

# 484S Natural Cerita<sup>®</sup> Soluble Wax


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

- 1.1 Product identifier  
 Product name : **484S Natural Cerita<sup>®</sup> Soluble Wax**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against  
 Identified uses : Manufacture of disposable wax patterns in the precision investment casting process.  
 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 : 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 polyethylene glycol & inorganic fillers.

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
12001-26-2	10 – 25%	Potassium aluminium silicate (Mica)	Not classified
1332-58-7	< 2.5%	Aluminium silicate (Kaolin)	Not classified
68476-25-5	<2.5%	Sodium aluminium silicate (Feldspar)	Not classified
14808-60-7	<2.5%	*Quartz	STOT RE, Cat 1: H372
<b>The following are included because of country workplace exposure limits – see section 8.1.</b>			

\*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. Seek medical attention if symptoms persist.

Skin contact : Wash with plenty of soap and water. Molten product – Cool affected areas with running water to remove heat. Product is water soluble and should wash away. Seek medical attention urgently.

Ingestion : Do not induce vomiting. Seek medical attention if irritation persists.

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

Burns should be treated as thermal burns.

#### 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.

- 1.2 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. 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. 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. Keep away from sources of ignition. Good housekeeping and controlling of dusts are necessary for the safe handling of this product, although dust generation is unlikely during normal use. 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 usage. 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 solid 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	Reference
<b>Substance: Mica</b>			
<b>CAS #: 12001-26-2</b>			
Australia	2.5 mg/m <sup>3</sup>		
Canada - Ontario	3 mg/m <sup>3</sup>		Respirable aerosol
Canada - Québec	3 mg/m <sup>3</sup>		
New Zealand	3 mg/m <sup>3</sup>		Respirable dust
People's Republic of China	2 mg/m <sup>3</sup>		Inhalable fraction
People's Republic of China	1.5 mg/m <sup>3</sup>		Respirable fraction
Singapore	3 mg/m <sup>3</sup>		Respirable aerosol
South Korea	3 mg/m <sup>3</sup>		
USA - NIOSH	3 mg/m <sup>3</sup>		Respirable fraction
USA - OSHA	20 mppcf		Respirable dust
USA - ACGIH	3 mg/m <sup>3</sup>		Respirable dust
<b>Substance: Quartz</b>			
<b>CAS #: 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 SiO <sub>2</sub> <= 50%
	0.7 mg/m <sup>3</sup>		Inhalable fraction 50% < free SiO <sub>2</sub> <= 80%
	0.5 mg/m <sup>3</sup>		Inhalable fraction free SiO <sub>2</sub> < 80%
Singapore	0.1 mg/m <sup>3</sup>		Respirable aerosol
South Korea	0.05 mg/m <sup>3</sup>		
USA - NIOSH	0.05 mg/m <sup>3</sup>		
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>Substance: 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>		
<b>Substance: Dust – Total</b>			
<b>CAS #:</b>			
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 – rubber gloves are recommended for prolonged exposure. 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

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|---------------------------------------|---------------------------------------|----------|
| Physical state at 20°C.               | : Waxy solid                          |          |
| Colour                                | : Biege                               |          |
| Odour                                 | : Characteristic                      |          |
| Odour threshold                       | : Not determined                      |          |
| pH                                    | : No data available                   |          |
| Boiling point                         | : No data available                   |          |
| Melting point (R&B)                   | : approx. 67.8°C. (154.0°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. 1.429                       | (20°C.)  |
| Solubility in water                   | : Soluble                             |          |
| 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)                    | : approx. 39000 cPs                   | (150°F.) |
| 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	: Avoid holding the product in the molten state when not in use. Excessive thermal exposure will oxidize the product. Generation of gas during decomposition can cause pressure in closed systems. Avoid static discharge.
Incompatible materials	: Strong acids, strong bases, strong oxidizing agents.
Hazardous decomposition products	: Decomposition products depend on air supply and the presence of other materials. They can include and are not limited to: carbon dioxide, carbon monoxide, alcohols, ethers, aldehydes and carboxylic acids.

## 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. The product is soluble in water, but should not pose a serious threat to the environment.

12.1 Toxicity : No data available

Polyethylene glycol	
LC50 fish	73493 mg/l (Static test, Exposure time: 96h – Species: Pimephales promelas)
EC50 Daphnia	35252 mg/l (Static test, Exposure time: 48 h – Species: Daphnia magna)
EC50 Bacteria	>5000 mg/l (Stactic test, Exposure time: 16 h)

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.

## 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.

EPCRA section 302 : This material contains no extremely hazardous substances.

SARA 313 : Not applicable.

SARA 311/312 : Immediate: Yes; Delated: Yes; Fire: No; Pressure: No; Reactivity: No.

### 15.2 US State regulations



California Proposition 65 : Materials known to the state of California to cause cancer, birth defects or other reproductive harm.

Component	CAS #	Amount
Acetaldehyde	75-07-0	<= 100ppm
Potassium aluminium silicate (Mica) * This component may also contain small amounts of one or more naturally-occurring materials	12001-26-2	10 – 25%

## 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/SDS

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.

H372 : Causes damage to lungs through prolonged or repeated exposure via inhalation.

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.