



Material Safety Data Sheet

Version : 2

Date of issue : 3/6/2005.

Akzo Nobel Coatings Inc. encourages and expects you to read and understand this entire MSDS, as there is important information throughout the document. Further, Akzo Nobel Coatings Inc. expects you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

To promote safe handling, each customer or recipient should: 1) Notify its employees, agents, contractors, and others whom it knows or believes will use this material of the information contained in this MSDS and any other information regarding hazards and safety; 2) Furnish this same information to each of its customers for the product; 3) Request its customers to notify their employees, customers, and other users of the product of this information; and 4) Notify its employees, agents, contractors, and others that the precautions identified for this product and any other products with which mixtures may be created are transferable and cumulative to the mixture.

Section 1. Chemical product and company identification

Manufacturer

Akzo Nobel Coatings Inc.
5555 Spalding Drive
Norcross, GA 30092
USA

Canadian Supplier

Akzo Nobel Coatings Ltd.
110 Woodbine Downs Blvd.
Unit #4 Etobicoke, Ontario
Canada M9W 5S6

IN CASE OF EMERGENCY (HEALTH OR SPILLS):

CHEMTREC (800) 424-9300 (Inside the US)

CHEMTREC International (703) 527-3887 (Outside the US, collect calls accepted)

Product code : 386578

Product name : Grip-Flex T2003 Reducer

MSDS# : 386578SIG700262310EN22118

Section 2. Hazardous Ingredients

Name	CAS #	% by weight	Vapor pressure	Exposure Limits (ACGIH-TLV/OSHA-PEL)
ethyl alcohol	64-17-5	45 - 55	5.5 kPa (41.4 mm Hg) (at 20°C)	ACGIH TLV (United States). TWA: 1000 ppm 8 hour(s). OSHA PEL (United States). TWA: 1000 ppm 8 hour(s).
butanol	71-36-3	10 - 25	0.7 kPa (5.5 mm Hg) (at 20°C)	ACGIH TLV (United States). Skin CEIL: 50 ppm OSHA PEL (United States). Skin TWA: 50 ppm 8 hour(s).
toluene	108-88-3	10 - 25	2.9 kPa (22 mm Hg) (at 20°C)	ACGIH TLV (United States). Skin TWA: 50 ppm 8 hour(s). STEL: 150 ppm 15 minute(s). OSHA PEL (United States). Skin TWA: 100 ppm 8 hour(s). STEL: 150 ppm 15 minute(s).
2-butoxyethanol	111-76-2	5 - 10	0.09 kPa (0.7 mm Hg) (at 20°C)	ACGIH TLV (United States). Skin TWA: 20 ppm 8 hour(s). OSHA PEL (United States). Skin TWA: 50 ppm 8 hour(s).
xylylene, mixed isomers	1330-20-7	1 - 5	0.7 kPa (5.1 mm Hg) (at 20°C)	ACGIH TLV (United States). TWA: 100 ppm 8 hour(s). STEL: 150 ppm 15 minute(s). OSHA PEL (United States). TWA: 100 ppm 8 hour(s).
methyl alcohol	67-56-1	1 - 5	13 kPa (97.7 mm Hg) (at 20°C)	ACGIH TLV (United States). TWA: 200 ppm 8 hour(s). STEL: 250 ppm 15 minute(s). OSHA PEL (United States). TWA: 200 ppm 8 hour(s).

ethyl benzene

100-41-4

0 - 1

0.9 kPa (7.1
mm Hg) (at
20°C)

STEL: 250 ppm 15 minute(s).
ACGIH TLV (United States).
 TWA: 100 ppm 8 hour(s).
 STEL: 125 ppm 15 minute(s).
OSHA PEL (United States).
 TWA: 100 ppm 8 hour(s).
 STEL: 125 ppm 15 minute(s).

Section 3. Hazards identification

Emergency overview : WARNING!

Potential acute health effects

Eyes : Irritating to eyes.

Other effects of eye contact may include : burning sensation, redness, swelling, tearing,

Skin : Harmful by skin absorption. Severely irritating to the skin.

Other effects of skin contact may include: defatting, dehydration, dermatitis, discoloration,
 Effects due to absorption through skin may include: blood effects, dizziness, headache, nausea,
 weakness,

Inhalation : Toxic by inhalation. Irritating to respiratory system.

Other effects of inhalation may include: blindness, blood effects, blurred vision, CNS effects, confusion,
 cramps, cyanosis, dizziness, drowsiness, excitation, fatigue, headache, incoordination, kidney damage,
 liver damage, nausea, shortness of breath, weakness,

Ingestion : Very toxic if swallowed.

