Material Safety Data Sheet

High Solids Epoxy Primer EC-265

Code: EC-265

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.
1 East Water Street
Waukegan, IL 60085
USA
+1(847) 625-4200

IN CASE OF EMERGENCY (HEALTH OR SPILLS):
CHEMTREC 1 (800) 424-9300 (Inside the US)
CHEMTREC International +1 (703) 527-3887 (Outside the US, collect calls accepted)

Product code : EC-265

Product name : High Solids Epoxy Primer EC-265

Product use : Coatings or Coatings Component

MSDS # : 0020853200

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For the most recent update to this Material Safety Data Sheet, visit our website at http://www.akzonobel.com/aerospace
For additional information call (847) 625-4200.

Section 2. Hazards identification

Emergency overview : DANGER!

FLAMMABLE LIQUID AND VAPOR. MAY BE FATAL IF SWALLOWED. CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS. HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE ALLERGIC RESPIRATORY REACTION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. POSSIBLE BIRTH DEFECT HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE BIRTH DEFECTS, BASED ON ANIMAL DATA.

Potential acute health effects

Inhalation : Corrosive to the respiratory system. May cause sensitization by inhalation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : Very toxic if swallowed. May cause burns to mouth, throat and stomach.

Section 2. Hazards identification

Skin : Corrosive to the skin. Causes burns. Toxic in contact with skin.

Eyes : Corrosive to eyes. Causes burns.

Potential chronic health effects

Chronic effects : Contains material that may cause target organ damage, based on animal data. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Contains material which may cause birth defects, based on animal data.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Target organs : Contains material which may cause damage to the following organs: kidneys, the reproductive system, liver, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
wheezing and breathing difficulties
asthma
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Eyes : Adverse symptoms may include the following:
pain
watering
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Medical conditions aggravated by over-exposure : Pre-existing respiratory disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

Section 3. Composition/information on ingredients

Name	CAS number	% by weight
toluene	108-88-3	25 - 40
4-tert-butylphenol	98-54-4	10 - 25
benzyl alcohol	100-51-6	10 - 25
Silane	-	10 - 25
m-phenylenebis(methylamine)	1477-55-0	5 - 10
trimethylhexane-1,6-diamine	25620-58-0	5 - 10
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	5 - 10
nonylphenol	25154-52-3	1 - 5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. 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. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Section 5. Fire-fighting measures

Flammability of the product : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards : Not available.

Special remarks on explosion hazards : Not available.

Section 6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Product name	Exposure limits
toluene	**NIOSH REL (United States, 6/2009).** STEL: 560 mg/m³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m³ 10 hours. TWA: 100 ppm 10 hours. **OSHA PEL Z2 (United States, 11/2006).** AMP: 500 ppm 10 minutes. CEIL: 300 ppm TWA: 200 ppm 8 hours. **ACGIH TLV (United States, 3/2012).** TWA: 20 ppm 8 hours.
benzyl alcohol	**AIHA WEEL (United States, 10/2011).** TWA: 10 ppm 8 hours.
m-phenylenebis(methylamine)	**ACGIH TLV (United States, 3/2012). Absorbed through skin.** C: 0.1 mg/m³ **NIOSH REL (United States, 6/2009). Absorbed through skin.** CEIL: 0.1 mg/m³

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flatting should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 8. Exposure controls/personal protection

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 9. Physical and chemical properties

Physical state	:	Liquid.
Flash point	:	Closed cup: 4.4°C (39.9°F)
Auto-ignition temperature	:	Not available.
upper flammability limit	:	Not determined.
Lower flammability limit	:	Not determined.
Appearance	:	Yellow.
Odor	:	Pungent.
Odor threshold	:	Not available.
Specific gravity	:	0.952
pH	:	Not available.
Boiling/condensation point	:	111°C (231.8°F)
Melting/freezing point	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Heavier than air
Density	:	7.94 lbs/gal 0.952 g/cm³
Evaporation rate	:	Not determined.
Coefficient of water/oil distribution	:	Not determined.
Weight Volatiles	:	42.14% (w/w)
Volume Volatiles	:	44.22 %(v/v)
Weight Solids	:	57.86 %(w/w)
Volume Solids	:	55.78 %(v/v)
VOC, minus water and exempt solvents	:	2.7 lbs/gal (324 g/l)

Section 10. Stability and reactivity

Stability : The product is stable.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Materials to avoid : Reactive or incompatible with the following materials: oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Conditions of reactivity : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidizing materials.

