

SAFETY DATA SHEET

Hardener S66/14

Section 1. Identification

GHS product identifier : Hardener S66/14

SDS code : A36870

Relevant identified uses of the substance or mixture and uses advised against

| Identified uses |
|----------------------|
| Industrial use |
| Uses advised against |
| All other uses |

Supplier's details

International Paint LLC
1 East Water Street
Waukegan, IL 60085
USA
Tel. 1 847 623 4200
Email: customer.service@akzonobel.com

Akzo Nobel Coatings Ltd.
110 Woodbine Downs Blvd.
Unit #4 Etobicoke, Ontario
Canada M9W 5S6
+1 (800) 618-1010

Importer : Cía. Mexicana de Pinturas International
S.A. de C.V., Carretera Anillo Periférico,
No Ext 205, No Interior A, Colonia HDA S JOSE, Garcia, Garcia, CP 66000, Nuevo
Leon.
RFC: ANA9510267C4

Emergency telephone number (with hours of operation) : CHEMTREC +1 (800) 424-9300 (Inside the US)
CHEMTREC International +1 (703) 527-3887 (Outside the US, collect calls accepted)

Section 2. Hazards identification

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

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
EYE IRRITATION - Category 2A
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

GHS label elements

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Section 2. Hazards identification

Hazard pictograms



Signal word

: Danger

Hazard statements

: Highly flammable liquid and vapor.
 May cause an allergic skin reaction.
 Causes serious eye irritation.
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 May cause respiratory irritation.
 May cause drowsiness or dizziness.
 Suspected of causing cancer.

Precautionary statements

Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Wear respiratory protection. Keep away from heat, sparks and hot surfaces. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response

: IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage

: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal

: Dispose of contents and container in accordance with all local, regional, national or international regulations.

Hazards not otherwise classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

| Ingredient name | % | CAS number |
|--|-----------|------------|
| n-butyl acetate | ≥25 - ≤50 | 123-86-4 |
| Hexamethylene diisocyanate, oligomers | ≥25 - ≤50 | 28182-81-2 |
| Benzene, 2,4-diisocyanato-1-methyl-, polymer with 1,6-diisocyanatohexane | ≥10 - ≤25 | 26426-91-5 |
| 2-methoxy-1-methylethyl acetate | ≤10 | 108-65-6 |
| xylene | ≤5 | 1330-20-7 |
| ethylbenzene | <1 | 100-41-4 |
| 4-methyl-m-phenylene diisocyanate | ≤0.3 | 584-84-9 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

Section 3. Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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. In the event of any complaints or symptoms, avoid further exposure.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
wheezing and breathing difficulties
asthma
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- 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.
- Specific treatments** : No specific treatment.
- 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : 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.

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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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).

Section 6. Accidental release measures

Methods and materials for containment and 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

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. 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 only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : 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. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : 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. Store locked up. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| n-butyl acetate | <p>NIOSH REL (United States, 10/2020). STEL: 950 mg/m³ 15 minutes. STEL: 200 ppm 15 minutes. TWA: 710 mg/m³ 10 hours. TWA: 150 ppm 10 hours.</p> <p>OSHA PEL (United States, 5/2018). TWA: 710 mg/m³ 8 hours. TWA: 150 ppm 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). STEL: 950 mg/m³ 15 minutes. STEL: 200 ppm 15 minutes. TWA: 710 mg/m³ 8 hours. TWA: 150 ppm 8 hours.</p> <p>ACGIH TLV (United States, 1/2022). [Butyl acetates] STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.</p> |
| Hexamethylene diisocyanate, oligomers | None. |
| Benzene, 2,4-diisocyanato-1-methyl-, polymer with | None. |
| 1,6-diisocyanatohexane | |
| 2-methoxy-1-methylethyl acetate | <p>OARS WEEL (United States, 7/2018). TWA: 50 ppm 8 hours.</p> <p>ACGIH TLV (United States, 1/2022). [xylene] Notes: 1996 Adoption Substances for which there is a Biological Exposure Index or Indices Refers to Appendix A -- Carcinogens. STEL: 651 mg/m³ 15 minutes. TWA: 434 mg/m³ 8 hours. TWA: 20 ppm 8 hours.</p> <p>OSHA PEL (United States, 5/2018). [Xylenes] TWA: 435 mg/m³ 8 hours. TWA: 100 ppm 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). [Xylenes (o-, m-, p-isomers)] STEL: 655 mg/m³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 435 mg/m³ 8 hours. TWA: 100 ppm 8 hours.</p> |
| xylene | |
| ethylbenzene | <p>ACGIH TLV (United States, 1/2022). Ototoxicant. Notes: Substances for which there is a Biological Exposure Index or Indices 2002 Adoption. TWA: 20 ppm 8 hours.</p> <p>NIOSH REL (United States, 10/2020). STEL: 545 mg/m³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 435 mg/m³ 10 hours. TWA: 100 ppm 10 hours.</p> <p>OSHA PEL (United States, 5/2018). TWA: 435 mg/m³ 8 hours. TWA: 100 ppm 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). STEL: 545 mg/m³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 435 mg/m³ 8 hours. TWA: 100 ppm 8 hours.</p> |