Other effects of ingestion may include : abdominal pain, blindness, blood effects, CNS effects, diarrhea,
 dizziness, drowsiness, fatigue, gastric disturbances, gastroenteritis, headache, incoordination, irritation,
 kidney damage, liver damage, nausea, vomiting, weakness,

Potential chronic health effects : CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC [ethyl benzene].
 MUTAGENIC EFFECTS: None by OSHA standard.
 TERATOGENIC EFFECTS: Classified POSSIBLE for human [toluene]. Classified POSSIBLE for human
 [methyl alcohol].

Contains material which may cause damage to the following organs: blood, kidneys, lungs, the
 reproductive system, liver, heart, brain, eyes, central nervous system (CNS), ears.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Effects of Overexposure: HARMFUL IF ABSORBED THROUGH SKIN.
 CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
 FLAMMABLE LIQUID AND VAPOR.
 VAPOR MAY CAUSE FLASH FIRE.
 MAY BE HARMFUL IF INHALED OR SWALLOWED.
 POSSIBLE CANCER HAZARD
 CONTAINS MATERIAL WHICH MAY CAUSE CANCER BASED ON ANIMAL DATA.
 CONTAINS MATERIAL WHICH MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA.
 CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: BLOOD,
 KIDNEYS, LUNGS, REPRODUCTIVE SYSTEM, LIVER, HEART, BRAIN, EYES, CENTRAL NERVOUS
 SYSTEM, EARS.

Risk of cancer depends on duration and level of exposure. Keep away from heat, sparks and flame.
 Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapor or mist. Keep
 container closed. Use only with adequate ventilation. Avoid exposure during pregnancy. Wash
 thoroughly after handling.

Medical conditions aggravated by overexposure : pulmonary conditions, skin disorders, eye disorders, liver conditions, kidney conditions, respiratory
 conditions, cardiovascular diseases,

NOTICE: Reports have associated repeated and prolonged OVEREXPOSURE to solvents with permanent brain and nervous system
 damage.

NOTICE: Intentional misuse by deliberately concentrating and inhaling the contents of this package may be harmful or fatal.

See toxicological Information (section 11)

Section 4. First aid measures

- Eye Contact** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
- Skin Contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. 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.
- Medical conditions aggravated by overexposure** : pulmonary conditions, skin disorders, eye disorders, liver conditions, kidney conditions, respiratory conditions, cardiovascular diseases,

Section 5. Fire fighting measures

- Flammability of the product** : Flammable.
- Auto-ignition Temperature** : The lowest known value is 244°C (471.2°F) (2-butoxyethanol).
- Flash Points** : Closed cup: 7°C (45°F).
- Flammable limits** : Not available.
- Products of combustion** : These products are carbon oxides (CO, CO₂).
- Fire Hazards in Presence of Various Substances/Conditions** : Highly flammable in presence of open flames, sparks and static discharge. Flammable in presence of oxidizing materials.
Vapors are heavier than air and may spread along floors. Vapor may travel considerable distance to source of ignition and flash back.
- Explosion Hazards in Presence of Various Substances/Conditions** : Not available.
- Fire fighting media and instructions** : SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
- Protective clothing (fire)** : Be sure to use an approved/certified respirator or equivalent.

Section 6. Accidental release measures

- Spill and Leak** : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Do not touch or walk through spilled material.
If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion proof means to transfer material to a sealed, appropriate container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.
Dispose of according to Section 13. If necessary, report spill to applicable government agency.

Section 7. Handling and storage

- Handling** : Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed when not in use. Use only with adequate ventilation. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling.
Use ventilation to remove decomposition products formed during welding or flame cutting of surfaces coated with this product.
- Storage** : Store in an approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).
- Other Precautions** : All precautions must be observed. Empty container may retain product residues.

Section 8. Exposure Controls, Personal Protection

Selection of personal protective equipment (PPE) is to be established by performing a PPE hazard assessment. In the U.S.A, OSHA requires completion of a certified PPE hazard assessment as described in 29 CFR 1910.132.

- 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 : Safety glasses.

Body : Synthetic apron.

Respiratory : Wear appropriate respirator when ventilation is inadequate.

Hands : Impervious gloves.

Barrier creams are not a replacement for full physical protection

Feet : Wear appropriate protection.

Protective clothing (pictograms)



HYGIENIC PRACTICES: Good personal hygiene practices are required at all times when handling chemicals. These practices include, but are not limited to, washing when safety equipment is removed, at the end of each shift or when going on breaks and especially if contamination occurs.

