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**Gardolene® D 6812 (previously Gardo TP 10724/2)**

Version 0.1

Revision Date 06/05/2015

Print Date 12/22/2015

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Gardolene® D 6812 (previously Gardo TP 10724/2)

Substance number : REL\_11388

Chemical usage : Surface Pre-treatment material

**Manufacturer or supplier's details**

Company : Chemetall US, Inc.

Address : 675 Central Avenue  
New Providence NJ 07974

Telephone : (800) 526-4473

Telefax : (908) 464-4658

Emergency telephone no : CHEMTREC - 800-424-9300, 1-703-527-3887 (International)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Appearance	liquid
Colour	green
Odour	acid
Hazard Summary	Liquid or vapor causes burns which may be delayed. Causes burns. Harmful if swallowed. May cause cancer.

**GHS Classification**

Skin irritation : Category 2

Eye irritation : Category 2A

Carcinogenicity : Category 1B

**GHS Label element**

Hazard pictograms :



Signal word : Danger

Hazard statements : Causes skin irritation.  
Causes serious eye irritation.

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May cause cancer.

Precautionary statements : **Prevention:**  
 Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Wash skin thoroughly after handling.  
 Wear eye protection/ face protection.  
 Wear protective gloves.  
 Use personal protective equipment as required.

**Response:**  
 IF 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 exposed or concerned: Get medical advice/ attention.  
 If skin irritation occurs: Get medical advice/ attention.  
 If eye irritation persists: Get medical advice/ attention.  
 Take off contaminated clothing and wash before reuse.

**Storage:**  
 Store locked up.

**Disposal:**  
 Dispose of contents/ container to an approved waste disposal plant.

**Potential Health Effects**

Inhalation : no

Skin : yes

Ingestion : yes

Aggravated Medical Condition : None known.

**Carcinogenicity:**

**IARC** Group 2A: Probably carcinogenic to humans

Chromic (III) nitrate 13548-38-4

**ACGIH** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**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.

**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.

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


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Substance / Mixture :

**Hazardous components**

Component	CAS-No.	Weight percent
Manganese gluconate	6485-39-8	5 - 10
Chromium (III) phosphate	7789-04-0	5 - 10
Chromic (III) nitrate	13548-38-4	5 - 10
Citric acid	77-92-9	5 - 10
Manganese (II) citrate	10024-66-5	1 - 5

Unidentified ingredients are considered not hazardous under Federal Hazard Communication Standard (29CFR 1910.1200).

Specific chemical identity of composition has been withheld as a trade secret.

Exact percentage of composition has been withheld as a trade secret.

**SECTION 4. FIRST AID MEASURES**

- If inhaled : Remove to fresh air.  
If symptoms persist, call a physician.  
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.  
Take off contaminated clothing and shoes immediately.  
Get medical attention immediately if irritation develops and persists
- In case of eye contact : Rinse immediately with plenty of water for at least 15 minutes.  
Keep eye wide open while rinsing.  
Get medical attention immediately
- If swallowed : Rinse mouth.  
Drink 1 or 2 glasses of water.  
Never give anything by mouth to an unconscious person.  
Get medical attention immediately

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Foam  
Water spray
- Further information : Use water spray to cool unopened containers.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.  
Use personal protective equipment.
- Methods and materials for containment and cleaning up : Ventilate area.  
Neutralize with lime milk or soda and flush with plenty of water.  
Clean up with inert absorbant material.  
Keep in suitable, closed containers for disposal.  
Flush with plenty of water.
- Additional advice : Never return spills in original containers for re-use.

**SECTION 7. HANDLING AND STORAGE**

- Advice on safe handling : Add this product to surface of solution slowly to avoid spattering  
Do not add large amounts of product to solution at any one time.  
Use with adequate ventilation.
- Conditions for safe storage : KEEP FROM FREEZING  
Keep containers dry and tightly closed to avoid moisture absorption and contamination.  
Store indoors in a cool, well-ventilated place

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Manganese gluconate	6485-39-8	C	5.000000 mg/m3	OSHA Z-1
		C	5.000000 mg/m3	OSHA P0
		TWA	1.000000 mg/m3	NIOSH REL
		ST	3.000000 mg/m3	NIOSH REL
Chromium (III) phosphate	7789-04-0	TWA	0.500000 mg/m3	OSHA Z-1
		TWA	0.500000 mg/m3	ACGIH
		TWA	0.500000 mg/m3	NIOSH REL
Chromic (III) nitrate	13548-38-4	TWA	0.500000 mg/m3	OSHA Z-1
		TWA	0.500000 mg/m3	ACGIH
		TWA	0.500000 mg/m3	NIOSH REL
Manganese (II) citrate	10024-66-5	C	5.000000 mg/m3	OSHA Z-1
		C	5.000000 mg/m3	OSHA P0
		TWA	1.000000 mg/m3	NIOSH REL
		ST	3.000000 mg/m3	NIOSH REL

**Personal protective equipment**

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Respiratory protection	: If the occupational exposure limits cannot be met, in exceptional cases suitable respiratory equipment should be worn only for a short period of time.
Hand protection	
Remarks	: Impervious butyl rubber gloves
Eye protection	: Chemical resistant goggles must be worn. Face-shield
Skin and body protection	: Complete suit protecting against chemicals
Hygiene measures	: Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection. Wear suitable protective clothing. Wash hands before breaks and immediately after handling the product. Provide adequate ventilation. Do not inhale fumes. Keep away from food and drink.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: liquid
Colour	: green
Odour	: acrid
pH	: < 2.5
Freezing point	: 0 °C
Boiling point/boiling range	: no data available
Flash point	: does not flash
Evaporation rate	: 1 Water = 1
Upper explosion limit	: Not applicable.
Lower explosion limit	: Not applicable.
Vapour pressure	: no data available
Relative vapour density	: 0
Relative density	: 1.257
Bulk density	: 10.47 lb/gal
Solubility(ies)	
Water solubility	: completely soluble
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: No data available
Thermal decomposition	: No data available

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Viscosity, dynamic : No data available

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**SECTION 10. STABILITY AND REACTIVITY**

Conditions to avoid : freezing  
 Direct sources of heat.

