



# **DEFENDER AR50 ISOCYANATE**

SAFETY DATA SHEET

# **SECTION 1. IDENTIFICATION**

PRODUCT NAME	DEFENDER AR50 ISOCYANATE		
MANUFACTURER'S NAME	UMI COATINGS		
ADDRESS	2870 CRESTWOOD BLVD. STE B IRONDALE, AL 35210		
EMERGENCY PHONE	CHEMTREC: 900-424-93000		
INFORMATION PHONE NUMBER	(205) 857-0040		
PRODUCT/RECOMMENDED USES	HIGH PERFORMANCE COATING FOR SPRAY APPLICATION		

# **SECTION 2. HAZARDS IDENTIFICATION**

#### **CLASSIFICATIONS**

# GHS US CLASSIFICATION IN ACCORDANCE WITH: (US) OSHA (29 CFR 1910.1200):

Acute toxicity Oral - Category 4

Eye Damage/Irritation - Category 1

Skin Corrosion/Irritation - Category 1B

Specific Target Organ Toxicity - Repeated Exposure - Category 2

#### **PICTOGRAMS**



#### **SIGNAL WORD**

Danger

# **HAZARD STATEMENTS**

H302 Harmful if swallowed H314 Causes severe skin burns and eye damage H373 May cause damage to organs through prolonged or repeated exposure

# **PRECAUTIONARY STATEMENTS - GENERAL**

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

P264 Wash hands, forearms, and other exposed areas thoroughly after handling P270 Do not eat, drink or smoke when using this product

P280 Wear protective gloves/protective clothing/eye protection/face protection P301+312 IF SWALLOWED: Call a POISON CENTER /doctor if you feel unwell





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P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and

easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor  $\,$ 

P314 Get medical advice/attention if you feel unwell

P363 Wash contaminated clothing before reuse

P405 Store locked up

P501 Dispose of contents/container in accordance with local, regional, national, and international regulations

#### OTHER HAZARDS WHICH DO NOT RESULT IN CLASSIFICATION:

Exposure may aggravate pre-existing eye, skin, or respiratory conditions

#### STATEMENT REGARDING INGREDIENTS OF UNKNOWN TOXICITY:

Up to 3 % of the mixture consists of ingredient(s) of unknown acute toxicitye

# SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### SUBSTANCE:

Not applicable

#### MIXTURES: CONCENTRATION:

Polyoxypropylenediamine (CAS no.: 9046-10-0) 60-80% (weight) Diethylmethylbenzenediamine (CAS no.: 68479-98-1) 15-40% (weight)

# **SECTION 4. FIRST AID MEASURES**

#### **GENERAL ADVICE:**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

# **INHALATION:**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. If symptoms persist, get medical attention.



<sup>\*</sup>The specific chemical identities and/or actual concentrations for one or more listed components are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(i).





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#### **EYE CONTACT**

Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.

#### **SKIN CONTACT**

Take off immediately all contaminated clothing. Rinse skin with water/shower for at least 15 minutes. Call a poison center or doctor if irritation develops or persists. Wash contaminated clothing before reuse.

#### **INGESTION**

Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

#### MOST IMPORTANT SYMPTOMS AND EFFECTS BOTH ACUTE AND DELAYED

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

#### IF INHALED:

May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain. Severe tissue damage may occur due to the corrosive nature of the product.

#### IN CASE OF SKIN CONTACT:

Causes severe skin burns. Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

# **IN CASE OF EYE CONTACT:**

Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

#### **IF SWALLOWED:**

Harmful if swallowed. May cause gastrointestinal irritation and other adverse effects. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. Severe tissue damage may occur due to the corrosive nature of the product.

#### **CHRONIC SYMPTOMS:**

May cause damage to organs through prolonged or repeated exposure.







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#### INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

# **SECTION 5. FIRE FIGHTING MEASURES**

#### **SUITABLE EXTINGUISHING MEDIA**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

Hazardous combustion products: Carbon oxides, nitrogen oxides, and other hazardous fumes and gases.

