SAFETY DATA SHEET

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PRODUCT AND COMPANY IDENTIFICATION

Supplier Details:

VeloBond, Inc. (909) 360-4977

1338 W 9th St

Upland, Ca 91786

Product:

**Velo 90 A**

Web:

www.VeloBond.com

Emergency:

SPILLTECH (323) 908-3952 (24 HOURS)

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HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Respiratory or skin sensitization, 1 Respiratory

Health, Respiratory or skin sensitization, 1 Skin

Health, Skin corrosion/irritation, 2

Health, Carcinogenicity, 2

Health, Serious Eye Damage/Eye Irritation, 2 A

Health, Specific target organ toxicity - Single exposure, 3

Health, Acute toxicity, 5 Oral

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: DANGER

GHS Hazard Pictograms:

GHS Hazard Statements:

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317 - May cause an allergic skin reaction

H315 - Causes skin irritation

H351 - Suspected of causing cancer.

H319 - Causes serious eye irritation

H336 - May cause drowsiness or dizziness

H303 - May be harmful if swallowed

GHS Precautionary Statements:

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

P264 - Wash exposed skin thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P284 - Wear respiratory protection.

P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and

easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER or doctor/physician.

P330 - Rinse mouth.

P501 - Dispose of contents/container to a licensed waste disposal facility.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry:

Target Organs:

Eyes; Ingestion; Inhalation; Skin;

Respiratory system; Skin; Eyes;

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Inhalation:

At room temperature, MDI vapors are minimal due to low vapor pressure. However, heating,

spraying, foaming, or otherwise mechanically dispersing (drumming, venting or pumping)

operations may generate vapor or aerosol concentrations sufficient to cause irritation or other

adverse effects. Excessive exposure may cause irritation of the eyes, upper respiratory tract and

lungs. Severe overexposure may lead to pulmonary edema. May cause respiratory sensitization

with asthma-like symptoms in susceptible individuals. MDI concentrations below the exposure

guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms

may include coughing, dryness of throat, headache, nausea, difficult breathing and a feeling of

tightness in the chest. Effects may be delayed. Impaired lung function (decreased ventilator

capacity) has been associated with overexposure to isocyanates

Chronic: As a result of previous repeated overexposures or a single large dose, certain individuals

develop isocyanate sensitization (chemical asthma) or tissue injury in the upper respiratory tract.

Animal tests indicate skin contact alone may also lead to allergic respiratory reaction. These

effects may be permanent. Any person developing asthmatic reaction or other sensitization should

be removed from further exposure

Skin Contact:

Product is a skin sensitizer. Causes irritation with symptoms of reddening, itching and swelling.

Prolonged or repeated exposure can cause skin irritation, reddening, dermatitis, and in some

individuals, sensitization. Skin contact may result in allergic skin reactions or respiratory

sensitization, but is not expected to result in absorption of amounts sufficient to cause other

adverse effects. May stain skin. Cured material is difficult to remove.

Eye Contact:

Ingestion:

As a liquid, vapor, aerosol or dust, may cause irritation, inflammation, and/or damage to sensitive

eye tissue. Symptoms include reddening, tearing, stinging and swelling. May cause corneal injury.

Prolonged contact may cause conjunctivitis.

Single dose oral toxicity is considered to be extremely low. Can result in irritation and corrosive

action in the mouth, stomach tissue and digestive tract. Symptoms can include nausea, vomiting,

sore throat, abdominal pain and diarrhea. Ingestion is not an applicable route of entry for intended

use.

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COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients:

CAS#

Chemical Name:

%

101-68-8

26447-40-5

39310-05-9

25-45% 4,4'-Methylenediphenyl diisocyanate

25-45% Benzene, 1,1'-methylenebis[isocyanato-

5-25% Benzene, 1,1'-methylenebis[isocyanato-,

homopolymer

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FIRST AID MEASURES

Inhalation:

Skin Contact:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be

administered by qualified personnel. Call a physician or transport to a medical facility immediately.

Wash off in flowing warm water or shower with soap. Remove and wash contaminated clothing and discard

contaminated shoes. For severe exposure, get under safety shower after removing clothing, then seek

medical attention. If redness, itching or a burning sensation develops or persists after the area is washed,

consult a physician.

Eye Contact:

Ingestion:

Flush with large amounts of water for 15 minutes. Materials containing MDI may react with the moisture in

the eye forming a thick material that is difficult to remove. Get immediate medical attention.

DO NOT INDUCE VOMITING. Give 1-2 cups of milk or water to drink. Never give anything by mouth to an

unconscious person. Seek medical attention.

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FIRE FIGHTING MEASURES

Flammability:

Flash Point:

OSHA - none; DOT - none

460°F

Flash Point Method:

Burning Rate:

Autoignition Temp:

LEL:

PMCC

N/A

NDA

N/A

UEL:

N/A

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Use dry chemical, foam, carbon dioxide, foam or water spray for large fires. The reaction between water and hot isocyanate

may be vigorous. If possible, contain fire run-off water.

Protective Equipment: Wear positive-pressure self-contained breathing apparatus with full face mask and full protective

clothing.