Incompatible materials : Bases  
 Warning! Do not use together with other products. May release dangerous gases (chlorine).

Hazardous decomposition products : Acidic fumes  
 Chromium oxides  
 Hydrogen, by reaction with metals  
 Nitrogen Oxides  
 Phosphorus Oxides  
 Carbon oxides

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**SECTION 11. TOXICOLOGICAL INFORMATION**
**Acute toxicity****Product:**
 Acute oral toxicity : Acute toxicity estimate : > 5,000.000000 mg/kg  
 Method: Calculation method
**Components:****Chromic (III) nitrate:**

Acute oral toxicity : LD50 rat: 3,250.000000 mg/kg

**Citric acid:**

Acute oral toxicity : LD50 mouse: 5,040.000000 mg/kg

LD50 rat: 3,000.000000 mg/kg

**Manganese (II) citrate:**

Acute oral toxicity : LD50 rat: &gt; 5,000.000000 mg/kg

Acute inhalation toxicity : LC50 rat: 2.810000 mg/l

Acute dermal toxicity : LD50 rabbit: &gt; 5,050.000000 mg/kg

**Skin corrosion/irritation****Product:**

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Result: Severe skin irritation

**Components:**

**Citric acid:**

Result: Severe skin irritation

**Serious eye damage/eye irritation**

**Product:**

Result: Eye irritation

**Components:**

**Citric acid:**

Result: Corrosive

**Respiratory or skin sensitisation**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**STOT - single exposure**

no data available

**STOT - repeated exposure**

no data available

**Aspiration toxicity**

no data available

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

no data available

**Bioaccumulative potential**

**Product:**

Partition coefficient: n-octanol/water : Remarks: no data available

**Components:**

**Citric acid :**

Partition coefficient: n-octanol/water : log Pow: -1.64 (20 °C)

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**Other adverse effects**

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

Waste from residues : Refer to all federal, provincial, state and local regulation prior to disposition of container and unused contents by reuse, recycle or disposal.

**SECTION 14. TRANSPORT INFORMATION**

**International regulation**

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

Not applicable for product as supplied.

**National Regulations**

**SECTION 15. REGULATORY INFORMATION**

**TSCA Status** : All components of this material comply with US TSCA requirements.

**OSHA Hazards** : Severe skin irritant, Moderate eye irritant, Carcinogen  
**WHMIS Classification** : D2A: Very Toxic Material Causing Other Toxic Effects  
 E: Corrosive Material

**EPCRA - Emergency Planning and Community Right-to-Know Act**

Nitric acid	7697-37-2	1,000	
Nitric acid	7697-37-2	1,000	

**SARA 311/312 Hazards** : Acute Health Hazard  
 Chronic Health Hazard

**SARA 302** : The following components are subject to reporting levels established by SARA Title III, Section 302:  
 Nitric acid 7697-37-2

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:  
 Manganese gluconate 6485-39-8  
 Chromium (III) phosphate 7789-04-0  
 Chromic (III) nitrate 13548-38-4

**US State Regulations**



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**Massachusetts Right To Know**

Nitric acid 7697-37-2

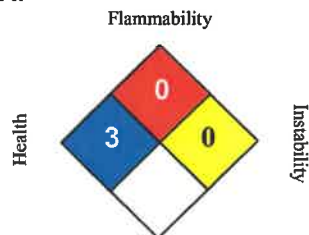
**Pennsylvania Right To Know**

water 7732-18-5  
Manganese gluconate 6485-39-8  
Chromium (III) phosphate 7789-04-0  
Chromic (III) nitrate 13548-38-4  
Citric acid 77-92-9  
Manganese (II) citrate 10024-66-5  
Nitric acid 7697-37-2

**New Jersey Right To Know**

water 7732-18-5  
Manganese gluconate 6485-39-8  
Chromium (III) phosphate 7789-04-0  
Chromic (III) nitrate 13548-38-4  
Citric acid 77-92-9  
Manganese (II) citrate 10024-66-5

**NFPA:**



**HMIS III:**

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Corrosive Acid

Splash Goggles, Gloves, Apron, Dust  
and Vapour Respirator

**SECTION 16. OTHER INFORMATION**

**Further information**

Version 1.0  
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Chemetall US, Inc. warrants that the products described herein will conform with its published specifications.

The products supplied by Chemetall and information related to them are intended for use by buyers having necessary industrial skill and knowledge. Buyers should undertake sufficient verification and testing to determine the suitability of the Chemetall materials for their own particular purpose. Since buyer's conditions of use of products are beyond Chemetall's control, Chemetall does not warrant any recommendations and information for the use of such products. CHEMETALL DISCLAIMS ALL OTHER WARRANTIES INCLUDING THE IMPLIED

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WARRANTY OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE IN CONNECTION WITH THE USE OF ITS PRODUCTS.