# **SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS:**

Wear self-contained breathing apparatus for firefighting if necessary.

#### **FURTHER INFORMATION:**

Use water spray to cool unopened containers.

# **SECTION 6. ACCIDENTAL RELEASE MEASURES**

#### PERSONAL PRECAUTIONS. PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use personal protective equipment as described in Section 8. Do not get in eyes, on skin, or on clothing. Ensure adequate ventilation. Evacuate personnel to safe areas.

# METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

# FOR CONTAINMENT:

Contain spilled material if possible. Soak up with inert absorbent material and dispose of in accordance with local and national regulations. Keep in suitable containers for disposal. Do not release into the environment. Stop spill/release if it can be done safely.

#### **REFERENCE TO OTHER SECTIONS:**

For disposal see section 13.







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# **SECTION 7. HANDLING AND STORAGE**

#### PRECAUTIONS FOR SAFE HANDLING

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Use personal protective equipment as described in Section 8. For precautions see section 2.2.

# **CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**STORAGE CONDITIONS:

Keep container tightly closed in a dry, cool, and well-ventilated place.

#### **SPECIFIC END USE(S):**

Apart from the uses mentioned in section 1 no other specific uses are stipulated.

#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **CONTROL PARAMETERS:**

No applicable occupational exposure limits.

#### **APPROPRIATE ENGINEERING CONTROLS:**

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

# INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT (PPE) PICTOGRAMS:





# **EYE/FACE PROTECTION:**

Safety glasses. If splash hazard, wear faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Ensure that eyewash stations and/or safety showers are close to the workstation location.







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#### **SKIN PROTECTION:**

Wear protective gloves. Consult manufacturer specifications for further information.

#### **BODY PROTECTION:**

Wear protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **RESPIRATORY PROTECTION:**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### THERMAL HAZARDS:

No data available.

# **ENVIRONMENTAL EXPOSURE CONTROLS:**

Do not let product enter drains.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

#### INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/FORM (PHYSICAL STATE, COLOR, ETC.)	ONYX BLACK, SPACE GRAY, AND TAN LIQUID
ODOR	SLIGHT AMINE ODOR
ODOR THRESHOLD	NO DATA AVAILABLE
РН	9
MELTING POINT	NO DATA AVAILABLE
INITIAL BOILING POINT AND BOILING RANGE	NO DATA AVAILABLE
FLASH POINT	NO DATA AVAILABLE
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NOT APPLICABLE
UPPER/LOWER FLAMMABILITY LIMITS	NO DATA AVAILABLE
UPPER/LOWER EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOR PRESSURE	NO DATA AVAILABLE
VAPOR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	NO DATA AVAILABLE







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DENSITY	8.4 LBS/GAL
SOLUBILITY(IES)	NO DATA AVAILABLE
PARTITION COEFFICIENT: N-OCTANOL/WATER	NO DATA AVAILABLE
AUTO-IGNITION TEMPERATURE	NO DATA AVAILABLE
DECOMPOSITION TEMPERATURE	NO DATA AVAILABLE
VISCOSITY	350-450 CP
EXPLOSIVE PROPERTIES	NOT EXPLOSIVE
OXIDIZING PROPERTIES	NOT OXIDIZING

#### **OTHER SAFETY INFORMATION:**

No data available.

# **SECTION 10. STABILITY AND REACTIVITY**

# **REACTIVITY:**

Stable under normal conditions.

#### **CHEMICAL STABILITY:**

Stable under normal storage conditions.

# **POSSIBILITY OF HAZARDOUS REACTIONS:**

No data available.

# **CONDITIONS TO AVOID:**

Keep away from direct sunlight, heat and sources of ignition.

# **INCOMPATIBLE MATERIALS:**

Strong oxidizing agents, strong acids, strong bases

# **HAZARDOUS DECOMPOSITION PRODUCTS:**

Hazardous combustion products: Carbon oxides, nitrogen oxides, and other hazardous fumes and gases.





