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SDS Number: EBP37-9A

CS HYBRID HARDENER - Part A

Revision Date: 1/6/2016

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PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

Product Name: CS Hybrid Ball Plug - Part A
Chemical Type: Extended Polyurethane Isocyanate
Material Use: Component of a Polyurethane System
Supplier/Manufacturer: VISE
2237 Stagecoach Road, Stockton, CA 95215

Emergency: 800.424.9300 (24 HOURS)

HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

- Health, Acute toxicity, 1 Inhalation
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, 4 Oral
Health, Acute toxicity, 5 Oral

GHS Label elements, including precautionary statements

GHS Signal Word: DANGER

GHS Hazard Pictograms:



GHS Hazard Statements:

- H330 - Fatal if inhaled
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
H302 - Harmful if swallowed
H303 - May be harmful if swallowed

GHS Precautionary Statements:

- P260 - Do not breathe dust/fume/gas/mist/vapor/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P264 - Wear respiratory protection.
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.
P501 - Dispose of contents/container to a licensed waste disposal services provider.

Hazards not otherwise classified (HNOC) or not covered by GHS

Route of Entry: Eyes; Ingestion; Inhalation; Skin;
Target Organs: Respiratory system; Skin; Eyes;
Inhalation: All room temperature, MDI vapors are minimal due to low vapor pressure. However, heating, spraying, foaming, or otherwise mechanically dispersing (stirring, 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 lightness 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: 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.

NFPA: Health = 2, Fire = 1, Reactivity = 1, Specific Hazard = None
HMIS III: Health = 2, Fire = 1, Physical Hazard = 1



COMPOSITION/INFORMATION ON INGREDIENTS

Table with 3 columns: Cas#, Chemical Name, %



FIRST AID MEASURES

Inhalation: 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.

Skin Contact: 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: 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.

Ingestion: DO NOT INDUCE VOMITTING. Give 1-2 cups of milk or water to drink. Never give anything by mouth to an unconscious person. Seek medical attention.

FIRE FIGHTING MEASURES

Flammability: OSHA - none, DOT - none

Flash Point: 446°F

Flash Point Method: PMCC

Burning Rate: N/A

Autoignition Temp: NDA

LEL: N/A

UEL: N/A

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.

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 before evolved carbon dioxide escape.

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 irritation 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: 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.

Storage Requirements:

EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Controls:

Personal Protective Equipment:

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

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.

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 (101-68-8) [20,30%]

Components with workplace control parameters

TNA	USA ACGIH Threshold Limit Values (TLV)
0.0050 ppm Respiratory sensitization	
C 0.02 ppm 0.2 mg/m3	USA OSHA - TABLE Z-1, Limits for Air Contaminants - 1970,1000
C 0.02 ppm	USA Occupational Exposure Limits (OSHA) - Table Z-1



0.2 mg/m³ 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	USA, NIOSH Recommended Exposure Limits
10 minute ceiling value	0.05 mg/m ³	
C	0.2 ppm	USA, NIOSH Recommended Exposure Limits
10 minute ceiling value	0.2 mg/m ³	

Isocyanic acid, poly(methylene)poly(phenylene ester) (9016-87-9) [30-40%] : no data available

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Non-pigmented liquid.	Odor:	musty
Physical State:	Liquid	Molecular Formula:	N/A
Odor Threshold:	No data available	Solubility:	Not soluble in water. REACTS with w
Spec. Grav./Density:	N/A	Percent Volatile:	0%
Viscosity:	approx. 400 cgs	Freezing/Melting Pt.:	60°F
Boiling Point:	approx. 406°F	Flash Point:	480°F
Flammability:	None	Vapor Density:	>1
Partition Coefficient:	No data available	Auto-ignition Temp.:	N/A
Vapor Pressure:	No data available	UFL/FL:	No data available
pH:	No data available		
Evap. Rate:	<1		
Decomp Temp.:	No data available		

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: Moisture and/or water. High temperatures, sparks, flame and temperature above 350°F.
Materials to Avoid: 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).

TOXICOLOGICAL INFORMATION

4.4: Methylenebis(phenyl diisocyanate) (101-68-9) [20-30%]

Information on toxicological effects
Acute toxicity:
Oral 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.
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 OS14A. No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OS14A.

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:

RTCS: N09350000

Isocyanic acid, poly(methylene)poly(phenylene ester) (9016-87-9) [30-40%]

Information on toxicological effects
Acute toxicity:
Oral LD50 no data available
Inhalation LC50 Dermal LD50
Inhalation LC50 Oral - rat - 4-h - 0.49 mg/l
Dermal LD50
Other information on acute toxicity



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Skin corrosion/irritation: no data available
Serious eye damage/eye irritation: no data available
Respiratory or skin sensitisation: May cause allergic respiratory and skin reactions
Germ cell mutagenicity: no data available

Carcinogenicity:
IARC: 3 - Not classifiable as to its carcinogenicity to humans (isocyanic acid, polymethylenepolyphenylene ester)
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: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
Irritation - 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 Harmful if swallowed. Skin Harmful if absorbed through skin. Causes skin irritation. Eyes Causes eye irritation.

