO UN Number:	UN1263
DOT Packing Group:	II	IATA Packing Group:	II	IMO Packing Group:	II
Resp. Guide Page:	128	IATA Hazard Subclass:	N/A	Marine Pollutant:	No

Chemical Name	CAS Number	RQ (lbs)
ETHYL ACETATE	141-78-6	5000
TOLUENE	108-88-3	1000
XYLENE	1330-20-7	100
ETHYLBENZENE	100-41-4	1000
HEXAMETHYLENE DIISOCYANATE	822-06-0	100

15. Regulatory Information

U.S. FEDERAL REGULATIONS: As follows -

CERCLA - SARA Hazard Category: This product is considered, under applicable definitions, to meet the following categories: IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, REACTIVE HAZARD

SARA Section 313: This product contains the following substances subject to the reporting requirements of Section 313 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and 40 CFR 372:

Chemical Name	313 Category	CAS Number	WT %
2-ETHOXYETHYL ACETATE	Glycol Ethers	111-15-9	24.7
TOLUENE		108-88-3	10.1
XYLENE		1330-20-7	2.7
ETHYLBENZENE		100-41-4	0.7
HEXAMETHYLENE DIISOCYANATE	Diisocyanates	822-06-0	0.7

Clean Air Act: This product contains the following chemical substances listed as Hazardous Air Pollutants (HAPs) under the Clean Air Act of 1990:

Chemical Name	HAP Category	CAS Number	WT %
2-ETHOXYETHYL ACETATE	Glycol Ethers	111-15-9	24.7
TOLUENE		108-88-3	10.1
XYLENE		1330-20-7	2.7
ETHYLBENZENE		100-41-4	0.7
HEXAMETHYLENE DIISOCYANATE		822-06-0	0.7

Toxic Substances Control Act: All the components of this product comply with applicable requirements of the US EPA TSCA inventory.
Does not contain chemicals known to be subject to TSCA 12b.

U.S. STATE REGULATIONS: As follows -

California Proposition 65: WARNING: This product contains chemicals known to the State of CA to cause cancer and birth defects or other reproductive harm.

INTERNATIONAL REGULATIONS: As follows -

Canadian WHMIS Class: B2, D2

Canadian DSL - All the components of this product are listed or are exempt from listing.
European EINECS - All the components of this product are listed or are exempt from listing.
Korean Inventory - All the components of this product are listed or are exempt from listing.
Australian AICS - All the components of this product are listed or are exempt from listing.

16. Other Information

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National Paint & Coatings Association (NPCA) Hazardous Material Identification System (HMIS):

Health: 2 Flammability: 3 Reactivity: 1 Personal Protection: See Section 8

Legend: N.A. - Not Applicable, N.D. - Not Determined

This MSDS relates only to the specific material identified in Section 2. In compiling this MSDS, Akzo Nobel has relied in good faith on information provided to Akzo Nobel by suppliers of the components of this material, and, in some cases, provided by independent data resources. Akzo Nobel has not independently verified such information, and, in addition, users should be aware that all materials may present unknown hazards. Use of this material in combination with other materials and/or in specific processes may render information set forth in the MSDS inaccurate or otherwise invalid. NO WARRANTY, EXPRESS OR IMPLIED, IS MADE REGARDING THE INFORMATION FURNISHED ON THIS MSDS.

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