Section 11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose
toluene	LD50 Dermal	Rabbit	14100 uL/kg
	LD50 Intraperitoneal	Rat	1332 mg/kg
	LD50 Intravenous	Rat	1960 mg/kg
	LD50 Oral	Rat	636 mg/kg
	LD50 Unreported	Rat	6900 mg/kg
	LDLo Intraperitoneal	Rat	2.5 mL/kg
	TDLo Dermal	Rat	26.4 mg/kg
	TDLo Intraperitoneal	Rat	1 g/kg
	TDLo Intraperitoneal	Rat	900 mg/kg
	TDLo Intraperitoneal	Rat	750 mg/kg
	TDLo Intraperitoneal	Rat	600 mg/kg
	TDLo Intraperitoneal	Rat	250 mg/kg
	TDLo Oral	Rat	1200 mg/kg
	TDLo Oral	Rat	1000 mg/kg
	TDLo Oral	Rat	800 mg/kg
	TDLo Oral	Rat	650 mg/kg
	TDLo Oral	Rat	400 mg/kg
benzyl alcohol	LD50 Dermal	Rabbit	2000 mg/kg
	LD50 Dermal	Rabbit	2000 mg/kg
	LD50 Intra-arterial	Rat	441 mg/kg
	LD50 Intraperitoneal	Rat	400 mg/kg
	LD50 Intravenous	Rat	53 mg/kg
	LD50 Oral	Rat	1.5 mL/kg
	LD50 Oral	Rat	1660 mg/kg
	LD50 Oral	Rat	1230 mg/kg
	LD50 Oral	Rat	1230 mg/kg
	LDLo Intraperitoneal	Rat	650 mg/kg
	LDLo Subcutaneous	Rat	1700 mg/kg
	TDLo Intraperitoneal	Rat	514 mg/kg
	LC50 Inhalation Vapor	Rat	1000 ppm
	LC50 Inhalation Vapor	Rat	1000 ppm
Silane	LD50 Oral	Rat	2413 mg/kg
	LD50 Oral	Rat	7460 uL/kg
	LDLo Dermal	Rabbit	16 mL/kg
m-phenylenebis(methylamine)	LD50 Dermal	Rabbit	2 g/kg
	LD50 Oral	Rat	930 mg/kg
4-tert-butylphenol	LD50 Dermal	Rabbit	2520 uL/kg
	LD50 Intraperitoneal	Rat	225 mg/kg
	LD50 Oral	Rat	3250 uL/kg
2,4,6-tris(dimethylaminomethyl)phenol	LD50 Dermal	Rat	1280 mg/kg
	LD50 Oral	Rat	2169 mg/kg
	LD50 Oral	Rat	1673 mg/kg

Section 11. Toxicological information

	LD50 Oral	Rat	1200 mg/kg
nonylphenol	LD50 Dermal	Rabbit	2140 mg/kg
	LD50 Dermal	Rabbit	2140 uL/kg
	LD50 Oral	Rat	580 mg/kg
	TDLo Intraperitoneal	Rat	60 mg/kg

Not available.

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
benzyl alcohol	Skin - Mild irritant	Man	-	48 hours 16 milligrams	-
	Skin - Moderate irritant	Pig	-	100 Percent	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
Silane	Eyes - Severe irritant	Rabbit	-	15 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
m-phenylenebis(methylamine)	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Skin - Severe irritant	Rabbit	-	24 hours 750 Micrograms	-
4-tert-butylphenol	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	4 hours 500 milligrams	-
2,4,6-tris(dimethylaminomethyl)phenol	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Skin - Mild irritant	Rat	-	0.025 Mililiters	-
	Skin - Severe irritant	Rat	-	0.25 Mililiters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
nonylphenol	Skin - Moderate irritant	Rabbit	-	500 milligrams	-

Carcinogenicity

Not available.

Section 11. Toxicological information

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
toluene	A4	-	-	None.	-	-
nonylphenol	-	-	-	None.	-	-

Mutagenicity

Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Not available.

Section 12. Ecological information

Environmental effects : Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic ecotoxicity : Not available.

Biodegradability : Not available.

:

Other adverse effects : No known significant effects or critical hazards.

Ecotoxicological data for one or more components are known and will be made available on request.

Section 13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

The transportation description provided below is based on a one gallon container shipped within the United States, by highway only.

UN number	Proper shipping name	Class	Packing group	Additional information
UN3469	PAINT RELATED MATERIAL, FLAMMABLE CORROSIVE	3(8)	II	

Section 15. Other Regulatory Information and Pictograms

United States

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

United States inventory (TSCA 8b) : All components are listed or exempted.

SARA 313

Form R - Reporting requirements :

Product name	CAS number	Concentration
toluene	108-88-3	25 - 40

California Prop. 65 : WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada

WHMIS (Canada) : Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).
Class E: Corrosive material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada inventory : At least one component is not listed.

International regulations

International lists : **Australia inventory (AICS)**: At least one component is not listed.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): At least one component is not listed.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): At least one component is not listed.
Taiwan inventory (CSNN): At least one component is not listed.

Section 16. Other information

Health	*	2
Flammability		3
Physical hazards		0

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.