Harwell Brothers

Conquering the War on Rust!™



2806

Miozinc 100

Safety Data Sheets

1 Identifier

Product identifier

Trade name: Moisture Cure Urethane Miozinc coating Article number: Harwell Brothers 2806 Miozinc 100 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Harwell Brothers Distribution LLC.

770 E. Main St. Lehi Utah, 84034 Phone 310 744 3325

Information department: Product safety department

Emergency telephone number: **EMERGENCY PHONE NUMBERS:**

USA 1-800 400-2361

2 Hazards Identification

Classification of the substance or mixture



Flame

GHS02

Flammable Liquid 2 H225 Highly flammable liquid and vapor.



Harmful

GHS07

Respiratory Sensitivity 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carcinogen 2 H351 Suspected of causing cancer.

Reproduction 1B H360 May damage fertility or the unborn child.

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



Health Hazard

GHS08

Skin Irritant 2 H315 Causes skin irritation.

Eye Irritant.2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction. *STOT SE 3 H335 May cause respiratory irritation

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^{*}Specific target organ toxicity

Label elements

GHS label elements

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

Hazard Pictograms GHS02 GHS07 GHS08

Signal word Danger

Hazard- determining components of labeling

4,4'-methylenediphenyl dilsocyante

Talc (Mg3H2(SiO3)4)

Ferric oxide

Solvent naphtha (petroleum), light aroma, heavy alkylate

Hazard statements

H225	Highly flammable liquid and vapor.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

H335 May cause respiratory irritation.

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

Precautionary statements

Keep out of reach from children.

P210 K	Keep away from heat/sparks/op	en flames/hot surfaces.	- No smoking.
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P241 Use explosion-proof electrical/ventilating/lighting/equipment.

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

P284 Wear respiratory protection.

P280 *Wear protective gloves / eye protection / face protection.*

P280 Wear protective gloves.

P280 Wear eye protection / face protection.

P240 Ground/bond container and receiving equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of the workplace.

P201 Obtain special instructions before use.

P202 Do not start until all safety precautions have been read and understood.

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

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see on this label). P321

P342+P311 *If experiencing respiratory symptoms: Call a poison center/doctor.*

P304+P340IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a poison center/doctor if you feel unwell. P363 Wash contaminated clothing before reuse.

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P308+P313	IF exposed or concerned: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P370+P378	In case of fire: Use for extinction: CO2, powder, or water spray.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

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

regulations

Classification system:

NFPA ratings (scale 0 -4)

· Classification system:

· NFPA ratings (scale 0 - 4)

Health = 2

Reactivity = 0

· HMIS-ratings (scale 0 - 4)

REACTIVITY \bigcirc Reactivity = 0

Health = *2Fire = 3

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:

7440-66-6	zinc powder -zinc dust (stabilized)	30-60%
1309-37-1	Ferric oxide	10-30%
540-88-5	tert-butyl acetate	10-30%
14807-96-6	Talc (Mg3H2(SiO3)4)	5-10%
872-50-4	N-methyl-2-pyrrolidone	.1-1%
101-68-8	4,4'-methylenediphenyl diisocyanate	1-5%
110-43-0	Methyl amyl ketone	1-5%
9016-87-9	diphenylmethanediisocyanate,isomeres and homologues	1-5%
1314-13-2	zinc oxide	1-5%
64742-95-6	Solvent naphtha (petroleum), light aroma.	1-5%
5873-54-1	o-(p-isocyanato benzyl)phenyl isocyanate	.1-1%
14808-60-7	Quartz (SiO2)	.1-1%
64742-82-1	Naphtha (petroleum), hydro desulfurized heavy alkylate	.1-1%

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4 First Aid

Description of first aid measures -

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident

After inhalation:

Supply fresh air and to be sure call for a doctor.

After skin contact:

Immediately wash with water, soap, and rinse thoroughly.

After eye contact:

Rinse opened eye for several minutes under running water.