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# **SECTION 11. TOXICOLOGICAL INFORMATION**

## **INFORMATION ON TOXICOLOGICAL EFFECTS**

LIKELY ROUTES OF EXPOSURE: EYE CONTACT. SKIN CONTACT. INHALATION.

#### IF INHALED:

May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain. Severe tissue damage may occur due to the corrosive nature of the product.

#### IN CASE OF SKIN CONTACT:

Causes severe skin burns. Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

# **IN CASE OF EYE CONTACT:**

Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

# **IF SWALLOWED:**

Harmful if swallowed. May cause gastrointestinal irritation and other adverse effects. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. Severe tissue damage may occur due to the corrosive nature of the product.

#### **CHRONIC SYMPTOMS:**

May cause damage to organs through prolonged or repeated exposure.

# **ACUTE TOXICITY:**

Harmful if swallowed.

#### **COMPONENTS:**

Polyoxypropylenediamine (CAS no.: 9046-10-0)

LD50 (oral) - rat - 475 mg/kg LD50 (skin) - 2173 mg/kg LC50 (inhalation) - rat -> 0.74 mg/l (8h)







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# Diethylmethylbenzenediamine (CAS no.: 68479-98-1)

LD50 (oral) – rat - 738 mg/kg LD50 (skin) – rat – > 2000 mg/kg

#### SKIN CORROSION/IRRITATION:

Causes severe skin burns.

# **SERIOUS EYE DAMAGE/IRRITATION:**

Causes serious eye damage.

### **RESPIRATORY OR SKIN SENSITIZATION:**

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 a carcinogen or potential carcinogen by IARC.

**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.

#### **STOT-SINGLE EXPOSURE:**

No data available.

# **STOT-REPEATED EXPOSURE:**

No data available.

#### **ASPIRATION HAZARD:**

No data available.

#### ADDITIONAL INFORMATION:

No data available.







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# **SECTION 12. ECOLOGICAL INFORMATION**

#### **TOXICITY**

No data available.

#### **MOBILITY IN SOIL**

No data available.

# **BIO-ACCUMULATIVE POTENTIAL**

No data available.

#### PERSISTENCE AND DEGRADABILITY

No data available.

#### **RESULTS OF PBT AND VPVB ASSESSMENT:**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

#### **OTHER ADVERSE EFFECT**

No data available.

# **SECTION 13. DISPOSAL CONSIDERATIONS**

#### **DISPOSAL OF THE PRODUCT:**

Disposal should be in accordance with applicable Federal, State and local laws and regulations. Local regulations may be more stringent than State or Federal requirements.

# **DISPOSAL OF CONTAMINATED PACKAGING:**

Dispose of as unused product.



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# **SECTION 14. TRANSPORT INFORMATION**

# DOT (US)

UN Number	2735
Class	8
Packaging Group	III
Proper Shipping Name	Amines, liquid, corrosive, N.O.S. (Polyoxypropylenediamine)

# **IMDG**

UN Number	2735
Class	8
Packaging Group	III
Proper Shipping Name	Amines, liquid, corrosive, N.O.S. (Polyoxypropylenediamine)

# **IATA**

UN Number	2735
Class	8
Packaging Group	III
Proper Shipping Name	Amines, liquid, corrosive, N.O.S. (Polyoxypropylenediamine)





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# **SECTION 15. REGULATORY INFORMATION**

#### SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT IN QUESTION

#### **SARA 302 COMPONENTS**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### **SARA 311/312 HAZARDS:**

Acute Health Hazard, Chronic Health Hazard.

#### **SARA 313 COMPONENTS:**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### **HMIS RATING**

# HEALTH 3\* FLAMMABILITY 1 PHYSICAL HAZARD 0

# **NFPA RATING**



# **SECTION 16. OTHER INFORMATION**

# **DATE OF ISSUE:**

February 2025.

#### **DISCLAIMER**

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. All materials may present unknown hazards and should be used with caution. In no event shall we be held liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if we have been advised of the possibility of such damages.







