



ESG-215 Resin (A)

Revision Date 05/17/2024

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SECTION 1. IDENTIFICATION

Product name : ESG-215 Resin (A)

Company name : Sika Corporation
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USA
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Telephone : (201) 933-8800

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Emergency telephone : CHEMTREC: 800-424-9300
INTERNATIONAL: +1-703-527-3887

Recommended use of the chemical and restrictions on use : For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION


GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitization : Category 1

GHS label elements

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

Precautionary Statements : **Prevention:**
P261 Avoid breathing mist or vapors.



ESG-215 Resin (A)

Revision Date 05/17/2024

Print Date 05/17/2024

P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labeling

There are no ingredients with unknown acute toxicity used in a mixture at a concentration $\geq 1\%$.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-	1675-54-3	Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Skin Sens. 1; H317	≥ 30 - < 50
1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane	17557-23-2	Skin Irrit. 2; H315 Skin Sens. 1; H317	≥ 5 - < 10
silicon dioxide, chemically prepared	112945-52-5		≥ 1 - < 5

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

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

If inhaled : Move to fresh air.



ESG-215 Resin (A)

Revision Date 05/17/2024

Print Date 05/17/2024

- Consult a physician after significant exposure.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.
- Most important symptoms and effects, both acute and delayed : irritant effects
sensitizing effects
Allergic reactions
Excessive lachrymation
Erythema
Dermatitis
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
- Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Deny access to unprotected persons.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
Local authorities should be advised if significant spillages



ESG-215 Resin (A)

Revision Date 05/17/2024

Print Date 05/17/2024

cannot be contained.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Avoid exceeding the given occupational exposure limits (see section 8).
Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area.
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Store in accordance with local regulations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
silicon dioxide, chemically prepared	112945-52-5	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m ³ / %SiO ₂ (Silica)	OSHA Z-3

The above constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineer-



ESG-215 Resin (A)

Revision Date 05/17/2024

Print Date 05/17/2024

ing controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

- Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
- The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
- Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
- Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : paste
- Color : black
- Odor : amine-like
- Odor Threshold : No data available
- pH : not determined
- Melting point/range / Freezing point : No data available
- Boiling point/boiling range : No data available
- Flash point : 201 °F / 94 °C
(Method: closed cup)



ESG-215 Resin (A)

Revision Date 05/17/2024

Print Date 05/17/2024

Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	0.01 hpa
Relative vapor density	:	No data available
Density	:	1.46 g/cm ³ (68 °F / 20 °C)
Solubility(ies)		
Water solubility	:	immiscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20.55 mm ² /s (104 °F / 40 °C)
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Volatile organic compounds (VOC) content	:	1 g/l Part A + ESG-215 Part B combined
		1 g/l Part A + ESG-215-T Part B combined

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Stable under recommended storage conditions.



ESG-215 Resin (A)

Revision Date 05/17/2024

Print Date 05/17/2024

Conditions to avoid	:	No data available
Incompatible materials	:	No data available
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Components:

Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified due to lack of data.

Germ cell mutagenicity

Not classified due to lack of data.

Carcinogenicity

Not classified due to lack of data.

IARC Not applicable

OSHA Not applicable

NTP Not applicable

Reproductive toxicity

Not classified due to lack of data.

STOT-single exposure

Not classified due to lack of data.



ESG-215 Resin (A)

Revision Date 05/17/2024

Print Date 05/17/2024

STOT-repeated exposure

Not classified due to lack of data.

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified due to lack of data.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1.8 mg/l
aquatic invertebrates Exposure time: 48 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : Do not empty into drains; dispose of this material and its container in a safe way.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
May be harmful to the environment if released in large quantities.
Water polluting material.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.



ESG-215 Resin (A)

Revision Date 05/17/2024

Print Date 05/17/2024

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No. : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(epoxy resin)
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964

IMDG-Code

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(epoxy resin)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Domestic regulation

49 CFR

Not regulated as a dangerous good

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

TSCA list : All chemical substances in this product are either listed as active on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

The following substance(s) is/are subject to a Significant New Use Rule:

Epoxy Modified Resin- ACCN# Not Assigned See 40 CFR § 721.7210
126002

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:



ESG-215 Resin (A)

Revision Date 05/17/2024

Print Date 05/17/2024

Epoxy Modified Resin- ACCN# Not Assigned
126002

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Respiratory or skin sensitization
 : Skin corrosion or irritation
 : Serious eye damage or eye irritation

SARA 313 : 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.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Quartz (SiO₂) >5µm, which is known to the State of California to cause cancer, and Oxirane, (chloromethyl)- Epichlorohydrin, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
OSHA Z-3 / TWA : 8-hour time weighted average

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.