Unusual Hazards: At temperatures greater than 400°F, polymeric MDI can polymerize and decompose which will cause

pressure build-up in closed containers. Explosive rupture is possible. Water contamination will produce carbon dioxide. Do not

reseal contaminated containers as pressure buildup may rupture the containers. Downwind personnel must be evacuated.

Fire Degradation Products: Isocyanate vapor and mist, carbon dioxide, carbon monoxide, nitrogen oxides and traces of

hydrogen cyanide.

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ACCIDENTAL RELEASE MEASURES

Spill: Evacuate and isolate spill area. Remove any ignition sources. With adequate ventilation and appropriate personal

protective equipment, cover the area with an inert absorbent material such as clay or vermiculite and transfer to metal waste

containers. Move container to a well ventilated area (outside), but do not seal the container with the isocyanate mixture.

Larger quantities of liquid may be transferred directly to drums for disposal. Decontaminate or discard all clean-up equipment.

NOTE: ISOCYANATES WILL REACT WITH WATER AND GENERATE CARBON DIOXIDE. THIS COULD RESULT IN THE

RUPTURE OF ANY CLOSED CONTAINERS.

Clean up: The area should then be flushed with a decontamination solution. The decontamination solution is a 5-10% mixture

of sodium carbonate and 0.5% liquid detergent in water solution or a 3-8% concentrated ammonium hydroxide and 0.5%

liquid detergent in water. Use 10 parts decontamination solution to 1 part spilled material. If the ammonium hydroxide solution

is used, ammonia will be evolved as a vapor. Use caution to avoid exposure to high concentrations of ammonia. Allow to

stand for 48 hours letting evolved carbon dioxide escape.

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HANDLING AND STORAGE

Handling Precautions:

Handling: Use personal protective equipment when transferring material to or from drums,

totes or other containers. The reaction of polyols and isocyanates generates heat. Contact of

the reacting materials with skin or eyes can cause irritiation and may be difficult to remove

from the affected areas. Do not smoke or use naked lights, open flames, space heaters, or

other ignition sources near pouring, frothing or spraying operations.

Special Emphasis for Spray Applications: Inspect the application area from the potential to

expose other persons or for overspray to drift onto buildings, vehicles or other property. When

spraying building exteriors, persons entering or exiting the building as well as those inside

could be exposed to polyisocyanates due to wind conditions, open windows or air intakes. Do

not begin application work until these potential problems have been corrected.

Storage Requirements:

Storage: When stored between 15 and 30°C (60 and 85°F) in dry place in tightly sealed

containers, typical shelf life is 6 months or more from the date of manufacture. Consult

technical data sheet for shelf life requirements affecting performance quality. Should freezing

occur, the material must be thawed thoroughly and mixed until uniform. Opened containers

must be handled properly to prevent moisture pickup. Do not reseal if contamination is

suspected.

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EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

MDI has a low vapor pressure at room temperature. Monitoring is required to determine

engineering controls. Uses requiring heating and/or spraying may require more agressive

engineering controls or PPE. Eyewash and safety showers should be available.

HMIS PP, X | Consult your supervisor for special instructions

Personal Protective

Equipment:

Personal protective equipment

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate

use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as

a backup to engineering controls. If the respirator is the sole means of protection, use a full-

face supplied air respirator. Use respirators and components tested and approved under

appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove

removal technique (without touching gloves outer surface) to avoid skin contact with this

product. Dispose of contaminated gloves after use in accordance with applicable laws and

good laboratory practices. Wash and dry hands.

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Eye protection: Face shield and safety glasses Use equipment for eye protection tested and

approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection: Complete suit protecting against chemicals, The type of protective

equipment must be selected according to the concentration and amount of the dangerous

substance at the specific workplace.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and

immediately after handling the product.

4,4'-Methylenediphenyl diisocyanate cas#:(101-68-8) [20-40%]

Components with workplace control parameters

TWA

0.0050 ppm

USA. ACGIH Threshold Limit Values (TLV)

Respiratory sensitization

C

C

0.02 ppm

0.2 mg/m3

USA. OSHA - TABLE Z-1 Limits for Air Contaminants -

1910.1000

0.02 ppm

0.2 mg/m3

USA. Occupational Exposure Limits (OSHA) - Table Z- 1

Limits for Air Contaminants

The value in mg/m3 is approximate. Ceiling limit is to be determined from breathing-zone air

samples.

TWA

0.0050 ppm

0.05 mg/m3

10 minute ceiling value

USA. NIOSH Recommended Exposure Limits

C

0.2 ppm

USA. NIOSH Recommended Exposure Limits

0.2 mg/m3

10 minute ceiling value

Proprietary polyol blend cas#:(0) [50-70%]

Contains no substance with occupational exposure limits

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PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Non-pigmented liquid.

Liquid

Physical State:

Odor:

musty

N/A

Spec Grav./Density: 9.04 lbs/gallon

Molecular Formula:

Solubility:

Viscosity:

approx. 800 cps

Not soluble in water; REACTS with

water releasing carbon dioxide.