After swallowing:

If symptoms persist consult doctor.

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

Extinguishing media

Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents: Water with full jet

Special hazards arising from the substance or mixture No further relevant information available.

Advice for firefighters

Protective equipment: Mouth respiratory protective device

6 Accidental Release

Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away

Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system does 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). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation. Do not flush with water or aqueous cleansing agents

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.

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 ignition sources away from product. Do not smoke. Protect against electrostatic charges. Keep respiratory protective device available.

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Conditions for safe storage, including any incompatibilities:

Storage:

Requirements to be met by storerooms and receptacles: Store in a cool location.

Information about storage in one common storage facility: Not required

Further information about storage conditions: Keep receptacle tightly sealed. Store in cool, dry conditions in well-sealed receptacles. 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

· Com	ponents with limit values that require monitoring at the workplace:
540-8	88-5 tert-butyl acetate
PEL	Long-term value: 950 mg/m³, 200 ppm
REL	Long-term value: 950 mg/m³, 200 ppm
TLV	Long-term value: 950 mg/m³, 200 ppm
101-0	68-8 4,4'-methylenediphenyl diisocyanate
PEL	Ceiling limit value: 0.2 mg/m³, 0.02 ppm
REL	Long-term value: 0.05 mg/m^3 , 0.005 ppm
	Ceiling limit value: 0.2* mg/m³, 0.02* ppm *10-
	min
TLV	Long-term value: 0.051 mg/m³, 0.005 ppm
110-4.	3-00 methyl amyl ketone
PEL	Long-term value: 435 mg/m³, 100 ppm
REL	Long-term value: 435 mg/m³, 100 ppm
TLV	Long-term value: 434 mg/m³, 100 ppm BEI
· Ingre	edients with biological limit values:
872-5	50-4-methyl-2-pyrrolidone
BEI	100 ml
	Medium: urine
	Time: end of shift
	Parameter: 50-Hydroxy-N-methyl- 2 -pyrrolidone

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 and skin.

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Breathing equipment:

During mixing, handling, and application: Splash goggles. Full protective clothing. Gloves (impervious). Wear suitable respiratory equipment. When air concentrations are not known (or above the TLV), an air supplied respirator is required. Refer to OSHA Respiratory Protection Standard (29 CFR 1910.134). In presence of air movement, air-purifying (cartridge type) respirators are not the best protection but can be used, if you replaced them frequently. Change cartridges after 8h max or less due to their low warning properties. When in a confined space wear MSHA/NIOSH approved self-contained breathing apparatus or equivalent and full protective gear **Protection of Hands:**

Protective Gloves: The Glove material must be resistant product. Due to not having test data, no recommendation to the type of glove can be given for the product. Selection of the glove material should be done on bases of the chemical make-up of the product. Material of the glove by selection of the glove dose not only depend on material, on the quality varies from manufacture to manufacture. This should be done by glove manufacture.

Eye Protection:

Tightly sealed Googles

9 Physical and Chemical Properties

Vapor pressure at 20 °C (68 °F):	41 hPa (31 mm Hg)
Upper:	Not determined.
Lower:	Not determined.
Explosion limits:	
Danger of explosion: Product is not	explosive. However, formation of explosive air/vapor mixtures are possib
Auto igniting:	Product is not self-igniting.
Decomposition temperature:	Not determined.
Ignition temperature:	
Flammability (solid, gaseous):	Not applicable.
Flash point:	59 °F (15 °C)
Boiling point/Boiling range:	207 °F (97 °C)
Change in condition Melting point/Melting range:	Undetermined.
pH-value:	Not determined.
Odor threshold:	Not determined.
Odor:	Aromatic
Color:	Assorted colors
Form:	Fluid
Information on basic physical and General Information · Appearance:	<u> </u>

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Density at 68 °F (20 °C): 17.775-18.776 lbs./gal (2.13-2.25 g/cm³)

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: Not determined **Kinematic:** Not determined.

