

# Rigidax<sup>®</sup> WI Blue 24-12

## 1. Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifier  
Product name : **Rigidax<sup>®</sup> WI Blue 24-12**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against  
Identified uses : Thermoplastic fixturing compound for use in metal shaping processes.  
Uses advised against : None known
- 1.3 Details of the supplier of the safety data sheet  
Manufacturer/supplier : M. Argüeso & Co., Inc. (D.B.A. Paramelt)  
2817 McCracken Street  
Muskegon, MI 49441, USA  
Tel: (+1) 231 759 7304  
Fax: (+1) 231 759 7570
- Manufacturing facility : Paramelt  
2817 McCracken Street  
Muskegon, MI 49441, USA  
Tel: (+1) 231 759 7304  
Fax: (+1) 231 759 7570
- SDS prepared by : Quality Manager  
E-mail : [EHS@argueso.com](mailto:EHS@argueso.com)
- 1.4 Emergency telephone number  
For emergency advice : CHEMTREC (Tel: 800 424 9300)  
Availability : 24 hours

## 2. Hazards identification

- 2.1 Classification of the substance or mixture  
GHS classification : This material is classified as hazardous under GHS/OSHA criteria. Human health: Quartz: Carcinogen. 1A
- Hazard summary:  
Inhalation : Causes damage to lungs through prolonged or repeated exposure via inhalation  
Eye contact : Molten material will produce thermal burns.  
Skin contact : Molten material will produce thermal burns  
Ingestion : None known  
Other health effects : None known  
Environmental hazards : None known
- 2.2 Label elements
- GHS Pictogram : 
- Signal word : Danger
- Hazard Statement : H350 May cause cancer (inhalation).
- Precautionary statements : P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust

- : P280 Wear protective gloves, protective clothing, eye protection.
- : P308 + P313 if exposed or concerned: Get medical advice/attention.
- : P405 Store locked up.
- : P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Long term exposure to crystalline silica can cause lung injury (silicosis). IARC and NTP have determined that crystalline silica inhaled from occupational sources can cause cancer in humans. Risk of injury is dependent on the duration and level of exposure.

2.3 Other hazards : None known

**3. Composition information**

- Description : Mixture of waxes, resins, inorganic fillers & oil soluble dye
- Classification : As supplied, the component(s) listed below can present physical or health hazards;

CAS No	%, w/w	Name	Classification according to 21 CFR 1910.1200
91-20-3	<0.2%	Naphthalene	Flam. Solids: H228 Carc. 2: H351 Acute Tox. 4: H302 Aquatic Acute 1: H400 Aquatic Chronic 1: H410
14808-60-7	<0.2%	Quartz	Carc. 1A: H350 STOT SE 3: H335 STOT SE 1: H370
<b>The following are included because of country workplace exposure limits – see section 8.1.</b>			
1317-65-3	30 – 60%	Limestone	

\*Quartz is a naturally occurring component of an ingredient used in this preparation.

For the full text of the H-statements mentioned in this Section, see Section 16.

**4. First-aid measures**

4.1 Description of first aid measures

- Inhalation : Exposure to fumes, vapors or smoke of overheated molten product handled in confined areas can result in irritation of the respiratory tracts, and possible discomfort to sensitive individuals. Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.
- Eye contact : Exposure to fumes, vapors or smoke of overheated product can result in irritation to eyes. Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if symptoms persist. If molten material contacts the eye, immediately flush with plenty of running water for at least 15 minutes, holding eyelid open. Do not remove adhering material. Seek medical attention immediately.
- Skin contact : Wash with soap and water. Molten product – Cool affected areas with running water to remove heat. In general, do not remove adhering material - it may be necessary to cut through material surrounding a limb to prevent a tourniquet effect. Seek medical attention urgently.
- Ingestion : Do not induce vomiting. Seek medical attention.

## 4.2 Most important symptoms and effects, both acute and delayed

Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from skin is not necessary

## 4.3 Indication of any immediate medical attention and special treatment needed

Hazards : Contact with molten product may cause severe burns to skin and eyes.

Treatment : Treat symptomatically.

## 5. Fire-fighting measures

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### 5.1 Extinguishing media

Suitable extinguishing media : Water mist, dry chemical, carbon dioxide or foam.

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

### 5.2 Special hazards arising from the substance or mixture

Watch footing on floors and stairs because of possible spreading of molten material. Material can create slippery conditions. In case of fire hazardous decomposition products may be produced such as: Carbon dioxide, carbon monoxide and complex hydrocarbons. As with most solid organic compounds, a high dust concentration of this product may form an explosive atmosphere, subject to ignition by heat and static discharge. This is an unlikely scenario but users should be aware of the risk.

