Material Safety Data Sheet

AKZO NOBEL

MSDS# 15-04707

Section 1. Chemical Product and Company Identification

Product name **KLING® BETA 2550(HM)-2**

Material Uses : Asphalt Additive.

Supplier/ Manufacturer

AKZO NOBEL SURFACE CHEMISTRY LLC
525 West Van Buren
Chicago, IL 60607-3823
www.surfactants.akzonobel.com

In Case of Emergency

CHEMTREC:	800-424-9300
CANUTEC:	613-996-6666
Medical/Handling:	914-693-6946
Product/Technical:	800-906-9977

Do not ship to Canada.

Section 2. Hazards Identification

Physical State Liquid.

Color Brown. (Dark.)

Odor Ammoniacal.

Emergency Overview

DANGER!
CAUSES SEVERE EYE AND SKIN BURNS.
HARMFUL IF INHALED OR ABSORBED THROUGH SKIN.
MAY BE HARMFUL IF SWALLOWED.
MAY CAUSE ALLERGIC SKIN REACTION.
HARMFUL TO AQUATIC ORGANISMS.
MAY BE HARMFUL TO ENVIRONMENT IF RELEASED IN LARGE AMOUNTS.

Do not get in eyes, on skin or on clothing. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapor or mist. Avoid prolonged or repeated contact with skin. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid contact of spilled material and runoff with soil and surface waterways.

Possible Carcinogenic Effects None of the components present in this material at concentrations equal to or greater than 0.1% are known carcinogens.

Routes of Entry Absorbed through skin. Dermal contact. Eye contact.

See Toxicological Information (section 11)

Section 3. Composition/ Information on Ingredients

Name	CAS #	% by Weight
proprietary polyamine	proprietary	70
proprietary polyamines	proprietary	14
Proprietary glycol ether blend	Proprietary	13
Proprietary Glycol. 1	proprietary	<5.6
Proprietary Glycol. 2	proprietary	<0.3

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Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Cold water may be used. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 30 minutes while removing contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get 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.
Medical Conditions Aggravated by Overexposure	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. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 5. Fire Fighting Measures

Flammability of the Product	May be combustible at high temperature.
Auto-ignition Temperature	The lowest known value is >250°C (482°F) (proprietary polyamines).
Flash Points	Closed cup: >200°C (392°F). (Pensky-Martens.)
Products of Combustion	These products are carbon oxides (CO, CO_2), nitrogen oxides (NO, NO_2...).
Fire Hazards in Presence of Various Substances	Flammable in presence of open flames, sparks and static discharge.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Protective Clothing (Fire)	Be sure to use an approved/certified respirator or equivalent.
Special Remarks on Explosion Hazards	**proprietary polyamine**: Forms explosive mixtures in air.

Section 6. Accidental Release Measures

Small Spill and Leak	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: **Use suitable protective equipment (Section 8).**
Large Spill and Leak	Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. **Use suitable protective equipment (Section 8).**

Section 7. Handling and Storage

Handling	Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapors or spray mists. Avoid prolonged or repeated contact with skin. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid contact of spilled material and runoff with soil and surface waterways.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

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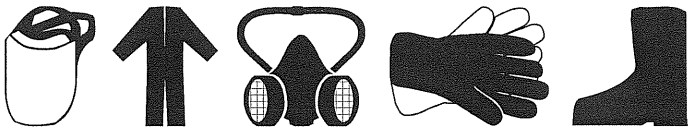
Section 8. Exposure Controls/ Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Eyes	Face shield.
Body	Full suit.
Respiratory	Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Hands	Gloves.
Feet	Boots.

Protective Clothing (Pictograms)



Personal Protection in Case of a Large Spill Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Ingredient Name	Exposure Limits United States
proprietary polyamine	Not available.
proprietary polyamines	Not available.
Proprietary glycol ether blend	Not available.
Proprietary Glycol. 1	Not available.
Proprietary Glycol. 2	Not available.

Section 9. Physical and Chemical Properties

Physical State	Liquid.
Color	Brown. (Dark.)
Odor	Ammoniacal.
pH	Basic.
Boiling/Condensation Point	>232°C (449.6°F)
Melting/Freezing Point	6°C (42.8°F)
Density	Not determined.
Vapor Density	>1 (Air = 1)
Evaporation Rate	<1 compared to Butyl acetate.
Solubility	Partially soluble in cold water.
Dispersion Properties	See solubility in water.
Physical Chemical Comments	Viscosity = 900 mPas (cP) 10°C; 520 mPas (cP) 20°C; 270 mPas (cP) 30°C; 130 mPas (cP) 40°C.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Incompatibility with Various Substances	Reactive with OXIDIZING AGENTS, acids.
Hazardous Polymerization	Will not occur.

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Section 11. Toxicological Information

Toxicity to Animals

Ingredient Name or Product name	Test	Result	Route	Species
proprietary polyamine	LD50	1500 mg/kg	Oral	Rat
	LD50	>200 mg/kg	Dermal	Rabbit
	LC50	>1 mg/l (4 hour(s))	Inhalation	Rat
proprietary polyamines	LD50	2500 mg/kg	Oral	Rat based on data for: (similar material)
Proprietary Glycol. 2	LD50	2037 mg/kg	Oral	Rat

Chronic Effects on Humans **MUTAGENIC EFFECTS**: Non-mutagenic for bacteria and/or yeast. [proprietary polyamine].