Signs and Symptoms of Exposure: salivary gland obstruction, allergic dermatitis, respiratory difficulties, bronchoconstriction. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: no data available

Additional Information:

RTECS: Not available

ECOLOGICAL INFORMATION

4,4'-Methylenediphenyl diisocyanate (101-68-8) [20-30%]

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



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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

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9) [30-40%]

Information on ecological effects

Toxicity: no data available

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: no data available

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 MSDS 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.

TRANSPORT INFORMATION

DOT/TA/IMDG/CAO Non regulated material

REGULATORY INFORMATION

Component (CAS#) [%] - CODES
.....
RQ5000(BS), 4,4'-Methylenediphenyl diisocyanate (101-68-8) [20-30%] CERCLA, HAP, IARC, MASS, NJHS, OSHA/MAC, PA, SARA313, TSCA, TXAIR
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9) [30-40%] IARC, SARA313, TSCA



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Regulatory CODE Descriptions

RO = Reportable Quantity
CERCLA = Superfund Clean up substance
LAP = Hazardous Air Pollutants
LAC = LARC Carcinogen Risks
MAC = MA Massachusetts Hazardous Substances List
NHS = NJ NJ Right-to-Know Hazardous Substances
OSHWAC = OSHA OSHA List of Hazardous Substances
PA = PA PA Right-to-Know List of Hazardous Substances
SARA 313 = SARA 313 Title III Toxic Chemicals
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level

OTHER INFORMATION

Disclaimer:
Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).



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SDS Number: EBP37-9B

CS HYBRID RESIN - Part B

Revision Date: 11/24/2015

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EBP37-9B

PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

Product Name: CS Hybrid Ball Plug - Part B
Chemical Type: Polyurethane Polyol
Material Use: Component of a Polyurethane System
Supplier/Manufacturer: VISE
2237 Stagecoach Rd, Stockton, CA 95275

Emergency: 800.424.9300 (24 HOURS)

HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):
Health, Serious Eye Damage/Eye Irritation, 2A

GHS Label elements, including precautionary statements

GHS Signal Word: WARNING

GHS Hazard Pictograms:



GHS Hazard Statements:

H319 - Causes serious eye irritation

GHS Precautionary Statements:

- P103 - Read label before use.
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301+313 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301+314 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301+315 - 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.
P332+313 - If skin irritation occurs: Get medical advice/attention.
P352 - Wash with soap and water.
P362 - Take off contaminated clothing and wash before reuse.
P501 - Dispose of contents/container to a licensed waste disposal services provider.

Hazards not otherwise classified (HNOC) or not covered by GHS

Route of Entry: Eyes; Ingestion; Inhalation; Skin;
Target Organs: Eyes; Skin; Respiratory system;

Inhalation:

Heating, spraying, foaming or otherwise mechanically dispersing operations may generate vapour or aerosol concentrations sufficient to cause irritation or other adverse effects. Minimal respiratory tract irritation may occur with exposure to a large amount of material.

Skin Contact:

Prolonged or repeated exposure can cause skin irritation or dermatitis in some individuals. May cause watering of the eye and irritation of the conjunctiva.

NFPA: Health = 1, Fire = 0, Reactivity = 0, Specific Hazard = None
HMS III: Health = 1, Fire = 0, Physical Hazard = 0



COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Table with 2 columns: CAS#, Chemical Name. Lists various chemical components like 1,2-Ethanediamine, polyurethane, etc.

FIRST AID MEASURES

Inhalation: 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.
Skin Contact: Remove all contaminated clothing and shoes. Wash skin with large quantities of water and soap. Wash clothing before wearing again and clean shoes. If redness, itching or a burning sensation develops or persists after the area is washed, consult a physician.
Eye Contact: Flush with large amounts of water for 15 minutes. Use fingers to assure that the eyelids are separated and that the eye is being irrigated. Get immediate medical attention.
Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. This material is an aspiration hazard. Never give anything by mouth to an unconscious person. Seek medical attention.

FIRE FIGHTING MEASURES

Flash Point: 277°F
Flash Point Method: COC
Dry powder, foam, carbon dioxide. Use cold water spray to cool fire exposed containers to minimize risk of rupture. A solid stream of water directed into hot burning liquid could cause frothing. If possible, contain fire run off.

ACCIDENTAL RELEASE MEASURES



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Spill: Remove all sources of flames, heating elements, gas engines, etc. Emergency clean-up personnel should wear chemical goggles, rubber or plastic gloves and clothing as required to protect against contact. Prevent spreading and contamination of surface waters and drinking supplies. Notify local health officials and other appropriate agencies if such contamination should occur.

Clean up: With adequate ventilation and appropriate personal protective equipment, cover the area with an inert absorbent material such as clay or vermiculite and transfer to steel waste containers. Ventilate area to remove the remaining vapors.