# **DEFENDER AR50 NAT. RESIN**

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# **SECTION 1. IDENTIFICATION**

PRODUCT ID	DEFENDER AR50 NAT. RESIN
PRODUCT NAME	DEFENDER AR50 NAT. RESIN
REVISION DATE	JULY 29, 2024
VERSION	1.0
MANUFACTURER'S NAME	UMI COATINGS
ADDRESS	2870 CRESTWOOD BLVD. STE B IRONDALE, AL 35210
EMERGENCY PHONE	CHEMTREC: 800-424-9300
INFORMATION PHONE NUMBER	(205) 857-0040
PRODUCT/RECOMMENDED USES	POLYURETHANE COMPONENT, INDUSTRIAL CHEMICALS

# **SECTION 2. HAZARDS IDENTIFICATION**

#### **CLASSIFICATIONS**

Acute aquatic toxicity - Category 1 Chronic aquatic toxicity - Category 1 Serious Eye Damage - Category 1 Skin Irritation - Category 2 Specific Target Organ Toxicity - Repeated Exposure - Category 2

#### **PICTOGRAMS**









#### **SIGNAL WORD**

Danger

# **HAZARD STATEMENTS - HEALTH**

Causes serious eye damage Causes skin irritation

May cause damage to organs through prolonged or repeated exposure.

#### **HAZARD STATEMENTS - ENVIRONMENTAL**

Very toxic to aquatic life with long lasting effects





# **DEFENDER AR50 NAT. RESIN**

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#### **PRECAUTIONARY STATEMENTS - GENERAL**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use

#### PRECAUTIONARY STATEMENTS - PREVENTION

Avoid release to the environment.

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

Wash hands thoroughly after handling.

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

#### **PRECAUTIONARY STATEMENTS - RESPONSE**

Collect spillage.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

IF ON SKIN: Wash with plenty of water.

Specific treatment (see first-aid on this label).

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing. And wash it before reuse.

Get Medical advice/attention if you feel unwell.

# **PRECAUTIONARY STATEMENTS - STORAGE**

No precautionary statement available.

#### **PRECAUTIONARY STATEMENTS - DISPOSAL**

Dispose of contents/container in accordance with local/national/international regulation. Waste management should be in full compliance with national, regional and local laws.

#### **HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)**

None.

ACUTE TOXICITY OF LESS THAN ONE PERCENT OF THE MIXTURE IS UNKNOWN







# **DEFENDER AR50 NAT. RESIN**

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# **SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS**

CAS	CHEMICAL NAME	% BY WEIGHT
0009046-10-0	POLY(PROPYLENEGLYCOL)DIAMINE	48% - 80%
0068479-98-1	DIETHYLTOLUENEDIAMINE	16.5% - 27%
0005285-60-9	BENZENAMINE, 4,4'-METHYLENEBIS[N-(1-METHYLPROPYL)-	4.0% - 16.0%
0025322-69-4	POLYOXYPROPYLENE GLYCOL	0.11% - 2.1%

# **SECTION 4. FIRST AID MEASURES**

#### **INHALATION**

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor.

#### **EYE CONTACT**

Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 30 minutes or until medical aid is available. Immediately call a POISON CENTER/doctor. Take care not to rinse contaminated water into the unaffected eye or onto the face.

#### **SKIN CONTACT**

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately call a POISON CENTER/doctor. Rinse skin with lukewarm, gently flowing water/shower for a duration of 30 minutes or until medical aid is available. Wash contaminated clothing before re-use or discard.

#### **INGESTION**

If vomiting occurs naturally, lie on your side, in the recovery position. Immediately call a POISON CENTER/doctor.

#### MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

No data available.







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#### INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat according to symptoms (decontamination, vital functions), no known specific antidote. Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.

# **SECTION 5. FIRE FIGHTING MEASURES**

#### SUITABLE EXTINGUISHING MEDIA

Small Fire: Dry chemical, foam, carbon dioxide, water-spray or alcohol-resistant foam. Carbon dioxide can displace oxygen. Large Fire: Water spray, fog or alcohol-resistant foam. Use caution when applying carbon dioxide in confined spaces.