Section 8. Exposure controls/personal protection

4-methyl-m-phenylene diisocyanate

ACGIH TLV (United States, 1/2022).
[Toluene diisocyanate, -2,4- or 2,6- (or as a mixture)] Absorbed through skin. Skin sensitizer. Inhalation sensitizer.

STEL: 0.005 ppm 15 minutes. Form:

Inhalable fraction and vapor

TWA: 0.001 ppm 8 hours. Form: Inhalable fraction and vapor

OSHA PEL (United States, 5/2018).

CEIL: 0.14 mg/m³

CEIL: 0.02 ppm

OSHA PEL 1989 (United States, 3/1989).

STEL: 0.15 mg/m³ 15 minutes.

STEL: 0.02 ppm 15 minutes.

TWA: 0.04 mg/m³ 8 hours.

TWA: 0.01 ppm 8 hours.

- Appropriate engineering controls** : 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.
- 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.

Individual protection measures

- 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : 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.
- Body protection** : 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.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

| | |
|---|---|
| Physical state | : Liquid. |
| Color | : Colorless. |
| Odor | : Typical. |
| Odor threshold | : Not available. |
| pH | : Not applicable. [DIN EN 1262] |
| Melting point/freezing point | : Not available. |
| Boiling point, initial boiling point, and boiling range | : 126°C (258.8°F) |
| Flash point | : Closed cup: 22°C (71.6°F) [Pensky-Martens] |
| Flammability | : Not available. |
| Lower and upper explosion limit | : Greatest known range: Lower: 1.4% Upper: 7.6% (n-butyl acetate) |
| Vapor pressure | : |

| Ingredient name | Vapor Pressure at 20°C | | | Vapor pressure at 50°C | | |
|---------------------------------|------------------------|------|----------------|------------------------|-----|--------|
| | mm Hg | kPa | Method | mm Hg | kPa | Method |
| n-butyl acetate | 11.25 | 1.5 | DIN EN 13016-2 | | | |
| xylene | 6.7 | 0.89 | | | | |
| 2-methoxy-1-methylethyl acetate | 2.7 | 0.36 | | | | |

| | |
|------------------------|---------------------|
| Relative vapor density | : Not available. |
| Relative density | : 1 [ISO 8130-2/-3] |
| Solubility(ies) | : |
| Not available. | |

| | |
|--|-------------------|
| Partition coefficient: n-octanol/water | : Not applicable. |
|--|-------------------|

| | |
|---------------------------|---|
| Auto-ignition temperature | : |
|---------------------------|---|

| Ingredient name | °C | °F | Method |
|---------------------------------|-----|-------|---------|
| 2-methoxy-1-methylethyl acetate | 333 | 631.4 | EU A.15 |
| n-butyl acetate | 415 | 779 | |
| xylene | 432 | 809.6 | |

| | |
|---------------------------|---|
| Decomposition temperature | : Not available. |
| Viscosity | : Kinematic: 40 mm ² /s (40 cSt) [DIN EN ISO 3219] |
| Weight Volatiles | : 56.1% (w/w) |
| Volume Volatiles | : 61.54 % (v/v) |
| Weight Solids | : 43.90 % (w/w) |
| Volume Solids | : 38.46 % (v/v) |
| Regulatory VOC | : 4.7 lbs/gal 561 g/l minus water and exempt solvents |
| VOC Actual | : 4.7 lbs/gal 561 g/l |