Boiling Point:

Flammability:

Evap. Rate:

>354°F

None

<1

Percent Volatile:

Freezing/Melting Pt.:

Flash Point:

0%

60°F

>150°F

>1

Vapor Density:

Auto-Ignition Temp:

NDA

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STABILITY AND REACTIVITY

Chemical Stability:

Polyisocyanates are highly reactive chemicals that should be handled and stored in a way to

avoid many common substances, including water and moisture. Product is stable under

normal conditions.

Conditions to Avoid:

Materials to Avoid:

Moisture and/or water. High temperatures, sparks, flame and temperature above 350°F.

Water; strong bases; alcohols; amines; metal compounds;

Hazardous Decomposition: By fire or excessive heat: carbon monoxide, carbon dioxide, oxides of nitrogen, traces of

hydrogen cyanide, ammonia and MDI vapors. Excess gas may rupture containers.

Hazardous Polymerization: May occur with incompatible reactants, especially strong bases, water or temperatures over

320°F (50°C).

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TOXICOLOGICAL INFORMATION

4,4'-Methylenediphenyl diisocyanate cas#:(101-68-8) [20-40%]

Information on toxicological effects

Acute toxicity:

Oral LD50 LD50 Oral - rat - 4,700 mg/kg

Inhalation LC50 Dermal LD50 no data available

Other information on acute toxicity

Skin corrosion/irritation: Serious eye damage/eye irritation:

Eyes - rabbit - Moderate eye irritation

Respiratory or skin sensitization: no data available

May cause allergic respiratory and skin reactions

Germ cell mutagenicity: Laboratory experiments have shown mutagenic effects.

Genotoxicity in vitro - Human - lymphocyte Sister chromatid exchange

Genotoxicity in vivo - rat - Inhalation DNA damage

Carcinogenicity:

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA

classification.

Limited evidence of carcinogenicity in animal studies

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Diphenylmethane-4,4- diisocyanate)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by

ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by

NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by

OSHA.

Reproductive toxicity: Reproductive toxicity - rat - Inhalation:

Maternal Effects: Other effects. Specific Developmental Abnormalities: Musculoskeletal system.

no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure (Globally Harmonized System):

no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be fatal if inhaled. Causes respiratory tract irritation. Ingestion May be harmful if swallowed. Skin

May be harmful if absorbed through skin. Causes skin irritation. Eyes Causes eye irritation.

Signs and Symptoms of Exposure: Cough, Shortness of breath, Headache, Nausea, Vomiting, Pulmonary edema. Effects may be delayed.

Synergistic effects: no data available

Additional Information:

RTECS: NQ9350000

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ECOLOGICAL INFORMATION

4,4'-Methylenediphenyl diisocyanate cas#:(101-68-8) [20-40%]

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Information on ecological effects

Toxicity:

Toxicity to daphnia EC50 - Daphnia magna (Water flea) - 0.35 mg/l - 24 h.

and other aquatic invertebrates

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: Do not empty into drains.

no data available

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DISPOSAL CONSIDERATIONS

Disposal: Any disposal practice must be in compliance with all federal, state and local laws and regulations. Chemical

additions, processing or otherwise altering this material may make the waste management information presented in this SDS

incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance are the responsibility

solely of the party generating the waste or deciding to discard or dispose of the material.

Do not allow material to enter sewers, a body of water, or contact the ground. Refer to RCRA 40 CFR 261, and/or any other

appropriate federal, state or local requirements for proper classification information.

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TRANSPORT INFORMATION

DOT - Non DOT/non RCRA regulated

IATA/IMDG/ICAO - Not dangerous goods

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REGULATORY INFORMATION

[%] RQ (CAS#) Substance - Reg Codes

----------------------------------------------------------------

[20-40%] RQ(5000LBS), 4,4'-Methylenediphenyl diisocyanate (101-68-8) CERCLA, HAP, IARC, MASS, NJHS, OSHAWAC,

PA, SARA313, TSCA, TXAIR

[20-40%] Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5) TSCA

[5-25%] Benzene, 1,1'-methylenebis[isocyanato-, homopolymer (39310-05-9) TSCA

This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Regulatory Code Legend

----------------------------------------------------------------

RQ = Reportable Quantity

CERCLA = Superfund clean up substance

HAP = Hazardous Air Pollutants

IARC = IARC Carcinogen Risks

MASS = MA Massachusetts Hazardous Substances List

NJHS = NJ Right-to-Know Hazardous Substances

OSHAWAC = OSHA Workplace Air Contaminants

PA = PA Right-To-Know List of Hazardous Substances

SARA313 = SARA 313 Title III Toxic Chemicals

TSCA = Toxic Substances Control Act

TXAIR = TX Air Contaminants with Health Effects Screening Level

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OTHER INFORMATION

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NFPA:

HMIS III:

Health = 2, Fire = 1, Reactivity = 1, Specific Hazard = None

Health = 2, Fire = 1, Physical Hazard = 1

HMIS PPE: X - Consult your supervisor for special instructions

2

1

1

2

1

1

None

X

Disclaimer:

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representations as to the accuracy or completeness of the information contained herein, and assume no responsibility

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