Solvent Content:

Solids content: 84-88 %

Other information: No further relevant information available.

10 Stability and Reactivity

Reactivity

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.

11 Toxicity

Information on toxicological effects

Acute toxicity:

· LD/LC50	· LD/LC50 values that are relevant for classification:		
1309-37-1	Ferric oxi	de	
Oral	LD50	>5000 mg/kg (rat)	
101-68-8 4	,4'-methyl	enediphenyl diisocyanate	
Oral	Oral LD50 2200 mg/kg (mouse)		
64742-95-	64742-95-6 Solvent naphtha (petroleum), light aroma.		
Oral	LD50	>6800 mg/kg (rat)	
Dermal	LD50	>3400 mg/kg (rab)	
Inhalative $ LC50/4 h > 10.2 \text{ mg/l (rat)}$			
1314-13-2	1314-13-2 zinc oxide		
Oral	LD50	> 5000 mg/kg (rat)	

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Primary irritant effect:

On the skin: No irritant effect. On the eye: No irritating effect.

Sensitization:

Sensitization possible through inhalation. Sensitization possible through skin contact.

Additional toxicological information:

This product may cause cancer.

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

Harmful Irritant

Carcinogenic categories

· IARC (Inte	ernational Agency for Research on Cancer)	
101-68-8	4,4'-methylenediphenyl diisocyanate	3
9016-87-9	diphenylmethanediisocyanate,isomeres and homologues	3
· NTP (Natio	onal Toxicology Program)	
None of the	e ingredients is listed.	
· OSHA-Ca	(Occupational Safety & Health Administration)	
None of the	e ingredients is listed.	

12 Ecological

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bio accumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Ecotoxic effects:

Remark: Harmful to fish

Additional ecological information:

General notes:

Water hazard class 3 (Self-assessment): extremely hazardous for water. Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground. Harmful to aquatic organisms

13 Disposal recommendations

Waste treatment methods

Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system ·

Uncleaned packaging's:

Recommendation: Disposal must be made according to official regulations

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111	10	1 1.
I A -	ranch	ortation

UN-Number

DOT, ADR, IMDG, IATA UN1263

UN proper shipping name

DOTPaint ADR1263 Paint IMDG, IATA **PAINT**

Packing group

DOT, ADR, IMDG, IATA II

Environmental hazards:

Marine pollutant: No

Special precautions for user Warning: Flammable liquids

Danger code (Kemler): 33 EMS Number: *F-E,<u>S-E</u>*

Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

Transport Hazard Class



Class Labels Flammable Liquids 3

ADR, IMDG,



Class Label Flammable Liquids 3

LATA



Environmental **Toxicity**



Class Label

Flammable Liquids 3

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Transport/Additional information:	
DOT	
Quantity limitations	on passenger aircraft/rail: 5 L
	on cargo aircraft only: 60 L
ADR	
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN1263, Paint, 3, II
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

15 Regulatory

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

· Section 35	5 (extremely hazardous substances):
4098-71-9	Isophorone diisocyanate
· Section 31.	3 (Specific toxic chemical listings):
117-81-7	bis(2-ethylhexyl) phthalate
4098-71-9	Isophorone di-isocyanate
95-63-6	1,2,4-trimethylbenzene
1330-20-7	xylene
872-50-4	N-methyl-2-pyrrolidone
822-06-0	hexamethylene-di-isocyanate
111-76-2	2-butoxyethanol
100-41-4	ethylbenzene
· TSCA (Tox	xic Substances Control Act):
tert-butyl a	ecetate
titanium dioxide	
Hexane, 1,6-diisocyanato-, homopolymer	
Stoddard solvent	
Homopolymer of IPDI	
methyl amyl ketone	
Solvent naphtha (petroleum), light aroma.	
silicon dioxide, chemically prepared	

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· TSCA new (21st Century Act) (Substances not listed)		
7429-90-5	7429-90-5 aluminum powder (stabilized)	
53880-05-0 Homopolymer of IPDI		

