

Rigidax[®] WI-NMF


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

- 1.1 Product identifier
Product name : **Rigidax[®] WI-NMF**
- 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
- 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: STOT RE 1 – H372
- 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 : H372 Causes damage to lungs through prolonged or repeated exposure via inhalation.
- Precautionary statements : P260 Do not breathe dust
: P285 In case of inadequate ventilation wear respiratory protection.

: P501 Dispose of contents/containers in accordance with local 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 |
|---|----------|-----------|--|
| 14808-60-7 | <0.2% | Quartz | Carc. 1A: H350 STOT SE 3: H335 STOT SE 1: H370 |
| The following are included because of country workplace exposure limits – see section 8.1. | | | |
| 1317-65-3 | 20 – 50% | 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

- 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

- 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

- 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 100°C (212°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 |
|--|---|--|--|
| Substance: Quartz | | | |
| CAS #: 14808-60-7 | | | |
| Australia | 0.15 mg/m ³ | | Respirable aerosol |
| Canada - Ontario | 0.1 mg/m ³ | | Respirable aerosol |
| Canada - Québec | 0.1 mg/m ³ | | |
| New Zealand | 0.2 mg/m ³ | | Respirable aerosol |
| People's Republic of China | 1 mg/m ³ | | Inhalable fraction 10% <= free SiO2 <= 50% |
| | 0.7 mg/m ³ | | Inhalable fraction 50% < free SiO2 <= 80% |
| | 0.5 mg/m ³ | | Inhalable fraction free SiO2 < 80% |
| Singapore | 0.1 mg/m ³ | | Respirable aerosol |
| South Korea | 0.05 mg/m ³ | | |
| USA - NIOSH | 0.05 mg/m ³ | | |
| USA – OSHA | 30/(%silica +2) mg/m ³ | | Total dust |
| USA - OSHA | 10/(%silica +2) mg/m ³ | | Respirable dust |
| Exposure to the following is unlikely given that the product form and its intended application. | | | |
| Substance: Dust – respirable, Or, Particulates, not otherwise regulated (respirable fraction) | | | |
| CAS #: | | | |
| USA - OSHA | 5 mg/m ³ | | Nuisance dust |
| USA - NIOSH | 5 mg/m ³ | | |
| Exposure to the following is unlikely given that the product form and its intended application. | | | |
| Substance: Dust – Total | | | |
| CAS #: | | | |
| USA - OSHA | 15 mg/m ³ | | 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 : Red
- Odor : Waxy, characteristic
- Odor threshold : Not determined
- pH : No data available
- Boiling point : No data available
- Melting point (DMP) : approx. 79.4°C. (175.0°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. 1.35 (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.
- 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. |
| Ingestion Use | : No data available |
| 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. |
| 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 |
| 12.2 Persistence and degradability | : No data available |
| 12.3 Bioaccumulative potential | : No data available |
| 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 : No reportable chemicals.
 SARA 311/312 : Not applicable

15.2 US State regulations

California Proposition 65 : Carcinogens: None
 Adverse reproductive effects: None

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:

| | |
|-------|--|
| H 228 | : Flammable solid |
| H 302 | : Harmful if swallowed |
| H 335 | : May cause respiratory irritation |
| H 350 | : May cause cancer |
| H 351 | : Suspected of causing cancer |
| H 370 | : Causes damage to organs |
| H 400 | : Very toxic to aquatic life |
| H 410 | : Very toxic to aquatic life with long-lasting effects |

Training information : No data available.

Disclaimer

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