#### **UNSUITABLE EXTINGUISHING MEDIA**

Do not use straight stream of water.

#### **SPECIFIC HAZARDS IN CASE OF FIRE**

Fire will produce irritating and toxic gases. Decomposition products may include carbon oxides, nitrous gases, isocyanate vapors.

#### **FIRE-FIGHTING PROCEDURES**

Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Cool containers with flooding quantities of water until well after fire is out. Water spray is recommended to cool or protect exposed materials or structures. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

#### **SPECIAL PROTECTIVE ACTIONS**

Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighter protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.





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# **SECTION 6. ACCIDENTAL RELEASE MEASURES**

#### **EMERGENCY PROCEDURE**

Evacuate and isolate hazard area and keep unauthorized personnel away. Stay uphill and/or upstream. Ventilate closed spaces before entering. Do not touch or walk through spilled material.

#### RECOMMENDED EQUIPMENT

Wear liquid tight chemical protective clothing in combination with positive pressure self-contained breathing apparatus (SCBA). Breathing protection is required.

#### PERSONAL PRECAUTIONS

DO NOT breathe vapor or mist. Do not get in eyes, on skin or on clothing.

#### **ENVIRONMENTAL PRECAUTIONS**

Prevent further leakage or spillage if safe to do so. Prevent spilled material and water from clean-up/firefighting from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

#### METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Ventilate and wash area after clean-up is complete Absorb liquids in vermiculite, dry sand, earth, or similar inert material and deposit in sealed containers for disposal. Dispose of contaminated materials according to federal, state and local regulations.

#### **SECTION 7. HANDLING AND STORAGE**

#### **GENERAL**

DO NOT breathe vapor or mist.

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

All containers must be properly labelled.

Eyewash stations and showers should be available in areas where this material is used and stored.







**DEFENDER AR50 NAT. RESIN** 

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#### **VENTILATION REQUIREMENTS**

Use only with adequate ventilation to control air contaminants to their exposure limits. Report ventilation failures immediately.

#### STORAGE ROOM REQUIREMENTS

ge Room Requirements Store in cool, dry, well-ventilated areas away from heat, direct sunlight and strong oxidizers. Keep containers securely sealed when not in use. Suitable materials for containers: Carbon steel (Iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2). Empty containers retain residue and may be dangerous. Formation of CO2 and build-up of pressure possible. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

Storage temperature: 60 - 80°F. Protect against moisture.

# **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **EYE PROTECTION**

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids.

#### **SKIN PROTECTION**

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Cover as much of the exposed skin as possible to prevent all skin contact. Use of an apron and over- boots of chemically impervious materials such as neoprene or nitrile rubber. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

#### RESPIRATORY PROTECTION

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor absorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place. For emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.







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# **APPROPRIATE ENGINEERING CONTROLS**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value

Chemical Name	CAN_ONsmg CAN	_ONsppm CAN_0	ONtmg CAN_ONtppn	NIOSH Carcinogen	NIOSH STEL (mg/m3)	NIOSH STEL (ppm)	NIOSH TWA (mg/m3)
No applicable chemical							
Chemical Name		A Skin OSHA 1 gnation (Z1, Z2,		OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA TWA (mg/m3)	OSHA TWA (ppm)
No applicable chemical							
Chemical Name	UK_WEL_Note s - United Kingdom_Work place Exposure Standard Notes	UK_WELsmg - United Kingdom_Work place Exposure Limit STEL Short-term exposure limit (15-minutes	UK_WELsppm - United Kingdom_Work place Exposure Limit STEL Short- term exposure limit (15-minutes) ppm	UK_WELtmg - United Kingdom_Work place Exposure Limits TWA Long- term exposure limit (8-hour TimeWeighted Average) mg/m3	UK_WELtppm - United Kingdom _Work place Exposure Limits TWA Long-term exposure limit (8- hour Time Weighted Average) ppm		ACGIH ACGIH TLV Notations Basis
No applicable chemical							
Chemical Name	ACGIH STEL ACG (mg/m3) (ppm	IH STEL ACGIH n) (mg/m		IOELV Directive	: IOELV Notations	IOELV STEL (mg/m3)	IOELV STEL (ppm)
No applicable chemical							
Chemical Name (mg/m3	TWA IOELV TWA (ppm)	R_ED984_Ob servation_Sant e France, ED 984, Observation des offet sur la santé	FR_ED984_VL CT_or_VLE_15 min_mg_m3 - France, ED 984, Des Valeure limites court terme (VLCT) ou Valeure limites d'exposition (VLE) 15 minute, mg/m3	FR_ED984_VL CT_or_VLE_15 min_ppm - France, ED 984, Des Valeure limites court terme (VLCT) ou Valeure limites d'exposition (VLE) 15 minute, ppm	FR_ED984_VL CT_or_VLE_5m in_mg_m3 - France, ED 984, Des Valeure limites court terme (VLCT) ou Valeure limites d'exposition (VLE) 5 minu	FR_ED984_VL CT_or_VLE_5m in_ppm - France, ED 984, Des Valeure limites court terme (VLCT) ou Valeure limites d'exposition (VLE, 15 minute, ppm	professionnelle
No applicable							