ESG-215 Resin (A)

Revision Date 05/17/2024

Print Date 05/17/2024

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All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 05/17/2024

100000035797
US / Z8

Safety Data Sheet acc. to OSHA HCS

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1 Identification

- **Product identifier**
- **Trade name:** ESG 215 T Hardener
- **Article number:** I215689
- **Application of the substance / the mixture** Epoxy hardener
- **Details of the supplier of the safety data sheet**
Sika Advanced Resins, US
EHS Department
- **Manufacturer/Supplier:**
Supplier's Name: Sika Advanced Resins, US
Headquarters:
30800 Stephenson Hwy
Madison Heights, MI 48071
USA

advancedresins.ehs@us.sika.com
- **Information department:** Product safety department
- **Emergency telephone number:**
During normal opening times: +1 (248) 588-2270
CHEMTREC 24-hour Emergency: +1 (800) 424-9300

* 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 Health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

(Contd. on page 2)

Safety Data Sheet acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: **ESG 215 T Hardener**

(Contd. of page 1)

Acute Tox. 4 H312 Harmful in contact with skin.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

· **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05 GHS06 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

2,2'-iminodiethylamine
diethylmethylbenzenediamine
1-methylimidazole
m-phenylenebis(methylamine)

· **Hazard statements**

Harmful if swallowed or in contact with skin.
Fatal if inhaled.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray
Do not breathe dusts or mists.
Wear protective gloves/protective clothing/eye protection/face protection.
[In case of inadequate ventilation] wear respiratory protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
Specific treatment is urgent (see on this label).
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 1
Reactivity = 0

(Contd. on page 3)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: ESG 215 T Hardener

(Contd. of page 2)

· HMIS-ratings (scale 0 - 4)

HEALTH	*3	Health = *3
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 111-40-0 EINECS: 203-865-4	2,2'-iminodiethylamine	20-50%
CAS: 68479-98-1 EINECS: 270-877-4	diethylmethylbenzenediamine	20-50%
CAS: 616-47-7 EINECS: 210-484-7	1-methylimidazole	10-20%
CAS: 1477-55-0 EINECS: 216-032-5	m-phenylenebis(methylamine)	≥1-<2.5%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
 Immediately remove any clothing soiled by the product.
 Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
 Remove breathing apparatus only after contaminated clothing have been completely removed.
 In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
 Supply fresh air or oxygen; call for doctor.
 In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
 Immediately call a doctor.
 Drink copious amounts of water and provide fresh air. Immediately call a doctor.

(Contd. on page 4)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: ESG 215 T Hardener

(Contd. of page 3)

- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
 No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**
 During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:**
 Mouth respiratory protective device.
 Wear self-contained respiratory protective device.
- **Additional information**
 Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 Mount respiratory protective device.
 Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Use neutralizing agent.
 Dispose contaminated material as waste according to item 13.
 Ensure adequate ventilation.
- **Reference to other sections**
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

111-40-0	2,2'-iminodiethylamine	3 ppm
616-47-7	1-methylimidazole	2.3 mg/m ³

· **PAC-2:**

111-40-0	2,2'-iminodiethylamine	8.5 ppm
616-47-7	1-methylimidazole	25 mg/m ³

· **PAC-3:**

111-40-0	2,2'-iminodiethylamine	51 ppm
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(Contd. on page 5)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: ESG 215 T Hardener

(Contd. of page 4)

616-47-7 1-methylimidazole

150 mg/m³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
 The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
 At this time, the other constituents have no known exposure limits.

111-40-0 2,2'-iminodiethylamine

REL	Long-term value: 4 mg/m ³ , 1 ppm Skin
TLV	Long-term value: 4.2 mg/m ³ , 1 ppm Skin

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.
 Avoid contact with the eyes.
 Avoid contact with the eyes and skin.

(Contd. on page 6)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: ESG 215 T Hardener

(Contd. of page 5)

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Liquid
Color:	Amber colored
Odor:	Amine-like
Odor threshold:	Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	198 °C (388.4 °F)

Flash point: 105 °C (221 °F)

Flammability (solid, gaseous): Not applicable.

(Contd. on page 7)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: *ESG 215 T Hardener*

(Contd. of page 6)

· Ignition temperature:	325 °C (617 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	1 Vol %
Upper:	10 Vol %
· Vapor pressure at 20 °C (68 °F):	0.5 hPa (0.4 mm Hg)
· Density at 20 °C (68 °F):	1.06 g/cm ³ (8.85 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic at 20 °C (68 °F):	150,000 mPas
Kinematic:	Not determined.
· Solvent content:	
VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
· Solids content:	4.7 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

(Contd. on page 8)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: ESG 215 T Hardener

(Contd. of page 7)

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

· LD/LC50 values that are relevant for classification:

111-40-0 2,2'-iminodiethylamine

Oral	LD50	1,553 mg/kg (rat)
Dermal	LD50	1,045 mg/kg (rabbit)

68479-98-1 diethylmethylbenzenediamine

Oral	LD50	738 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

616-47-7 1-methylimidazole

Oral	LD50	1,400 mg/kg (mouse)
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- Primary irritant effect:
- on the skin: Caustic effect on skin and mucous membranes.
- on the eye:
 Strong caustic effect.
 Strong irritant with the danger of severe eye injury.
- Sensitization: Sensitization possible through skin contact.
- Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

- Toxic
- Harmful
- Corrosive
- Irritant
- Very toxic

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.

