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SAFETY DATA SHEET

1. Identification

Product identifier CIMGUARD® R562

CORROSION INHIBITOR

Other means of identification

SDS No. Not applicable

Recommended use of the chemical and restrictions on use

Recommended use CORROSION INHIBITOR

Restrictions on use Not available.

Details of manufacturer or importer

Manufacturer

Company name CIMCOOL® Korea Inc

Address 255,Gongdan-ro,Onsan-eup,Ulju-gun,Ulsan,Korea

Telephone +82-52-239-2333 **Emergency telephone** 003-0813-2549

number (Korea CHEMTREC)

Importer / Supplier

Company name CIMCOOL® Korea Inc

Address C/- DuBois Chemicals Australia Pty Ltd

305 Frankston Dandenong Road Dandenong South VIC 3175

Australia

Telephone (General

Information)

+ 61 3 9768 3860

Emergency Telephone

Number (Australia) Emergency Telephone

Number (Australia CHEMTREC)

131 126 (Poison Information Centre)

+ 61 2 9037 2994

2. Hazard(s) identification

Classification of the hazardous chemical

Physical hazardsCorrosive to metalsCategory 1Health hazardsAcute toxicity, oralCategory 4Skin irritationCategory 2Serious eye irritationCategory 2

Environmental hazards Not classified.

Label elements, including precautionary statements

Hazard symbol(s)



Corrosion Exclamation

mark

Signal word Warning

Hazard statement(s) May be corrosive to metals. Harmful if swallowed. Causes skin irritation. Causes serious eye

irritation.

Precautionary statement(s)

Keep only in original container. Wash thoroughly after handling. Do not eat, drink or smoke when Prevention

using this product. Wear eye protection/face protection. Wear protective gloves.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF Response

ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin

irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Absorb spillage to

prevent material damage.

Storage Store in corrosive resistant container with a resistant inner liner.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification

None known.

Supplemental information 15% of the mixture consists of component(s) of unknown acute inhalation toxicity. 5% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 5% of

the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixture

| Identity of chemical ingredients | CAS number and other of unique identifiers | Concentration of ingredients |
|--|--|---------------------------------|
| MONOETHANOLAMINE | 141-43-5 | 5 - < 10 |
| Other components below reportable levels | | 90 - 100 |

The exact percentages of hazardous ingredients have been withheld as a trade secret.

4. First-aid measures

Description of necessary first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist. Under normal conditions of

intended use, this material is not expected to be an inhalation hazard.

Skin contact Rinse skin with water. If skin irritation or rash occurs: Get medical advice/attention. Wash

contaminated clothing before reuse.

Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical Eye contact

attention if irritation develops and persists.

Rinse mouth thoroughly. Drink 1 or 2 glasses of water. Do not induce vomiting. If vomiting occurs, Ingestion

keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if

you feel unwell.

Personal protection for first-aid responders

If exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

Symptoms caused by exposure

Medical attention and special

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

treatment

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing

media

Not applicable, non-combustible.

Specific hazards arising from

the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment

and precautions for fire

Wear suitable protective equipment.

Fire fighting

fighters

equipment/instructions

Move containers from fire area if you can do so without risk.

2 X Hazchem code

Use standard firefighting procedures and consider the hazards of other involved materials. In the Specific methods

event of fire and/or explosion do not breathe fumes.

Material name: CIMGUARD® R562 SDS Australia

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

Methods and materials for containment and cleaning up

Local authorities should be advised if significant spillages cannot be contained. This product is miscible in water. Prevent entry into waterways, sewer, basements or confined areas. Clean up in accordance with all applicable regulations.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling

Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid breathing mist/vapors. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Store in tightly closed container. Keep only in the original container. If frozen, product may separate. Thaw completely at room temperature and stir thoroughly prior to use. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls and personal protection

Control parameters

Follow standard monitoring procedures.

Occupational exposure limits

| Components | Туре | Value |
|------------------------------------|--------------|-----------|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 15 mg/m3 |
| | | 6 ppm |
| | TWA | 7.5 mg/m3 |
| | | 3 ppm |
| US. ACGIH Threshold Limit Value | es | |
| Components | Туре | Value |
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 6 ppm |
| | TWA | 3 ppm |
| UK. EH40 Workplace Exposure L | imits (WELs) | |
| Components | Туре | Value |
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 7.6 mg/m3 |
| | | 3 ppm |
| | TWA | 2.5 mg/m3 |
| | | 1 ppm |

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds

in the Work Area (DFG)

| Components | Туре | Value | Form |
|------------------------------------|------|------------|--------------------|
| MONOETHANOLAMINE (CAS 141-43-5) | TWA | 0.51 mg/m3 | Vapor and aerosol. |
| | | 0.2 ppm | Vapor and aerosol. |

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower

Individual protection measures, for example personal protective equipment (PPE)

Eye/face protection Do not get in eyes. Wear safety glasses with side shields (or goggles). Eye wash fountain is

recommended.

Skin protection

Hand protection Nitrile gloves are recommended.

Other Wear appropriate chemical resistant clothing.

In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

When using, do not eat, drink or smoke. Do not get in eyes, on skin, on clothing. Always observe Hygiene measures

good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove

contaminants.

9. Physical and chemical properties

Appearance CLEAR Liquid. Physical state Liquid. Form Color Not available.

CHEMICAL Odor Odor threshold Not available.

10.9

Melting point/freezing point 32 °F (0 °C) estimated Initial boiling point and boiling 212 °F (100 °C) estimated

range

Not Applicable Flash point

Like water when diluted **Evaporation rate**

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower

Not available.