Acute Effects Skin Severely corrosive to the skin. Toxic in contact with skin. May cause sensitization by skin contact.

Acute Effects Eyes Severely corrosive to the eyes.

Special Remarks on Other Toxic Effects on Humans :

Section 12. Ecological Information

Ecotoxicity

Ingredient Name or Product name	Species	Period	Result
proprietary polyamines	Fish (LC50)	96 hour(s)	>100 mg/l
	Daphnia (EC50)	48 hour(s)	10 mg/l
	Algae (EC50)	72 hour(s)	400 mg/l

Products of Degradation These products are carbon oxides (CO, CO_2) and water, nitrogen oxides (NO, NO_2...).

Section 13. Disposal Considerations

Waste Information Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Consult your local or regional authorities.

Section 14. Transport Information

Regulatory Information	UN number	Proper shipping name	Class	Packing Group	Label	Additional information
DOT Classification	UN2735	Polyamines, liquid, corrosive, n.o.s. (Aliphatic polyamines)	8 -	III		-
TDG Classification	UN2735	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Aliphatic polyamines)	8 -	III		Special Provisions Classified in Accordance with UN Recomendations
IMDG Class	UN2735	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Aliphatic polyamines)	8 -	III		-

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IATA-DGR Class	UN2735	Polyamines, liquid, corrosive, n.o.s. (Aliphatic polyamines)	8 -	III		-

Section 15. Regulatory Information

HCS Classification

Toxic
Corrosive Material

U.S. Federal Regulations

TSCA: All intentionally present components are listed on the TSCA inventory.

DSL: One or more of the intentionally present components in this material is not on the DSL.

TSCA 5(a)2 final significant rules: No products were found.

CERCLA: Hazardous substances.: Proprietary Glycol. 1: No RQ is being assigned to the generic or broad class.; Proprietary Glycol. 2: 1000 lbs. (453.6 kg);

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: KLING® BETA 2550(HM)-2
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: KLING® BETA 2550(HM)-2: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

SARA 313 Form R Reporting Requirements
Proprietary glycol blend component <5.6

SARA 313 Supplier Notification
Proprietary glycol blend component <5.6

State Regulations

Pennsylvania RTK: Proprietary Glycol. 1: (environmental hazard, generic environmental hazard); Proprietary Glycol. 2: (environmental hazard, generic environmental hazard)
Massachusetts RTK: Proprietary Glycol. 2
New Jersey: Proprietary Glycol. 1; Proprietary Glycol. 2

California prop. 65: No products were found.

WHMIS (Canada)

Class D-1B: Material causing immediate and serious toxic effects (TOXIC).
Class E: Corrosive liquid.

CEPA DSL: proprietary polyamine; Proprietary glycol blend component 1; Proprietary glycol blend component 2; Proprietary glycol blend component 3; Proprietary Glycol. 1; Proprietary Glycol. 2

CEPA NDSL: proprietary polyamines

European Union

Component	EC Number	EC Status	EC Annex
proprietary polyamine	proprietary	proprietary	proprietary
proprietary polyamines	proprietary	proprietary	proprietary
Proprietary glycol ether blend	Proprietary		
Proprietary Glycol. 1	proprietary	proprietary	proprietary
Proprietary Glycol. 2	proprietary	proprietary	proprietary

Other International Lists

Australia (NICNAS): proprietary polyamine; proprietary polyamines; Proprietary glycol blend component 1; Proprietary glycol blend component 2; Proprietary glycol blend component 3; Proprietary Glycol. 1; Proprietary Glycol. 2

China: proprietary polyamine; proprietary polyamines; Proprietary glycol blend component 1; Proprietary glycol blend component 2; Proprietary glycol blend component 3; Proprietary Glycol. 1; Proprietary Glycol. 2

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Germany water class: Proprietary Glycol. 2

Japan (MITI): Proprietary glycol blend component 1; Proprietary glycol blend component 2; Proprietary glycol blend component 3; Proprietary Glycol. 1; Proprietary Glycol. 2

Korea (TCCL): proprietary polyamine; Proprietary glycol blend component 1; Proprietary glycol blend component 2; Proprietary glycol blend component 3; Proprietary Glycol. 1; Proprietary Glycol. 2

Philippines (RA6969): Proprietary glycol blend component 1; Proprietary glycol blend component 2; Proprietary glycol blend component 3; Proprietary Glycol. 1; Proprietary Glycol. 2

Section 16. Other Information

Hazardous Material Information System (U.S.A.)

Health	3
Fire Hazard	1
Reactivity	0
Personal Protection	

National Fire Protection Association (U.S.A.)

Other Information Kling® Beta is a registered trademark of Akzo Nobel or affiliated companies and is registered in one or more countries including the United States.

Validation Date	**2/5/2008.**	**Validated by**	**Product Safety Specialist**
Previous Validation Date	8/22/2007.	**Print Date**	4/2/2008.
		Phone Number	**312-544-7038**

Notice to Reader

The information in the material safety data sheet should be provided to all who will use, handle, store, transport or otherwise be exposed to this product. All information concerning this product and/or suggestions for handling and use contained herein are offered in good faith and are believed to be reliable as of the date of publication. However, no warranty is made as to the accuracy of and/or sufficiency of such information and/or suggestions or as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. Nothing contained herein shall be construed as granting or extending any license under any patent. Buyer must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes, including mixing with other products. The information contained herein supersedes all previously issued bulletins on the subject matter covered. If the date on this document is more than three years old, call to make certain that this sheet is current.