

MATERIAL SAFETY DATA SHEET



ADEKA ULTRA SEAL

PRODUCT NAME

P-201

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DATE PREPARED : FEBRUARY/01/2002
DATE REVISED : May/01/2006
M S D S No. : US-87544

1. CHEMICAL PRODUCTS AND COMPANY IDENTIFICATION

PRODUCT IDENTIFIER: ADEKA ULTRA SEAL P-201

GENERAL USE: Waterstop for construction use.

FORMULA: Mixture

MANUFACTURER:

ADEKA CORPORATION

2-35, HIGASHI-OGU 7-CHOME,

ARAKAWA-KU, TOKYO 116-8554, JAPAN

TEL 81-3-4455-2823 FAX 81-3-3809-8222

EMERGENCY TELEPHONE NUMBERS:

OCM, INC.

TEL 847-955-9700 FAX 847-541-9338

DISTRIBUTOR:

OCM, INC.

TEL 847-955-9700 FAX 847-541-9338

CHEMICAL NAME & STRUCTURE:

Mixture

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>COMPONENT</u> | <u>%</u> | <u>CAS No.</u> | <u>NOTE</u> |
|---|----------|----------------|-------------|
| Urethane prepolymer | 45~50 | Trade secret | None |
| Filler | 35~40 | Trade secret | None |
| Hydrotreated heavy naphtha | 10~15 | 64742-48-9 | None |
| Toluene diisocyanate | <0.1 | 26471-62-5 | Carcinogen |
| Diphenylmethane diisocyanate | <0.1 | 101-68-8 | Mutagen |
| Carbon black | <0.1 | 1333-86-4 | Carcinogen |
| Tris(mixed mono, dinonyl- phenyl)phosphite | <0.1 | 54771-30-1 | None |
| 4-toluene-sulfonyl-isocyanate (tosyl-isocyanate) | <0.1 | 4083-64-1 | None |

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EXPOSURE GUIDELINE

| OSHA HAZARDS | OSHA | | ACGIH TLV | | | |
|------------------------------|------|-------------------|-----------|-------------------|------|-------------------|
| | PEL | | TWA | | STEL | |
| | ppm | mg/m ³ | ppm | mg/m ³ | ppm | mg/m ³ |
| Toluene diisocyanate | 0.02 | 0.14 | 0.005 | — | 0.02 | — |
| Diphenylmethane diisocyanate | 0.02 | 0.2 | 0.005 | — | 0.02 | — |
| Carbon black | — | 3.5 | — | 3.5 | — | — |

3. HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW *****

*
 * Gray putty , slight odor. *
 * May cause skin and eye irritation. *
 * Prolonged exposure may cause irritation to the respiratory tract. *
 *

POTENTIAL HEALTH EFFECTS

SKIN CONTACT : May cause skin irritation.
 EYE CONTACT : May cause eye irritation.
 INHALATION : Prolonged exposure may cause irritation to the respiratory tract.
 INGESTION : Oral toxicity has not been determined.
 CHRONIC EFFECTS : It contains of carcinogenic substance(TDI), however it is only under 0.1%.
 Therefore it is not considered to have carcinogen.

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4. FIRST AID MEASURES

SKIN CONTACT: Wash off immediately with plenty of soap and water.
Take all contamination clothing off immediately.
Seek medical advice if irritation develops.

EYE CONTACT: Immediately flush with large quantities of clean water and consult a ophthalmologist.

INHALATION : Move affection person to fresh air.
In case of respiratory system or mucous membranes, or if your feel unwell or in case of prolonged exposure, get medical attention.

INGESTION : See a physician immediately.

NOTE TO PHYSICIAN : None.

5. FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES:

Flash point and Method F(°C) : No data available.
Flammable Limits (% by volume) : LFL Not applicable. UFL Not applicable.
Auto ignition Temperature ° F (°C) : Not applicable.

EXTINGUISHING MEDIA: CO₂ foam, water spray, dry chemical powder.

SPECIAL FIRE-FIGHTING PROCEDURES: None.

FIRE-FIGHTING INSTRUCTIONS: Wear full bunker gear including a positive pressure self-contained breathing apparatus in any closed system.

HAZARDOUS DECOMPOSITION PRODUCTS: Dense smoke emitted when burned without sufficient oxygen.

TO FIREMEN: Firefighters are to wear full protective equipment, including full bunker gear and SCBA respiratory protection.

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6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of heat and ignition.

Clean-up personnel should wear protective clothing and equipment to prevent inhalation of vapor, skin and eye contact.

LARGE SPILL : Incinerate or place in a suitable container for disposal by a licensed contractor (follow all Federal, State and local regulation in your country).

SMALL SPILL : Absorb with paper towels or suitable absorbent and place in a closed container for disposal.

7. HANDLING AND STORAGE

HANDLING: Avoid contact with moisture prior to use.

Because material might be hardened in contact with moisture.

STORAGE: Avoid contact with water and moisture absorption.

Store in a cool place.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide mechanical ventilation of confined spaces.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: Use of respiratory protection is good industrial practice.

EYE PROTECTION : Use of eye protection is good industrial practice.

