



MATERIAL SAFETY DATA SHEET

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1- COMMERCIAL NAME : Adekit A211 Isocyanate

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

2- COMPOSITION/INFORMATION ON INGREDIENTS :

CHEMICAL NAME	C.A.S	QTY%
1. Aliphatic Polyisocyanate	28182-81-2	10-25
2. HDI	822-06-0	<.0.1
3. N/A	N/A	N/A

3- HAZARDS IDENTIFICATION :

- Harmful by inhalation; possible risk of occupational asthma.
A health surveillance/monitoring program is recommended when working with isocyanates
- Irritating to eyes, respiratory system, and skin.
- May cause sensitization by inhalation and skin contact.

4- FIRST AID MEASURES :

- ***Where a serious accident occurs, seek medical advice immediately.***
- ***Change any soiled clothing immediately.***
- ***In case of eye contact*** : open eyelids as far as possible and flush with large quantities of water for at least fifteen minutes. Seek immediate medical attention.
- ***In case of skin contact*** : physically remove the product and wash skin thoroughly with soap and water. Consult a physician if skin irritation occurs.
- ***In case of swallowing*** : do not give the patient anything to drink and do not induce vomiting; seek immediate medical attention.
- ***In case of inhalation*** : remove the patient from the contaminated area. Consult physician if after-effects occur.
If large amount of product has been inhaled in aerosol or vapor form, seek medical advice immediately, since delayed pulmonary edema may occur.

5- FIRE-FIGHTING MEASURES :

5-1 Fire-extinguisher types :

- Use : chemical foam, CO₂, powder. Where the fire is of major proportions, water spray may also be used.

5-2 Specific fire and explosion risks :

Incomplete combustion or pyrolysis mainly produces oxides of carbon, water, isocyanate fumes, and hydrogen cyanide traces. Closed containers may explode when exposed to extreme heat or burst when contaminated with water.

5-3 specific protective measures during firefighting :

Firefighting personnel should be equipped with insulated, autonomous respiratory protection equipment.

COMMERCIAL NAME : Adekit A211 Isocyanate**6- ACCIDENTAL RELEASE MEASURES :****6-1 Individual protection :**

Wearing of suitable protective clothing and protective equipment for face/eyes; wear suitable respiratory equipment if ventilation is insufficient.

6-2 Environmental protection : Please see § 12

6-3 Decontamination procedures :

- Contain spilt material in order to avoid its transfer to sewers or rivers and streams.
- Physically remove the material.
- Neutralize the product using a decontaminating agent (ethanol/water/concentrated ammonia - 50/45/5) or copious amounts of water.
- Cover over using an absorbent substance (e.g. sand, sawdust). After one hour, transfer to suitable drum containers. Do not close (likelihood of CO₂ production). Cover tops only.
- Leave open to air in a supervised area for 7 to 14 days before being removed for disposal.

7- HANDLING AND STORAGE :**7-1 Handling :**

- Inform personnel of risks associated with the product, the precautions to be taken and procedures to follow where an accident occurs.
- Observe personal hygiene rules to avoid contact with eyes and skin.
- Avoid inhaling vapors produced by the material, **especially when heated and/or sprayed.**
- Install showers and eye baths ("fountain" type).
- Ensure sufficient ventilation, including appropriate local air extraction, in order to comply with workplace exposure limits.
- Wash hands thoroughly at beginning of every work break and at the end of the working day.
- Work stations and the general working area must be kept perfectly clean.
- Avoid exposure to the product of persons having suffered from eczema or still suffering from any skin condition, wound, cut or irritation.

7-2 Storage :

- Keep the material hermetically sealed in its original packaging, protected from humidity and at a temperature between 59 and 77°F / 15 and 25°C in a well-ventilated storage facility.
- Ensure that the floor of the storage area is impermeable and concave in profile in order to provide effective containment.
- Keep the product away from food.
- Reproduce labeling on all new packs where original packaging is divided.

8- EXPOSURE CONTROLS/PERSONAL PROTECTION :

8-1 Exposure controls : Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations. Always maintain workplace air contaminants to a minimum.