Particle characteristics

| | |
|---|-------------------|
| Median particle size | : Not applicable. |
| Percentage of particles with aerodynamic diameter ≤ 10 µm | : 0 |

Section 10. Stability and reactivity

| | |
|---|---|
| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | : The product is stable. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions 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. |
| Incompatible materials | : 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. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---------------------------------------|---------------------------------|------------|-------------------------|----------|
| n-butyl acetate | LC50 Inhalation Gas. | Rat | 390 ppm | 4 hours |
| | LC50 Inhalation Vapor | Mouse | 6 g/m ³ | 2 hours |
| | LC50 Inhalation Vapor | Rat | 390 ppm | 4 hours |
| | LD50 Dermal | Rabbit | >17600 mg/kg | - |
| | LD50 Intraperitoneal | Mouse | 1230 mg/kg | - |
| | LD50 Oral | Guinea pig | 4700 mg/kg | - |
| | LD50 Oral | Mouse | 6 g/kg | - |
| | LD50 Oral | Rabbit | 3200 mg/kg | - |
| | LD50 Oral | Rat | 10768 mg/kg | - |
| Hexamethylene diisocyanate, oligomers | LC50 Inhalation Dusts and mists | Rat | 18500 mg/m ³ | 1 hours |
| 2-methoxy-1-methylethyl acetate | LD50 Dermal | Rabbit | >5 g/kg | - |
| xylene | LD50 Intraperitoneal | Mouse | 750 mg/kg | - |
| | LD50 Intraperitoneal | Mouse | >1500 mg/kg | - |
| | LD50 Oral | Mouse | >5000 mg/kg | - |
| | LD50 Oral | Rat | 8532 mg/kg | - |
| | LD50 Oral | Rat | 9000 mg/kg | - |
| | LC50 Inhalation Gas. | Rat | 5000 ppm | 4 hours |
| | LC50 Inhalation Gas. | Rat | 6700 ppm | 4 hours |
| | LC50 Inhalation Gas. | Rat | 6670 ppm | 4 hours |
| | LD50 Intraperitoneal | Mouse | 1548 mg/kg | - |
| | LD50 Intraperitoneal | Mouse | 1548 mg/kg | - |
| | LD50 Intraperitoneal | Rat | 2459 mg/kg | - |
| | LD50 Oral | Mouse | 2119 mg/kg | - |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| | LD50 Subcutaneous | Rat | 1700 mg/kg | - |
| ethylbenzene | LC50 Inhalation Gas. | Rabbit | 4000 ppm | 4 hours |
| | LC50 Inhalation Vapor | Mouse | 35500 mg/m ³ | 2 hours |
| | LC50 Inhalation Vapor | Rat | 55000 mg/m ³ | 2 hours |
| | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Dermal | Rabbit | 17800 uL/kg | - |
| | LD50 Intraperitoneal | Mouse | 2624 uL/kg | - |
| | LD50 Oral | Rat | 3500 mg/kg | - |
| | LD50 Oral | Rat | 3500 mg/kg | - |
| | LD50 Oral | Rat | 3500 mg/kg | - |
| 4-methyl-m-phenylene | LC50 Inhalation Gas. | Guinea pig | 13 ppm | 4 hours |

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| | | | | |
|--------------|----------------------|--------|------------|---------|
| diisocyanate | LC50 Inhalation Gas. | Mouse | 10 ppm | 4 hours |
| | LC50 Inhalation Gas. | Mouse | 10 ppm | 4 hours |
| | LC50 Inhalation Gas. | Rabbit | 11 ppm | 4 hours |
| | LC50 Inhalation Gas. | Rat | 14 ppm | 4 hours |
| | LC50 Inhalation Gas. | Rat | 14 ppm | 4 hours |
| | LD50 Intravenous | Mouse | 56 mg/kg | - |
| | LD50 Oral | Rat | 5800 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---------------------------------------|--------------------------|---------|-------|-----------------|-------------|
| n-butyl acetate | Eyes - Moderate irritant | Rabbit | - | 100 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| Hexamethylene diisocyanate, oligomers | Eyes - Moderate irritant | Rabbit | - | 100 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 500 mg | - |
| xylene | Eyes - Mild irritant | Rabbit | - | 87 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 5 mg | - |
| | Skin - Mild irritant | Rat | - | 8 hours 60 UI | - |
| | Skin - Moderate irritant | Rabbit | - | 100 % | - |
| ethylbenzene | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 15 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 100 mg | - |
| 4-methyl-m-phenylene diisocyanate | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Moderate irritant | Rat | - | 8 hours 12 mg | - |
| | Skin - Severe irritant | Rabbit | - | 500 mg | - |
| | | | | | |