SKIN PROTECTION : Use of protective gloves/clothing is good industrial practice.

BODY PROTECTION : Wear suitable clothing.

SPECIAL PROTECTION INFORMATION: Avoid prolonged or repeated contact with material.

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9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Gray putty.

ODOR : Slight.

BOILING POINT ° F (°C) : No data available.

MELTING POINT/
FREEZING POINT ° F (°C) : No data available/ No data available.

VAPOR PRESSURE (mPa) : No data available.

SOLUBILITY IN WATER : Negligible.

SPECIFIC GRAVITY (g/ml) : 1.25

pH : No data available.

VISCOSITY (mPa. s) : 6000 (77° F)

VAPOR DENSITY (air =1) : No data available.

EVAPORATION RATE : No data available.
(n- Butylacetate=1)

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable in normal conditions.

SUBSTANCE TO AVOID CONTAMINATION:

Strong alkalies, strong acids, hazardous lights, peroxides, organic solvents.

HAZARDOUS REACTION AND FIRE DANGER:

No risk of special hazardous reactions or fire under normal conditions.

PRODUCTS CAUSING HAZARDOUS DECOMPOSITION:

Thermal decomposition or combustion may produce Oxides of Nitrogen, Carbon Monoxide and Carbon Dioxide.

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11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: May cause eye irritation.

SKIN EFFECTS: May cause skin irritation.

ACUTE ORAL EFFECTS: No data available.

ACUTE INHALATION EFFECTS: No data available.

CHRONIC EFFECTS/CARCINOGENICITY:

This products include < 0.1% TDI. TDI is on the list of NTP(b), IRAC(2B).

This products include < 0.1% MDI. (For 4,4'-Diphenylmethane Diisocyanate)

Prolonged exposure to the vapor or mist may reduce the function of the lungs.

Sensitizing effect on the skin may be chronic.

IARC test on animals recognizes the carcinogen, but no data on the effects on human being is available. Classified in group 3 by IARC evaluation.

This products include < 0.1% Carbon black. Carbon black is on the list of IARC(2B).⁴⁾

MUTAGENICITY: This products include < 0.1% MDI. (For 4,4'-Diphenylmethane diisocyanate)

4,4'-Diphenylmethane diisocyanate showed a mutagenic effect to a certain salmonella(TA-98, TA-100), when S-9Mix was added in Ames test.³⁾

OTHERS: None.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data are available on the adverse effects of this material on the environment.

13. DISPOSAL CONSIDERATION

DISPOSAL INFORMATION: Dispose of accordance with federal, state and local laws and regulations.

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14. TRANSPORTATION INFORMATION

UN No. : Not applicable.

IMDG CODE : Not applicable.

MARINE POLLUTANT : Not applicable.

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATION:

TSCA: TSCA INVENTORY registered not registered

| SARA TITLE III | SECTION 313 TOXIC CHEMICALS: | COMPONENT | CAS No. | WT% |
|----------------|------------------------------|----------------------|------------------|-------------------|
| | | Toluene-diisocyanate | <u>2647-62-5</u> | <u><0.1wt%</u> |
| | | 4,4'-Diphenylmethane | | |
| | | <u>Diisocyanate</u> | <u>101-68-8</u> | <u><0.1wt%</u> |

INTERNATIONAL INFORMATION:

CEPA: DSL registered not registered

EINECS: registered not registered

| <u>COMPONENT</u> | <u>EINECS No.</u> |
|--|-------------------|
| Urethane prepolymer | Trade secret |
| Filler | Trade secret |
| Hydrotreated heavy naphtha | 265-150-3 |
| Toluene diisocyanate | 247-722-4 |
| Diphenylmethanediisocyanate | 247-714-0 |
| Carbon black | 215-609-9 |
| Tris(mixed mono, dinonyl-phenyl) phosphite | 259-335-8 |
| 4-toluene-sulfonyl-isocyanate (tosyl-isocyanate) | 223-810-8 |

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16. OTHER INFORMATION

RATING

H M I S :

| | |
|------------------------------------|---|
| HEALTH ; | 2 |
| FLAMMABILITY ; | 1 |
| REACTIVITY ; | 1 |
| PERSONAL PROTECTIVE EQUIPMENT ; | C |

N F P A :

| | |
|------------------|------|
| HEALTH HAZARD ; | 2 |
| FLAMMABILITY ; | 1 |
| REACTIVITY ; | 1 |
| SPECIFIC HAZARD; | None |

REFERENCE :

- 1) M.H.Litchfield, "Review of MDI Toxicity Studies", III Ref:10844, 7 (1991)
- 2) Threshold limit values for chemical substance and physical agents and biological exposure in dices, ACGH(2001)
- 3) Chemical and Industry vol.42.8 (1989)
- 4) IARC Monographs on the Evaluation of Carcinogenic Risk of Chemical to Humans vol.1~79
- 5) Chemical Safety Data Sheets, Vol.1 ~5. The Royal of Chemistry.
(1989-) Thomas Graham House, Cambridge, U.K.

OTHERS : DATE PREPARED : FEBRARY/01/2002
 DATE REVISED : AUGUST/22/2002
 OTHER : None.

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