Flammability limit - upper

Not available.

Explosive limit - lower (%) Not available. Explosive limit - upper (%) Not available. Not available. Vapor pressure Not available. Vapor density Not available. Relative density

Solubility(ies)

100 % Water Miscible Solubility (water)

Partition coefficient

(n-octanol/water)

Not available.

Not available **Auto-ignition temperature**

Decomposition temperature Not available. **Viscosity** Not available.

Other physical and chemical parameters

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

pH in aqueous solution 9.5 @ 2%

Specific gravity 1.110

10. Stability and reactivity

Reactivity May be corrosive to metals.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Acids. Oxidizing agents. Aluminum. Do not add sodium nitrite or other nitrosating agents which

may form cancer causing nitrosamines.

Hazardous decomposition

products

Smoke, fumes, oxides of nitrogen, and oxides of carbon

11. Toxicological information

Information on possible routes of exposure

Inhalation May cause irritation to the respiratory system.

Skin contact Causes skin irritation.

Eye contact Causes serious eye irritation.

Ingestion Harmful if swallowed.

Symptoms related to exposure Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct contact with

eyes may cause temporary irritation. Skin irritation.

Acute toxicity

Components Species Test Results

MONOETHANOLAMINE (CAS 141-43-5)

Acute Dermal

LD50 Rabbit 1025 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization Due to partial or complete lack of data the classification is not possible.

Germ cell mutagenicityNo data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicityThis product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard Not classified.

Chronic effects Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

Other information The classification for health and environmental hazards is derived by a combination of calculation

methods and test data, if available.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the

possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Material name: CIMGUARD® R562 SDS Australia

Components **Species Test Results**

MONOETHANOLAMINE (CAS 141-43-5)

Aquatic

LC50 Fish Rainbow trout, donaldson trout 114 - 196 mg/l, 96 hours

(Oncorhynchus mykiss)

Acute

Crustacea FC50 Daphnia 65 mg/l, 48 hours ECHA

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

MONOETHANOLAMINE -1.31

Bioconcentration factor

(BCF)

MONOETHANOLAMINE < 3.2, ESTIMATED

Mobility in soil This product is miscible in water.

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation Other adverse effects

potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal methods Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of

contents/container in accordance with local/regional/national/international regulations.

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some

product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Since emptied containers may retain product residue, follow label warnings even after container is Contaminated packaging

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

14. Transport information

ADG

3267 UN number

UN proper shipping name

CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (MONOETHANOLAMINE) Transport hazard class(es)

8 Class Subsidiary risk Ш **Packing group**

Environmental hazards Not available.

Hazchem code

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

RID

3267 **UN number**

CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (MONOETHANOLAMINE) **UN proper shipping name**

Transport hazard class(es)

8 Class Subsidiary risk 8 Label(s) Ш **Packing group**

Environmental hazards

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number 3267

UN proper shipping name Corrosive liquid, basic, organic, n.o.s. (MONOETHANOLAMINE)

Transport hazard class(es)

8 Class Subsidiary risk Ш Packing group **Environmental hazards** No. ERG Code 8L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo

aircraft

Allowed with restrictions.

Cargo aircraft only

Allowed with restrictions.

Not established.

IMDG

UN number 3267

UN proper shipping name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (MONOETHANOLAMINE)

Transport hazard class(es)

Class 8
Subsidiary risk Packing group III
Environmental hazards

Marine pollutant No. EmS F-A, S-B

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and

the IBC Code

ADG



IATA; IMDG; RID



15. Regulatory information

Safety, health and environmental regulations

National regulations This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the

preparation of Safety Data Sheets for Hazardous Chemicals.

Australia Medicines & Poisons Appendix A

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix B

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix D

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix E

MONOETHANOLAMINE (CAS 141-43-5)

Australia Medicines & Poisons Appendix F

MONOETHANOLAMINE (CAS 141-43-5)

Australia Medicines & Poisons Appendix G

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix H

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix I

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix J

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix K

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 10

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 2

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 3

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 4

MONOETHANOLAMINE (CAS 141-43-5)

Australia Medicines & Poisons Schedule 5

MONOETHANOLAMINE (CAS 141-43-5)

Australia Medicines & Poisons Schedule 6

MONOETHANOLAMINE (CAS 141-43-5)

Australia Medicines & Poisons Schedule 7

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 8

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 9

Poisons schedule number not allocated.

High Volume Industrial Chemicals (HVIC)

MONOETHANOLAMINE (CAS 141-43-5)

1000 - 9999 TONNES See the regulation for additional information.

Importation of Ozone Deleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)

Not listed.

National Pollutant Inventory (NPI) substance reporting list

Not listed.

Prohibited Carcinogenic Substances

Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)

Not listed.

Resricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)

Not listed.

Restricted Carcinogenic Substances

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region Inventory name

Australia Australian Inventory of Chemical Substances (AICS)

On inventory or exempt (yes/no)*

Ye

Material name: CIMGUARD® R562 SDS Australia

| Country(s) or region | Inventory name On inventory o | r exempt (yes/no)* |
|------------------------------------|---|--------------------|
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |
| *A "Yes" indicates that all compor | nents of this product comply with the inventory requirements administered by the governing co | ountry(s) |

^{16.} Other information

 Issue date
 07-03-2014

 Revision date
 01-20-2021

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge,

information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other

materials or in any process, unless specified in the text.

Revision information This document has undergone significant changes and should be reviewed in its entirety.