chemical





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Chemical Name	_VLEP_Date -	_	 FR_TMP - France, Tableaux des maladies professionnelles
No applicable chemical			

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

# **PHYSICAL AND CHEMICAL PROPERTIES**

DENSITY	8.30000 LB/GAL
DENSITY VOC	0.00000 LB/GAL
% VOC	0.00000%
SPECIFIC GRAVITY	0.99460
APPEARANCE	LIQUID
ODOR THRESHOLD	NO DATA AVAILABLE
ODOR DESCRIPTION	MILD AMMONIA-LIKE
PH	NO DATA AVAILABLE
WATER SOLUBILITY	NO DATA AVAILABLE
FLAMMABILITY	FLASH POINT AT OR ABOVE 200°F/93°C
FLASH POINT SYMBOL	NO DATA AVAILABLE
FLASH POINT	212 °F
VISCOSITY	450 CP
LOWER EXPLOSION LEVEL	NO DATA AVAILABLE
UPPER EXPLOSION LEVEL	NO DATA AVAILABLE
VAPOR PRESSURE	NO DATA AVAILABLE
VAPOR DENSITY	HEAVIER THAN AIR
FREEZING POINT	NO DATA AVAILABLE
MELTIN POINT	NO DATA AVAILABLE
LOW BOILING POINT	586 °F
HIGH BOILING POINT	NO DATA AVAILABLE
AUTO IGNITION TEMP	NO DATA AVAILABLE
DECOMPOSITION PT	NO DATA AVAILABLE
EVAPORATION RATE	SLOWER THAN ETHER
COEFFICIENT WATER/OIL	NO DATA AVAILABLE





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# **SECTION 10. STABILITY AND REACTIVITY**

#### **STABILITY**

Stable under normal storage and handling conditions.

#### **CONDITIONS TO AVOID**

Avoid moisture. Temperature: < 0 degrees Celsius

#### HAZARDOUS REACTIONS/POLYMERIZATION

Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalies. Reacts with amines. Risk of exothermic reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

#### **INCOMPATIBLE MATERIALS**

Water, Amines, Alkalines, Acids, Strong bases, Alcohols, Copper alloys and substances/products that react with isocyanates. Strong oxidising agents

# **HAZARDOUS DECOMPOSITION PRODUCTS**

Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke, Hydrogen cyanide, Isocyanates, Isocyanic Acid, other undetermined compounds.

# **SECTION 11. TOXICOLOGICAL INFORMATION**

#### LIKELY ROUTES OF EXPOSURE

Skin Contact, Eye Contact, Ingestion, Inhalation

#### **ACUTE TOXICITY**

If ingested: In humans, irritation or chemical burns of the mouth, pharynx, esophagus and stomach can develop following ingestion, and injury may be severe and cause death. Repeated and prolonged exposure at low levels may result in adverse skin and eye effects, liver and kidney disorders. May be harmful in contact with skin. Harmful if swallowed.