### 5.3 Advice for firefighters

In the event of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and protective suit.

## 6. Accidental release measures

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### 6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate personal protective equipment.

### 6.2 Environmental precautions

Should not be released into the environment. Prevent product from entering drains.

### 6.3 Methods and material for containment and cleaning up

Solid product : Sweep up the spilled material. If it is clean, place in a suitable container for use. If it is contaminated, collect in a suitable container for disposal. Note that pelletized product can travel some distance when spilled. Prevent the spillage entering drainage channels.

Molten product : Wear appropriate personal protective equipment – boots, eye protection & heat resistant gloves. Attempt to contain the spill by making dams with sand or earth. A water mist can be used to cool a spill but take extreme care when doing so. Allow the spill to solidify before collecting the material for disposal. Do not let molten product enter drainage channels.

### Notification procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

## 7. Handling and storage

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### 7.1 Precautions for safe handling

Use only in a well ventilated area and avoid breathing fumes and dust (dust is unlikely). Avoid skin and eye contact, especially with the molten material. Do not eat, drink or smoke whilst using this product.

7.2 Conditions for safe storage, including any incompatibilities

Keep product closed in its original packaging until used. Keep dry; avoid temperature extremes (keep between 5 & 30°C / 41 & 86°F) and direct sunlight. Keep away from sources of ignition, oxidizing agents and other chemicals.

7.3 Specific end use(s)

Avoid heating above 130°C (266°F) during the normal investment casting process (excepting dewax operations). Do not let molten product stand unused in melt tanks and injection machines. Stir product at all times.

8. Exposure controls and personal protection

8.1 Control parameters

Occupational exposure limit values : The following may be released from the product in the molten state.

Workplace exposure limits : The following values were obtained from:  
<http://limitvalue.ifa.dguv.de>

Country	Long term exposure limit (8 hr. TWA reference period)	Short term exposure limit (15 minute reference period)	Notes
<b>Substance:</b>	<b>Naphthalene</b>		
<b>CAS #:</b>	<b>91-20-3</b>		
Australia	52 mg/m <sup>3</sup>	79 mg/m <sup>3</sup>	
Canada - Ontario	10 ppm		
Canada - Québec	52 mg/m <sup>3</sup>	79 mg/m <sup>3</sup>	
New Zealand	52 mg/m <sup>3</sup>	79 mg/m <sup>3</sup>	
People's Republic of china	50 mg/m <sup>3</sup>	75 mg/m <sup>3</sup>	STEL 15 minute average value
Singapore	52 mg/m <sup>3</sup>	79 mg/m <sup>3</sup>	
South Korea	50 mg/m <sup>3</sup>	75 mg/m <sup>3</sup>	
USA - NIOSH	50 mg/m <sup>3</sup>	75 mg/m <sup>3</sup>	STEL 15 minute average value
USA – OSHA	50 mg/m <sup>3</sup>		
<b>Substance:</b>	<b>Quartz</b>		
<b>CAS #:</b>	<b>14808-60-7</b>		
Australia	0.15 mg/m <sup>3</sup>		Respirable aerosol
Canada - Ontario	0.1 mg/m <sup>3</sup>		Respirable aerosol
Canada - Québec	0.1 mg/m <sup>3</sup>		
New Zealand	0.2 mg/m <sup>3</sup>		Respirable aerosol
People's Republic of China	1 mg/m <sup>3</sup>		Inhalable fraction 10% <= free SiO2 <= 50%
	0.7 mg/m <sup>3</sup>		Inhalable fraction 50% < free SiO2 <= 80%
	0.5 mg/m <sup>3</sup>		Inhalable fraction free SiO2 < 80%
Singapore	0.1 mg/m <sup>3</sup>		Respirable aerosol
South Korea	0.05 mg/m <sup>3</sup>		
USA - ACGIH	0.025 mg/m <sup>3</sup>		Respirable fraction
USA - NIOSH	0.05 mg/m <sup>3</sup>		
USA – OSHA	0.1 mg/m <sup>3</sup>		PEL – respirable dust
USA – OSHA	0.3 mg/m <sup>3</sup>		PEL – tota dust
USA – OSHA	30/(%silica +2) mg/m <sup>3</sup>		Total dust
USA - OSHA	10/(%silica +2) mg/m <sup>3</sup>		Respirable dust
<b>Exposure to the following is unlikely given that the product form and its intended application.</b>			
<b>Substance:</b>	<b>Limestone</b>		
<b>CAS#:</b>	<b>1317-65-3</b>		
USA - NIOSH	5 mg/m <sup>3</sup>		Respirable aerosol
USA - NIOSH	10 mg/m <sup>3</sup>		Total dust
<b>Substance:</b>	<b>Dust – respirable, Or, Particulates, not otherwise regulated (respirable fraction)</b>		
<b>CAS #:</b>			
USA - OSHA	5 mg/m <sup>3</sup>		Nuisance dust
USA - NIOSH	5 mg/m <sup>3</sup>		