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

| Product/ingredient name | OSHA | IARC | NTP |
|-----------------------------------|------|------|--|
| xylene | - | 3 | - |
| ethylbenzene | - | 2B | - |
| 4-methyl-m-phenylene diisocyanate | - | 2B | Reasonably anticipated to be a human carcinogen. |

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

| Name | Category | Route of exposure | Target organs |
|---------------------------------------|------------|-------------------|------------------------------|
| n-butyl acetate | Category 3 | - | Narcotic effects |
| Hexamethylene diisocyanate, oligomers | Category 3 | - | Respiratory tract irritation |
| 2-methoxy-1-methylethyl acetate | Category 3 | - | Narcotic effects |
| xylene | Category 3 | - | Respiratory tract irritation |
| 4-methyl-m-phenylene diisocyanate | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Name | Category | Route of exposure | Target organs |
|--------------|------------|-------------------|----------------|
| ethylbenzene | Category 2 | - | hearing organs |

Aspiration hazard

| Name | Result |
|--------------|--------------------------------|
| xylene | ASPIRATION HAZARD - Category 1 |
| ethylbenzene | ASPIRATION HAZARD - Category 1 |

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
wheezing and breathing difficulties
asthma
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Section 11. Toxicological information

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---------------------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| Product as-supplied | N/A | 25995.5 | 118161.4 | N/A | 14.7 |
| Hexamethylene diisocyanate, oligomers | N/A | N/A | N/A | N/A | 4.625 |
| xylene | N/A | 1100 | 5000 | N/A | N/A |
| ethylbenzene | N/A | N/A | N/A | 11 | N/A |
| 4-methyl-m-phenylene diisocyanate | N/A | N/A | 100 | N/A | N/A |

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|-------------------------------------|--|----------|
| n-butyl acetate | Acute LC50 32 mg/l Marine water | Crustaceans - Artemia salina | 48 hours |
| | Acute LC50 62000 µg/l Fresh water | Fish - Danio rerio | 96 hours |
| | Acute LC50 100000 µg/l Fresh water | Fish - Lepomis macrochirus | 96 hours |
| | Acute LC50 185000 µg/l Marine water | Fish - Menidia beryllina | 96 hours |
| | Acute LC50 18000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute EC50 90 mg/l Fresh water | Crustaceans - Cypris subglobosa | 48 hours |
| | Acute LC50 8.5 ppm Marine water | Crustaceans - Palaemonetes pugio - Adult | 48 hours |
| | Acute LC50 8500 µg/l Marine water | Crustaceans - Palaemonetes pugio | 48 hours |
| | Acute LC50 16940 µg/l Fresh water | Fish - Carassius auratus | 96 hours |
| | Acute LC50 15700 µg/l Fresh water | Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
| xylene | Acute LC50 20870 µg/l Fresh water | Fish - Lepomis macrochirus | 96 hours |
| | Acute LC50 19000 µg/l Fresh water | Fish - Lepomis macrochirus | 96 hours |
| | Acute LC50 13400 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute EC50 4600 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 5400 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 3600 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 hours |
| | Acute EC50 4900 µg/l Marine water | Algae - Skeletonema costatum | 72 hours |
| ethylbenzene | | | |

