


# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>Back Up Pads</b>
<b>Other means of identification</b>	None.
<b>Recommended use of the chemical and restrictions on use</b>	
<b>Recommended use</b>	Sanding, polishing various surfaces.
<b>Restrictions on use</b>	Not available.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer/Supplier</b>	Ferro Industries, Inc. 35200 Union Lake Road Harrison Township, MI 48045 +1 586-792-6001 (7:00 A.M. - 4:30 P.M. EST)
<b>Contact person</b>	Product Responsibility Manager
<b>E-mail</b>	ferroindustries@gmail.com
<b>Emergency telephone number</b>	For Chemical Emergency ONLY, call:  +1 800-832-4357

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, respiratory	Category 1
	Sensitization, skin	Category 1
	Carcinogenicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, repeated exposure	Category 2 (Inhalation, Kidneys)
<b>Environmental hazards</b>	Not classified.	
<b>Label elements</b>		
<b>Signal word</b>	Danger	
<b>Hazard statement</b>	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs (Inhalation, Kidneys) through prolonged or repeated exposure.	
<b>Precautionary statement</b>		
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.	
<b>Response</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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 experiencing respiratory symptoms: Call a POISON CENTER/doctor.	
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.	
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.	
<b>Other hazards which do not result in classification</b>	None known.	
<b>Supplemental information</b>	None.	

### 3. Composition/information on ingredients

#### Mixtures

##### Hazardous components

Chemical name	CAS number	Content in percent (%)
Diphenylmethane-4-4'-diisocyanate (MDI)	101-68-8	>=25.0 - < 50.0
Ethylene glycol	107-21-1	>= 3.0 - < 7.0
Methylenediphenyl diisocyanate (MDI)	26447-40-5	>=1.0 - < 3.0
Triethyl phosphate	78-40-0	>=1.0 - < 3.0

##### Non-hazardous components

Chemical name	CAS number	Content in percent (%)
Dipropylene Glycol	25265-71-8	>=1.0 - < 3.0
Methylene bis(isocyanatobenzene) homopolymer	39310-05-9	>=1.0 - < 3.0
Triethylendiamine	280-57-9	>= 0.3 - < 1.0
Other components below reportable levels		41.1

Note 2: The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.

Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a poison center or doctor/physician.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Dusts may irritate the respiratory tract, skin and eyes. Coughing. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Water.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots. Move containers from fire area if you can do so without risk.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.  
**General fire hazards** No unusual fire or explosion hazards noted.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. 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.

**Methods and materials for containment and cleaning up** Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Minimize dust generation and accumulation. Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. 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. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

**Environmental precautions** Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Store locked up. Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

**Argentina. OELs. Law 19587 (Establishing the Conditions for Health and Safety in the Workplace) and Decree 351/79 Article 61, Annex III, as amended**

Components	Type	Value	Form
Diphenylmethane-4-4'-diisocyanate (MDI) (CAS 101-68-8)	TWA	0.005 ppm	
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m <sup>3</sup>	Aerosol.
Methylenediphenyl diisocyanate (MDI) (CAS 26447-40-5)	TWA	0.005 ppm	

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Diphenylmethane-4-4'-diisocyanate (MDI) (CAS 101-68-8)	TWA	0.005 ppm	
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m <sup>3</sup>	Aerosol.
Methylenediphenyl diisocyanate (MDI) (CAS 26447-40-5)	TWA	0.005 ppm	

**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.

If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Provide eyewash station and safety shower.

**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.

<b>General hygiene considerations</b>	Observe any medical surveillance requirements. Always observe 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. Contaminated work clothing should not be allowed out of the workplace.
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**9. Physical and chemical properties****Appearance**

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Yellow.

**Odor** Not available.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** Not available.

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

**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.

**Vapor pressure** Not available.

**Vapor density** Not available.

**Relative density** 25 Durometer/Shore A

**Solubility(ies)**

**Solubility (water)** Insoluble.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Other information**

**Explosive properties** Not explosive.

**Oxidizing properties** Not oxidizing.

**10. Stability and reactivity**

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Material is stable under normal conditions.

**Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**Conditions to avoid** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials. Moisture.

**Incompatible materials** Acids. Alcohols. Alkalines. Amines. Strong bases. Strong oxidizing agents. Substances that react with isocyanates.

**Hazardous decomposition products** Carbon oxides. Hydrogen cyanide. Isocyanates. Nitrogen oxides.

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation** Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
**Skin contact** Causes skin irritation. May cause an allergic skin reaction.  
**Eye contact** Causes serious eye irritation.  
**Ingestion** Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Dusts may irritate the respiratory tract, skin and eyes. Coughing. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

### Information on toxicological effects

**Acute toxicity** Harmful if inhaled.

Components	Species	Test Results
Diphenylmethane-4-4'-diisocyanate (MDI) (CAS 101-68-8)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Mouse	2200 mg/kg
Ethylene glycol (CAS 107-21-1)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	9530 mg/kg
Triethylendiamine (CAS 280-57-9)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 2000 mg/kg
<b>Oral</b>		
LD50	Rat	700 mg/kg

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

### Respiratory or skin sensitization

**Respiratory sensitization** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** Suspected of causing cancer.

#### ACGIH Carcinogens

Ethylene glycol (CAS 107-21-1) A4 Not classifiable as a human carcinogen.

**Argentina. OELs. Law 19587 (Establishing the Conditions for Health and Safety in the Workplace) and Decree 351/79 Article 61, Annex III, as amended**

Ethylene glycol (CAS 107-21-1) Not classifiable as a human carcinogen.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure** May cause damage to organs (Inhalation, Kidneys) through prolonged or repeated exposure.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

## 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.

Components	Species		Test Results
Ethylene glycol (CAS 107-21-1)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	EC50	Ceriodaphnia dubia	10000 mg/l, 48 Hours
Fish	LC50	Oncorhynchus mykiss	24591 mg/l, 96 Hours
<i>Chronic</i>			
Crustacea	NOEC	Ceriodaphnia dubia	3469 mg/l, 7 days
Fish	NOEC	Oncorhynchus mykiss	14692 mg/l, 12 days
Triethylendiamine (CAS 280-57-9)			
<i>Acute</i>			
	EC50	Selenastrum capricornutum (new) Pseudokirchneriella subcapita	110 mg/l, 72 hours
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	EC50	Daphnia magna	> 100 mg/l, 48 hours
Fish	LC50	Carp (Cyprinus carpio)	> 100 mg/l, 96 hours

**Persistence and degradability** No data is available on the degradability of any ingredients in the mixture.

**Bioaccumulative potential**

**Partition coefficient n-octanol / water (log Kow)**

Ethylene glycol (CAS 107-21-1)	-1.36
Triethyl phosphate (CAS 78-40-0)	0.8

**Mobility in soil** The product is insoluble in water.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

**Disposal instructions** 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.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Waste from residues / unused products** 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).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information**

**ADR**

Not regulated as dangerous goods.

**RID**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**15. Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**Active Ingredients Not Permitted in Household Insecticides (Disposición 7292/1998, Annex VII, as amended through Disposicion ANMAT 2659/2008, May 2008)**

Not listed.

**Chemical Precursors. Decree 1095/96, Annex 1, Lists I, II, III (amended by Decree 1161/00 December 11, 2000)**

Not listed.

**CWC. Law 26.247 Implementation of the Convention on prohibition of development, production methods, stockpiling and use of chemical weapons and on their destruction (May 21, 2007)**

Not regulated

**Export Control Chemical Substances (2012)**

Not regulated

**Prohibited Chemical Substances**

Not regulated

**Restricted Chemical Substances**

Not regulated

**Small Operators of Controlled Chemicals, Annex I, Lists I and II (Resolution 1227/2010, September 29, 2010)**

Not regulated

**International regulations****Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Montreal Protocol**

Not applicable.

**Kyoto protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
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)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

<b>Issue date</b>	27-August-2018
<b>Revision date</b>	-
<b>Version #</b>	01
<b>Disclaimer</b>	The information in the sheet was written based on the best knowledge and experience currently available.