Proposition 65

· Chemicals known to cause cancer:		
13463-67-7	titanium dioxide	
117-81-7	bis(2-ethylhexyl) phthalate	
1333-86-4	Carbon black	
14808-60-7	Quartz (SiO2)	
100-41-4	ethylbenzene	
Chemicals known to cause reproductive toxicity for females:		
None of the ingredients is listed.		
· Chemicals known to cause reproductive toxicity for males:		
117-81-7 bis(2-ethylhexyl) phthalate		
Chemicals known to cause developmental toxicity:		
117-81-7 b	is(2-ethylhexyl) phthalate	
872-50-4 N	I-methyl-2-pyrrolidone	

Carcinogenic categories

· EPA (Env	ironmental Protection Agency)	
117-81-7	bis(2-ethylhexyl) phthalate	B2
1330-20-7	xylene	I
111-76-2	2-butoxyethanol	NL
100-41-4	ethylbenzene	D
· TLV (Thre	eshold Limit Value established by ACGIH)	
titanium di	oxide	A4
bis(2-ethylhexyl) phthalate		A3
Carbon black		A4
xylene		A4
zirconium	dioxide	A4
· NIOSH-C	a (National Institute for Occupational Safety and Health)	
13463-67-	7 titanium dioxide	
117-81-	7 bis(2-ethylhexyl) phthalate	
1333-86-	4 Carbon black	
14808-60-	7 Quartz (SiO2)	

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GHS label element: The product is classified and labeled according to the Globally Harmonized System (GHS Hazard pictogram



GHS02



GHS07



GHS08

· Signal word Danger

Hazard-determining components of labeling:

4,4'-methylenediphenyl diisocyanate, diphenylmethanediisocyanate,isomeres and homologues (p-isocyanato benzyl)phenyl isocyanate light aroma

Hazard statements

H225 Highly flammable liquid and vapor.

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

H317 May cause an allergic skin reaction.

H350 May cause cancer.

Precautionary statements

1 reculiionary sta	wenterus
P210	Keep away from heat/sparks/open flames/hot surfaces No smoking.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P284	Wear respiratory protection.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P280	Wear protective gloves / eye protection / face protection.
P280	Wear protective gloves.
P280	Wear eye protection / face protection
P240	Ground/bond container and receiving equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing remain at workplace.
P201	Obtain special instructions before use.
P202	Do not start until all safety precautions (personal) have analyzed, read, and understood.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately al contaminated clothing

P321 Specific treatment (see on this label).

P304+P340 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for

Breathing

P363 Wash contaminated clothing before reuse. P308+P313 If exposed or concerned: Get medical advice

P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P370+P378 *In case of fire: Use for extinction: CO2, powder, or water spray.*

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Harwell Brothers

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

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

National regulations:

Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.

Exceptions can be accommodated by the authorities in certain cases.

Chemical safety assessment:

A Chemical Safety Assessment has not been conducted, work my not proceed

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

Department issuing SDS: Product safety department

Contact: HS REG.DEPART.REG.SS

Date of preparation / last revision

Abbreviations and acronyms:

ADR: Accord European sur le transport des merchandises danger uses par Route (European Agreement concerning the International

Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for

Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association CGIH: American Conference of Governmental

Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical

Substances

 ${\it CAS: Chemical Abstracts Service (division of the}$

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

Flam. Liq.2: Flammable liquids, Hazard Category

Skin Irrit. 2: Skin corrosion/irritation, Hazard

Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation,

Hazard Category 2A

Resp. Sens.1: Sensitization Respiratory., Hazard

Category 1

Skin Sens.1: Sensitization Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

Repr 1B: Reproductive toxicity, Hazard Category

 ${\it 1BSTOTSE~3: Specific~target~organ~toxicity~-}$

Single exposure, Hazard Category 3STOT RE 2:

Specific target organ toxicity - Repeated exposure,

Hazard Category 2

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