Section 9. Physical and chemical properties

- Physical State and Appearance** : Liquid.
- Boiling/condensation point** : The lowest known value is 63.8889°C (147°F) (methyl alcohol).
- Flash Points** : Closed cup: 7°C (45°F).
- Specific Gravity** : 0.83 (Water = 1)
- Vapor pressure** : The highest known value is 13 kPa (97.7 mm Hg) (at 20°C) (methyl alcohol).
- Vapor density** : Heavier than air
- Volatile Content** : 100% (w/w).
- Evaporation rate** : The highest known value is 3.4 (ethyl alcohol) compared to BUTYL ACETATE
- VOC** : 831 (g/l).

Section 10. Stability and reactivity

- Stability and Reactivity** : The product is stable.
- Conditions of instability** : heat, open flame, sparks, moisture,
- Incompatibility with various substances** : Reactive with oxidizing agents, metals, acids, alkalis.
- Hazardous Reaction Products** : Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
- Hazardous polymerization** : Will not undergo hazardous polymerization.

Section 11. Toxicological information

Toxicity data

<u>Ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
ethyl alcohol	LD50	7060 mg/kg	Oral	Rat
	LD50	20000 mg/kg	Dermal	Rabbit
	LC50	20000 ppm (10 hour(s))	Inhalation	Rat
butanol	LD50	790 mg/kg	Oral	Rat
	LD50	3400 mg/kg	Dermal	Rabbit
	LC50	8000 ppm (4 hour(s))	Inhalation	Rat
toluene	LD50	636 mg/kg	Oral	Rat
	LD50	12267 mg/kg	Dermal	Rabbit
	LC50	4900 mg/m ³ (4 hour(s))	Inhalation	Rat
2-butoxyethanol	LD50	470 mg/kg	Oral	Rat
	LD50	220 mg/kg	Dermal	Rabbit
	LC50	450 ppm (4 hour(s))	Inhalation	Rat
xylene, mixed isomers	LD50	4300 mg/kg	Oral	Rat
	LD50	>1700 mg/kg	Dermal	Rabbit
	LC50	5000 ppm (4 hour(s))	Inhalation	Rat
methyl alcohol	LD50	5628 mg/kg	Oral	Rat
	LD50	15800 mg/kg	Dermal	Rabbit
	LC50	64000 ppm (4 hour(s))	Inhalation	Rat
ethyl benzene	LD50	3500 mg/kg	Oral	Rat
	LD50	15486 mg/kg	Dermal	Rabbit

Section 12. Ecological information




- Products of degradation** : These products are carbon oxides (CO, CO₂) and water.
- Toxicity of the products of biodegradation** : The products of degradation are less toxic than the product itself.
- Ecotoxicological data for one or more components are known and will be made available on request.**

Section 13. Disposal considerations

- Waste information** : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Empty containers should be recycled or disposed through an approved waste management facility.

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		Consult your shipping specialist or transport agency for appropriate assignment of the DOT information.				
TDG Classification	UN1263	PAINT RELATED MATERIAL	3	II		
IMDG Class	UN1263	PAINT RELATED MATERIAL	3	II		Not available.
IATA-DGR Class	UN1263	PAINT RELATED MATERIAL	3	II		Not available.

Marine pollutant : No.

Section 15. Regulatory information

U.S. Federal regulations : All components in this product have been verified as being on the TSCA Inventory.

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

(HAPS) : Clean air act (CAA) 112 regulated toxic substances: methyl alcohol; methyl isobutyl ketone; toluene; ethyl benzene; xylene, mixed isomers; 2-butoxyethanol

SARA 313 TRT - Reporting requirements	butanol	71-36-3	18.80
	toluene	108-88-3	15.98
	2-butoxyethanol	111-76-2	9.40
	xylene, mixed isomers	1330-20-7	3.15
	methyl alcohol	67-56-1	1.93
	ethyl benzene	100-41-4	0.74

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

International regulations

International lists : This product contains one or more components that are NOT listed on the CEPA DSL inventory.

Section 16. Other information

HMIS III ®
Hazardous Material Information System (U.S.A.)®

Health	*	2
Fire hazard		4
Physical hazards		0
Personal protection		

(HMIS® III is a registered trademark of the National Paint and Coatings Association)

WHMIS (Canada)



Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
 Class D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
 Class D-2A: Material causing other toxic effects (VERY TOXIC).
 Class D-2B: Material causing other toxic effects (TOXIC).

Notice to reader

The absence of a positive finding indicates that we believe, to the best of our knowledge, that the negative is true.

Do not handle until the manufacturer's safety precautions have been read and understood. Regulations require that all employees be trained on Material Safety Data Sheets for all products with which they come in contact.

Disclaimer: While Akzo Nobel Coatings believes that the data contained herein are accurate and derived from qualified sources, the data are not to be taken as a warranty or representation for which Akzo Nobel Coatings assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, Provincial and local laws and regulations.