HANDLING AND STORAGE

Handling Precautions:

Do not smoke or use naked lights, open flames, space heaters or other ignition sources near pouring, frothing or spraying operations. If contamination with isocyanates is suspected, do not reuse containers. Special Emphasis for spray applications of mixed products containing isocyanates: inspect the application area for 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:

When stored between 60°-85° F in sealed containers, typical shelf life is 6 months or more from the date of manufacture. Open containers must be handled properly to prevent moisture pickup.

EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Controls:

All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Uses requiring heating and/or spraying may require more aggressive engineering controls or PPE.

Personal Protective Equipment:

Personal protective equipment

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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. Splash contact Material: butyl-rubber
Minimum layer thickness: 0.3 mm Break through time: 30 min Material tested: Butoltec (KCL 897 / Aldrich 2677647, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 if used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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 186(IEU).

Skin and body protection: Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to



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the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Poly[oxy(methyl-1,2-ethanediy)]-, alpha-, alpha', alpha'', 1,2,3-propanetriyltris[omega-hydroxy- (25791-96-2) [9-20%] : no data available

2,2,4-Trimethyl-1,3-pentanediol diisobutylate (6846-50-0) [35-40%] : no data available

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Non-Pigmented liquid.

Physical State: Liquid

Odor Threshold: No data available

Spec Grav./Density: N/A

Viscosity: No data available

Boiling Point: >500°F

Flammability: None Flammable

Partition Coefficient: No data available

Vapor Pressure: No data available

pH: No data available

Evap. Rate: <1

Decomp Temp: No data available

Odor: Mild

Solubility: No data available

Freezing/Melting Pt.: No data available

Flash Point: 500°F - 644°F

Vapor Density: >1

Auto-ignition Temp: No data available

UFI/LFL: No data available

STABILITY AND REACTIVITY

Reactivity: No specific data

Chemical Stability: Product is stable under normal conditions.

Conditions to Avoid: No specific data

Materials to Avoid: Oxidizing Materials

Hazardous Decomposition: Under normal storage conditions hazardous decomposition products should not be produced.

Hazardous Polymerization: Will not occur.

TOXICOLOGICAL INFORMATION

Poly[oxy(methyl-1,2-ethanediy)]-, alpha-, alpha', alpha'', 1,2,3-propanetriyltris[omega-hydroxy- (25791-96-2) [9-20%]

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - > 69,632 mg/kg

Inhalation: no data available

LD50 Dermal - rabbit - > 21,760 mg/kg

Skin corrosion/irritation: no data available



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Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
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: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional information:

RTECS: QR4325000

2,2,4-Trimethyl-1,3-pentanediol diisobutyrate (6946-50-0) [35-40%]

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - female - > 2,000 mg/kg

Inhalation: no data available

LD50 Dermal - rabbit - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation: Skin - rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation: Eyes - rabbit Result: No eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: Hamster ovary Result: negative

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
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



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potential carcinogen by OSHA.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional information:

Repeated dose toxicity - rat - male - No observed adverse effect level - 150 mg/kg RTECS: SA1420000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ECOLOGICAL INFORMATION

Poly[oxymethyl-1,2-ethanediyl], alpha..alpha., alpha., alpha., "1,2,3-propanetriyltris[omega.-hydroxy- (25791-96-2) (9-20%)]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PB/T and vPvB assessment PB/T/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

2,2,4-Trimethyl-1,3-pentanediol diisobutyrate (6946-50-0) [35-40%]

Information on ecological effects

Toxicity:

Toxicity to fish static test LC50 - Pimephales promelas (fathead minnow) - > 1.55 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to algae Growth inhibition EC50 - Selenastrum capricornutum (green algae) - > 7.49: mg/l - 72 h (OECD Test Guideline 201)

Persistence and degradability: Biodegradability aerobic - Exposure time 28 d Result: 70.73 % - Readily biodegradable. (OECD Test Guideline 301B) Remarks: The 10 day time window criterion is not fulfilled.



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Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

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 MSDS 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.

TRANSPORT INFORMATION

Non DOT/Non RCRA Regulated

Non regulated by IATA, ICAO, IMDG

REGULATORY INFORMATION

Component (CAS#) [%] - CODES

1,2-Ethanediamine, polymer with methyloxirane (25214-63-5) [30-40%] TSCA

Poly[oxy(methyl-1,2-ethanediy)]-, alpha-hydro-omega-hydroxy-, ether with .beta.-D-fructofuranosyl-, alpha-D-glucopyranoside (9049-71-2) [14-21%] TSCA

Poly[oxy(methyl-1,2-ethanediy)]-, alpha-, alpha-, .alpha.-, .alpha.-, 1,2,3-propanetriyl/tris[.omega.-hydroxy- (25791-96-2) [9-20%] TSCA

2,2,4-Trimethyl-1,3-pentanediol disobutylate (6846-50-0) [35-40%] TSCA

Regulatory Code Descriptions

TSCA = TOXIC SUBSTANCES CONTROL ACT



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OTHER INFORMATION

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).