Exposure to the following is unlikely given that the product form and its intended application.		
Substance:	Dust – Total	
CAS #:		
USA - OSHA	15 mg/m <sup>3</sup>	Nuisance dust

8.2 Exposure controls

Appropriate engineering controls

Good general ventilation should be used. If applicable, use local exhaust ventilation or other engineering controls to maintain airborne levels of dust (solid product), fume or vapor (molten product) below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eyes & Face

: Appropriate eye protection should be worn when handling slabs and pellets, when injecting the product and when assembling patterns. A full face shield is recommended for operations involving the transfer of molten product, i.e. refilling press reservoirs

Skin

: Solid product – cotton gloves. Molten product – Impervious heat protective gloves.

Respiratory

: If engineering controls do not maintain airborne concentrations below recommended exposure limits an approved respirator must be worn. Respirator type: Air-purifying respirator with an appropriate air-purifying filter, cartridge or canister.

Hygiene

: A good standard of industrial hygiene should be practiced when using this product. Wash hands thoroughly before eating, drinking or smoking. Contaminated clothing should be laundered before reuse.

Environmental

: Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

9. Physical and chemical properties

Physical state at 20°C.	: Waxy solid
Color	: Blue
Odor	: Waxy, characteristic
Odor threshold	: Not determined
pH	: No data available
Boiling point	: No data available
Melting point (DMP)	: approx. 81.1°C. (178.0°F.)
Flash point	: >185°C (365°F), Cleveland Open Cup.
Evaporation rate	: Not determined
Flammability (solid, gas)	: No data available
Upper/lower flammability	: No data available
Vapor pressure	: No data available
Vapor density	: No data available
Specific gravity	: approx. 1.37 (20°C.)
Solubility in water	: Insoluble
Solubility in common organic solvents	: Soluble
Partial coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity (RS6000)	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

**10. Stability and reactivity**

Reactivity	: None known.
Stability	: Stable as supplied
Possibility of hazardous reactions	: None known
Conditions to avoid	: The product is organic, however, and will be subject to surface oxidation. Avoid holding the product in the molten state when not in use. Excessive thermal exposure will degrade the product.
Incompatible materials	: Strong oxidizing agents.
Hazardous decomposition products	: Carbon dioxide, carbon monoxide.

**11. Toxicological information**

11.1 Information on toxicological effects

Acute Exposure  
Inhalation : Inhalation of dust may irritate respiratory tract.

<b>Naphthalene</b>	
LC50 (Inhalation)	>340 mg/m <sup>3</sup> , 1h, (rat)

Eye contact : Molten product will cause thermal burns on contact with the eyes. Solid product may produce irritation upon contact with the eye.

Skin contact : Molten product will cause thermal burns on contact with the skin. Solid product may cause skin irritation upon prolonged or repeated exposure.

<b>Naphthalene</b>	
LD50 (Skin)	>20 g/kg (rabbit)

Ingestion Use : No data available

<b>Naphthalene</b>	
LD50 (Oral)	490 mg/kg (rat)

Skin corrosion/irritation : No data available.

Serious eye damage/irritation : No data available.

Respiratory or skin sensitisation : No data available.

Germ cell mutagenicity : No data available.

Carcinogenicity : See section 2 for discussion of the carcinogenic status of crystalline silica.

<b>Quartz</b>	
IARC group	1 – Carcinogenic to humans
<b>Naphthalene</b>	
IARC group	2B – Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to the human carcinogen

Toxicity for reproduction : No data available.

Summary of evaluation of the CMR properties : No data available.

- STOT – single exposure : No data available.
- STOT – repeated exposure : See section 2 for discussion of the carcinogenic status of crystalline silica.
- Aspiration hazard : No data available

**12. Ecological information**

No specific ecological information has been determined for this product. However, the product is insoluble in water and should not pose a serious threat to the environment.