8-2 Personal protection :

- respiratory protection : NIOSH approved respirator for poorly ventilated areas or where product is being heated and/or sprayed
- eye protection : YES, safety glasses with side shields, or chemical-goggles and faceshield
- skin protection : YES, protective gloves, such as nitrile, rubber, or neoprene

COMMERCIAL NAME : Adekit A211 Isocyanate**9- PHYSICAL AND CHEMICAL PROPERTIES :**

Physical state : liquid

Color : translucent

Odor : characteristic

pH : not established

Flash point : > 230°F / 110°C

Decomposition temperature : > 392°F / 200°C

Specific gravity : 1.1

Solubility :

- in water : at 68°F / 20°C : insoluble; slowly reacts with water to liberate carbon dioxide
- in solvents : YES (soluble in many organic solvents : benzene hydrocarbons and chlorinated hydrocarbons, acetone, phthalates, ...)

10- STABILITY AND REACTIVITY :**10-1 Dangerous decomposition by-products :**

- These are non-existent if storage and handling rules are followed (please see also § 5-2).

10-2 Hazardous reactions with :

- Exothermic reaction may occur; contact with moisture or other materials which react with isocyanates (acids, alcohols, bases such as soda, ammonia, or amines) or temperature above 400°F may cause polymerization.

11- TOXICOLOGICAL INFORMATION :

Effects on eyes : aerosol, vapor, or liquid will irritate human eyes following contact.

Effects on skin : irritates and darkens skin, although systemic toxicity is considered low. Skin sensitization is unlikely unless exposure is repeated or prolonged.

Effects on ingestion : low toxicity for a single oral dose. *Oral (rats): LD50>15 g/kg*

Over-Exposure : (*especially where spraying is carried out without safety precautions*) - a concentration dependent irritation to eyes, nose, throat, and respiratory tract. Delayed occurrence of nausea and allergic reactions (respiratory difficulty, cough, asthma) is possible. In predisposed individuals, these symptoms may appear after exposure to minimal concentrations of isocyanates, even where this value is below threshold limits.

12- ECOLOGICAL INFORMATION :

This product is not miscible in water. It acts on water, producing CO₂ and polyurea (a solid, non-fusible, and insoluble compound) which is, to the best of our knowledge, inert and non-biodegradable.

13- DISPOSAL CONSIDERATIONS :

All disposal methods must be in compliance with all Federal, State/Provincial and local regulations. Regulations may vary in different locations. Waste characteristics and compliance with applicable laws are the responsibility solely of the waste generator. Empty containers may not be disposed of unless any remaining material adhering to the internal walls has been removed (see § 6.3).

COMMERCIAL NAME : Adekit A211 Isocyanate**14- TRANSPORT INFORMATION :****DOT Regulations/Information:****Proper Shipping Name:** not regulated**Hazard Class:** n/a**UN/NA Number:** n/a**Packaging Group:** n/a**Internal label:** H0082200**15- REGULATORY INFORMATION :****US Federal Regulation :****Toxic Substances Control Act (TSCA) :**

All components are included in the EPA Toxic Substances Control Act Chemical Substance Inventory.

OSHA Hazard Communication Standard hazard classes :

Hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

OSHA PEL/TWA : Not established for this product**ACGIH TWA :** HDI - 0.005ppm (0.034 mg/m³)**EPA SARA Title III Section 313 Toxic Chemicals :**

Isocyanates - (see § 2) 90-100%

CERCLA Reportable Quantity :

HDI (28182-81-2) 100 lbs.

You may be required to submit this MSDS to state and local emergency response agencies (SERC & LEPC) and to your local fire department based on the chemical and quantity stored at your location. Call the EPA Hotline @ (800)535-0202 for more information or further assistance with chemical reporting requirements.

16- OTHER INFORMATION :**HMIS Ratings:****Health. Flammability. Reactivity****2*.1.1.****Ratings Key: 4 = Highest hazard, 0 = Lowest hazard, * = Chronic Health Hazard****REVEALING MODIFICATION : I4.PDF**

Revised : 11/22/2006 Supersedes sheet : N/A This sheet provides a complement to the product use instructions but does not replace them. The information it contains is based on our current knowledge of the product concerned at the date of drafting. That information is given in good faith and does not in any circumstances remove from the user his duty to be aware of and to follow all legal regulations and statutes covering his activities. The user takes sole responsibility for application of safety measures covering the use of the product he is aware of. We also draw the user's attention to the risks attached to any use of the product for applications for which it was not designed. 03/2006