No data available.

#### **ASPIRATION HAZARD**

No data available







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# **CARCINOGENICITY**

No data available

#### **GERM CELL MUTAGENICITY**

No data available

# REPRODUCTIVE TOXICITY

No data available

#### **RESPIRATORY/SKIN SENSITIZATION**

Inhalation: Severe overexposure may induce respiratory sensitization with asthma like symptoms. These symptoms may be immediate or delayed up to several hours after exposure. Chronic exposures may result in permanent decreases in lung function. Skin sensitization may develop after repeated and/or prolonged contact. No data available.

#### **SERIOUS EYE DAMAGE/IRRITATION**

Vapors can irritate the eyes. Chemical burns may result due to overexposure. Effects of exposure may be delayed.

Causes serious eye damage

#### SKIN CORROSION/IRRITATION

IProduct may be absorbed through skin and cause nausea, headache, and general discomfort.

Causes skin irritation

#### SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE

May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

#### **SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE**

No data available.





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# **SECTION 12. ECOLOGICAL INFORMATION**

#### **TOXICITY**

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

#### **MOBILITY IN SOIL**

No data available.

#### **BIO-ACCUMULATIVE POTENTIAL**

No data available.

#### PERSISTENCE AND DEGRADABILITY

No data available.

### **OTHER ADVERSE EFFECT**

No data available.

# **SECTION 13. DISPOSAL CONSIDERATIONS**

#### **WASTE DISPOSAL**

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Incinerate in a licensed facility. Dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Steel drums must be emptied and can be sent to a licensed drum re-conditioner for reuse, a scrap metal dealer or an approved landfill. Do not attempt to refill or clean containers since residue is difficult to remove. Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated. Do not reuse empty containers. Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes





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# SECTION 14. Transport Information

	IATA Information	IMDG Information	U.S. DOT Information
UN Number	UN3082	UN3082	Not Regulated
Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s. (DIETHYLTOLUENED IAMINE)	Environmentally hazardous substances, liquid, n.o.s. (DIETHYLTOLUENED IAMINE)	Not Applicable
Hazard Class	9	9	Not Applicable
Packaging Group	Ш	III	Not Applicable
Hazardous Substance (RQ)			No Data Available
Marine Pollutant		No Data Available	No Data Available
Note / Special Provision	No Data Available	No Data Available	No Data Available
Toxic-Inhalation Hazard			No Data Available

# **SECTION 15. REGULATORY INFORMATION**

CAS	Chemical Name	% by Weight	Regulation List
0009046-10-0	POLY(PROPYLENEGLYCOL)DIA MINE	48% - 80%	DSL,SARA312,TSCA
0068479-98-1	DIETHYLTOLUENEDIAMINE	16.5% - 27%	DSL,SARA312,TSCA,EU_EINECS,EU_EC_I nventory

The information in this Section does not list components that might have relevant DSL, EU\_EC\_Inventory, EU\_EINECS, SARA312, TSCA regulatory values, if they are present at less than 1%. Please contact manufacturer for more information.





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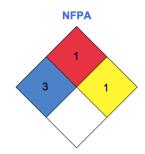
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# **SECTION 16. Other Information**

#### **GLOSSARY**

ACGIH - American Conference of Governmental Industrial Hygienists; CAS - Chemical Abstracts Service (service that maintains the most comprehensive list of chemical sub- stances); Chemtrec - Chemical Transportation Emergency Center; DSL - Domestic Substances List; GHS - "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations; HMIS - Hazardous Material Information Service; IATA - Dangerous Goods Regulations (DGR) for the air transport (IATA); IMDG - International Maritime Dangerous Goods Code; MARPOL - International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant); LC - Lethal Concentration; LD - Lethal Dose; NFPA - National Fire Protection Association; NIOSH - National Institute for Occupational Safety and Health; OEL - Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL - Permissible Exposure Limit; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; SCBA - Self Contained Breathing Apparatus; ppm - parts per million; STEL - Short-term exposure limit; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time-weighted average; US DOT- US Department of Transportation.





(\*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

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