12.1 Toxicity : No data available

<b>Naphthalene</b>	
LC50 fish	1.6 mg/l (Flow-through, Exposure time: 96h – Species: Rainbow Trout) 5.74 – 6.44 mg/l (Flow-through, Exposure time: 96h – Species: Fathead Minnow)
EC50 Daphnia	2.16 mg/l (Exposure time: 48 h – Species: Daphnia) 1.96 mg/l (Flow-through, Exposure time: 48 h – Species: Daphnia)
EC50 other aquatic organisms	0.4 mg/l (Exposure time: 72 h – Skeletonema costatum)

12.2 Persistence and degradability : No data available

12.3 Bioaccumulative potential : No data available

<b>Naphthalene</b>	
BCF fish	30-430
Log Pow	3.3 (at 20°C)

12.4 Mobility in soil : No data available

12.5 Results of PBT and vPvB assessment : No data available

12.6 Other adverse effects : No data available

Users of the product should, however, ensure that it is stored, handled and disposed of in such a manner that it is not released to the environment. Spent material from the flash fire furnace or autoclave must therefore be stored in such a manner as to prevent environmental contamination, either by solid product or rain water run-off from it.

**13. Disposal considerations**

13.1 Waste treatment methods

General information : Dispose of used product, unwanted product and related packaging in strict accordance with waste disposal legislation and any local authority requirements.

Disposal methods : Wherever possible, spent material should be returned to the manufacturer, or other qualified reprocessor, for reclamation

**14. Transportation information**

ADR/RID : Solid forms of this product are not regulated.

IMDG : Solid forms of this product are not regulated.

IATA : Solid forms of this product are not regulated.

**15. Regulatory information**

**15.1 US Federal regulations**

TSCA	: All components of this product are listed or exempted from listing on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.
CWA	: Plastic pellets are defined by the US EPA under the Clean Water Act (40CFR122.26) as a "significant material" which requires any industrial plant that may expose pellets to storm water to secure a storm water permit. Violations of the rule carry the same penalties as other Clean Water Act violations. Pellets found in storm water runoff are subject to EPA regulations with the potential for substantial fines and penalties.
EPCRA section 302	: This material contains no extremely hazardous substances.
SARA 313	: Naphthalene (CAS #91-20-3).
SARA 311/312	: Chronic health hazard.

**15.2 US State regulations**

California Proposition 65	: Carcinogens: Naphthalene (CAS #91-20-3) and Quartz (CAS# 14808-60-7). Adverse reproductive effects: None
New Jersey - Right to Know Hazardous Substance	: Calcium Carbonate (1317-65-3) and Quartz (CAS# 14808-60-7)
Massachusetts - Right to Know List	: Calcium Carbonate (1317-65-3) and Quartz (CAS# 14808-60-7)
Pennsylvania - Right to Know List	: Quartz (CAS# 14808-60-7)

**16. Other information**

**NFPA (National Fire Protection Association)**

NFPA health hazard	: 1
NFPA fire hazard	: 1
NFPA reactivity	: 0

**HMIS III Rating**

Health	: 1
Flammability	: 1
Physical Hazard	: 0
Personal Protection	: See section 8 of SDS

Revision information : New SDS

Key literature references and sources for data :

- Supplier MSDS
- ECHA –Guidance on the compilation of safety data sheets, Version 2.0, Dated December 2013
- GESTIS - International limit values for chemical agents database (English)
- GESTIS – database on hazardous substances (English)
- 21 CFR 1910
- ANSI Z400.1/Z129.1-2010



Other internet sources.

Full text of the H-statements referred to under section 3:  
Not classified.

Training information : No data available.

#### Disclaimer

Information and details given in this document, particularly any recommendations for application and use of our products are based on careful laboratory tests and prevailing practical experience and are believed to be correct at time of publication. The information is not binding, which is also generally true for our practical customer service, given verbally, in writing and by tests. Due to (possibly varying) conditions of transport, storage, process, substrate use or product application (which are beyond our knowledge and control), we strongly recommend to carry out sufficient tests in order to ensure that our products are suitable for the intended processes and applications. Further, it is the user's obligation to utilize this material with due care, in accordance with the information in the Safety Data Sheet (and with the information given in any other way by Paramelt) and in full compliance with health, safety and environmental regulations. Whilst proper care has been taken in the preparation of this document, no liability for damage or injury resulting from its use is accepted, other than the limited liability which may arise towards a contractual party on the basis of Paramelt's conditions of sale (a copy of these conditions is available on request). Paramelt's acceptance of any orders for this product is expressly conditional upon purchaser's assent to these conditions of sale. No information contained in this document (nor any information given verbally, in writing and by tests) is to be construed as permission, recommendation or inducement by Paramelt or its officers, employees or affiliates, to use any product or process so as to infringe upon or conflict with any patent. Paramelt does not attest or guarantee that the use of its products or processes will not infringe upon any patent; user is responsible for verifying its freedom to operate in any jurisdiction.