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Section 12. Ecological information

| | | | |
|-----------------------------------|------------------------------------|---|----------|
| 4-methyl-m-phenylene diisocyanate | Acute EC50 7700 µg/l Marine water | Algae - Skeletonema costatum | 96 hours |
| | Acute EC50 6.53 mg/l Marine water | Crustaceans - Artemia sp. - Nauplii | 48 hours |
| | Acute EC50 13.3 mg/l Marine water | Crustaceans - Artemia sp. - Nauplii | 48 hours |
| | Acute EC50 2.97 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute EC50 2.93 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 8.78 mg/l Marine water | Crustaceans - Artemia sp. - Nauplii | 48 hours |
| | Acute LC50 13.3 mg/l Marine water | Crustaceans - Artemia sp. - Nauplii | 48 hours |
| | Acute LC50 40000 µg/l Marine water | Crustaceans - Cancer magister - Zoea | 48 hours |
| | Acute LC50 18.4 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 13.9 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 75000 µg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 5100 µg/l Marine water | Fish - Menidia menidia | 96 hours |
| | Acute LC50 4.3 ul/L Marine water | Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
| | Acute LC50 4200 µg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Acute LC50 9090 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 9100 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 164.5 mg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 164500 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 164500 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |

Persistence and degradability

Not available.

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---------------------------------------|--------------------|-------------|-----------|
| n-butyl acetate | 2.3 | - | low |
| Hexamethylene diisocyanate, oligomers | 5.54 | 367.7 | low |
| 2-methoxy-1-methylethyl acetate | 1.2 | - | low |
| xylene | 3.12 | 8.1 to 25.9 | low |
| ethylbenzene | 3.6 | - | low |
| 4-methyl-m-phenylene diisocyanate | 3.43 | - | low |

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations






Disposal methods : 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.

United States - RCRA Toxic hazardous waste "U" List

| Ingredient | CAS # | Status | Reference number |
|------------|-----------|--------|------------------|
| xylene | 1330-20-7 | Listed | U239 |

Section 14. Transport information

The information provided in section 14 is based on a bulk package shipment via ground transport in North America. All shippers are responsible for ensuring the proper transportation classification and package/container requirements are followed for the relevant mode of transport.

| | DOT Classification | TDG Classification | Mexico Classification | IMDG | IATA |
|----------------------------|--|--|--|--|--|
| UN number | UN1263 | UN1263 | UN1263 | UN1263 | UN1263 |
| UN proper shipping name | PAINT RELATED MATERIAL | PAINT RELATED MATERIAL | PAINT RELATED MATERIAL | PAINT RELATED MATERIAL | PAINT RELATED MATERIAL |
| Transport hazard class(es) | 3  | 3  | 3  | 3  | 3  |
| Packing group | II | III | II | II | II |
| Environmental hazards | No. | No. | No. | No. | No. |

Additional information

- DOT Classification** : **Reportable quantity** 2363.2 lbs / 1072.9 kg [283.43 gal / 1072.9 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Viscous liquid exception This class 3 material can be shipped as Packing Group III in packagings up to 450 L (30 L for passenger aircraft, 100 L for cargo aircraft).
- TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).
- Mexico Classification** : **Viscous liquid exception** This class 3 material can be shipped as Packing Group III in packagings up to 450 L.
- IMDG** : **Emergency schedules** F-E, _S-E_
Viscous liquid exception This class 3 material can be shipped as Packing Group III in packagings up to 450 L.
- IATA** : **Viscous liquid exception** This class 3 material can be shipped as Packing Group III in packagings up to 30 L (100 L for cargo aircraft). Transport in accordance with this provision must be noted on the Shipper's Declaration.

| | | | |
|--------------------------------|--------------------------|---------|-------|
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Section 14. Transport information

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 5(a)2 final significant new use rules:** No products found.
TSCA 5(e) substance consent order: No products found.
TSCA 8(a) PAIR: 2-methoxy-1-methylethyl acetate
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
TSCA 12(b) one-time export: 4-methyl-m-phenylene diisocyanate
United States inventory (TSCA 8b): All components are active or exempted.
Clean Water Act (CWA) 307: ethylbenzene; hexamethylene-di-isocyanate; toluene
Clean Water Act (CWA) 311: n-butyl acetate; xylene; ethylbenzene; toluene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

| Name | % | EHS | SARA 302 TPQ | | SARA 304 RQ | |
|-----------------------------------|------|------|--------------|-----------|-------------|-----------|
| | | | (lbs) | (gallons) | (lbs) | (gallons) |
| 4-methyl-m-phenylene diisocyanate | ≤0.3 | Yes. | 500 | - | 100 | - |