(Contd. on page 9)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: ESG 215 T Hardener

(Contd. of page 8)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT** NA2735
- **IMDG, IATA** UN2735
- **UN proper shipping name**
- **DOT** Amines, liquid, corrosive, n.o.s. (Diethylenetriamine, m-phenylenebis(methylamine))
- **IMDG** AMINES, LIQUID, CORROSIVE, N.O.S. (DIETHYLENETRIAMINE, m-phenylenebis(methylamine)), MARINE POLLUTANT
- **IATA** AMINES, LIQUID, CORROSIVE, N.O.S. (DIETHYLENETRIAMINE, m-phenylenebis(methylamine))

(Contd. on page 10)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: *ESG 215 T Hardener*

(Contd. of page 9)

· **Transport hazard class(es)**

· **DOT**



· **Class** 8 Corrosive substances
 · **Label** 8

· **IMDG**



· **Class** 8 Corrosive substances
 · **Label** 8

· **IATA**



· **Class** 8 Corrosive substances
 · **Label** 8

· **Packing group**

· **DOT, IMDG, IATA** II

· **Environmental hazards:** Product contains environmentally hazardous substances: diethylmethylbenzenediamine, Epoxy phenol novolac resin

· **Marine pollutant:** Yes
 Symbol (fish and tree)

· **Special precautions for user** Warning: Corrosive substances

· **Danger code (Kemler):** 80

· **EMS Number:** F-A,S-B

· **Segregation groups** Alkalis

· **Stowage Category** A

· **Segregation Code** SG35 Stow "separated from" SGG1-acids

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

(Contd. on page 11)



Safety Data Sheet
 acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: ESG 215 T Hardener

(Contd. of page 10)

· Transport/Additional information:

· **DOT**

· **Quantity limitations**

On passenger aircraft/rail: 1 L

On cargo aircraft only: 30 L

· **Remarks:**

Special marking with the symbol (fish and tree).

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S.
 (DIETHYLENETRIAMINE, M-PHENYLENEBIS(METHYLAMINE)), 8, II, ENVIRONMENTALLY
 HAZARDOUS

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Chemicals regulated by TSCA Section 12(b)**

None of the ingredients is listed.

· **Chemical regulated by TSCA 5(a)(2)rule:**

None of the ingredients is listed.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

(Contd. on page 12)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: ESG 215 T Hardener

(Contd. of page 11)

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Listed in CWC Regulations**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05 GHS06 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

2,2'-iminodiethylamine
 diethylmethylbenzenediamine
 1-methylimidazole
 m-phenylenebis(methylamine)

· **Hazard statements**

Harmful if swallowed or in contact with skin.
 Fatal if inhaled.
 Causes severe skin burns and eye damage.
 May cause an allergic skin reaction.
 May cause respiratory irritation.
 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Do not breathe dusts or mists.
 Wear protective gloves/protective clothing/eye protection/face protection.
 [In case of inadequate ventilation] wear respiratory protection.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 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.

(Contd. on page 13)

Safety Data Sheet acc. to OSHA HCS

Printing date 03/03/2020

Reviewed on 03/03/2020

Trade name: ESG 215 T Hardener

(Contd. of page 12)

- Specific treatment is urgent (see on this label).
- Take off contaminated clothing and wash it before reuse.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** 03/03/2020 / 5
- **Abbreviations and acronyms:**
 - IMDG: International Maritime Code for Dangerous Goods
 - DOT: US Department of Transportation
 - IATA: International Air Transport Association
 - ACGIH: American Conference of Governmental Industrial Hygienists
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - NFPA: National Fire Protection Association (USA)
 - HMIS: Hazardous Materials Identification System (USA)
 - VOC: Volatile Organic Compounds (USA, EU)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - NIOSH: National Institute for Occupational Safety
 - OSHA: Occupational Safety & Health
 - TLV: Threshold Limit Value
 - PEL: Permissible Exposure Limit
 - REL: Recommended Exposure Limit
 - Acute Tox. 4: Acute toxicity – Category 4
 - Acute Tox. 2: Acute toxicity – Category 2
 - Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 - Skin Sens. 1: Skin sensitisation – Category 1
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 - STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
- *** Data compared to the previous version altered.**