SARA 304 RQ : 99552 lbs / 45196.6 kg [11939.7 gal / 45196.6 L]

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
EYE IRRITATION - Category 2A
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Composition/information on ingredients

Section 15. Regulatory information

| Name | % | Classification |
|--|-----------|---|
| n-butyl acetate | ≥25 - ≤50 | FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 |
| Hexamethylene diisocyanate, oligomers | ≥25 - ≤50 | ACUTE TOXICITY (inhalation) - Category 4 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| Benzene, 2,4-diisocyanato-1-methyl-, polymer with 1,6-diisocyanatohexane | ≥10 - ≤25 | EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 |
| 2-methoxy-1-methylethyl acetate | ≤10 | FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 |
| xylene | ≤5 | FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| ethylbenzene | <1 | ASPIRATION HAZARD - Category 1 FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 |
| 4-methyl-m-phenylene diisocyanate | ≤0.3 | ASPIRATION HAZARD - Category 1 ACUTE TOXICITY (inhalation) - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A RESPIRATORY SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |

SARA 313

| | Product name | CAS number | % |
|---------------------------------|-----------------------------------|------------|------|
| Form R - Reporting requirements | xylene | 1330-20-7 | ≤5 |
| | ethylbenzene | 100-41-4 | <1 |
| | 4-methyl-m-phenylene diisocyanate | 584-84-9 | ≤0.3 |
| Supplier notification | xylene | 1330-20-7 | ≤5 |
| | ethylbenzene | 100-41-4 | <1 |
| | 4-methyl-m-phenylene diisocyanate | 584-84-9 | ≤0.3 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: BUTYL ACETATE; XYLENE; DIMETHYLBENZENE
- New York** : The following components are listed: Butyl acetate; Xylene mixed
- New Jersey** : The following components are listed: n-BUTYL ACETATE; XYLENES; BENZENE, DIMETHYL-; TOLUENE-2,4-DIISOCYANATE
- Pennsylvania** : The following components are listed: ACETIC ACID, BUTYL ESTER; BENZENE, DIMETHYL-

California Prop. 65

 **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

Section 15. Regulatory information

| Ingredient name | No significant risk level | Maximum acceptable dosage level | Type of toxicity |
|-----------------------------------|---------------------------|---------------------------------|------------------|
| ethylbenzene | Yes. | - | Cancer |
| 4-methyl-m-phenylene diisocyanate | Yes. | - | Cancer |
| toluene | - | Yes. | Developmental |

Inventory list

| | |
|--------------------------------|---|
| Australia | : All components are listed or exempted. |
| Canada | : All components are listed or exempted. |
| China | : All components are listed or exempted. |
| Eurasian Economic Union | : Russian Federation inventory : Not determined. |
| Japan | : Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : Not determined. |
| New Zealand | : All components are listed or exempted. |
| Philippines | : All components are listed or exempted. |
| Republic of Korea | : All components are listed or exempted. |
| Taiwan | : All components are listed or exempted. |
| Thailand | : Not determined. |
| Turkey | : Not determined. |
| United States | : All components are active or exempted. |
| Viet Nam | : Not determined. |

Section 16. Other information


Procedure used to derive the classification

| Classification | Justification |
|--|-----------------------|
| FLAMMABLE LIQUIDS - Category 2 | On basis of test data |
| EYE IRRITATION - Category 2A | Calculation method |
| RESPIRATORY SENSITIZATION - Category 1 | Calculation method |
| SKIN SENSITIZATION - Category 1 | Calculation method |
| CARCINOGENICITY - Category 2 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 | Calculation method |

History

| | |
|--|--|
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| Key to abbreviations | : ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group UN = United Nations |

Section 16. Other information

 Indicates information that has changed from previously issued version.

Notice to reader

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws. Any person using this product must determine for themselves, by preliminary tests or otherwise, the suitability of this product for their purposes. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Safety Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. The application, use and processing of AkzoNobel's products and the products manufactured by Buyer on the basis of AkzoNobel's technical advice are beyond AkzoNobel's control and, therefore, entirely Buyer's own responsibility. AkzoNobel makes no warranty as to accuracy and/or sufficiency of such information and/or suggestions, 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. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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