Plastic Medias

MATERIAL SAFETY DATA SHEET

Brand Name(s): ***Avialite*** Type 2 Mac'Ants Group Ref: **T2, PLA2 or PLII Prefixes**

Product: Type 2 Plastic Media

1. Identification of the Substances/Preparation & Company

Preparation: The products this data pertain to is as above & relate to; Plastic Medias of the Type 2 Urea variants

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2. Composition/Information on Ingredients

Chemical Composition & Description

Compound	Typical Content %	CAS No. / EINECS No.
Thermoset Urea Amino Polymer	66-70	9011-05-6 / NA
Cellulose	30-33	9004-34-6 / 232-674-9
Titanium Dioxide (Pigments)	<0.8	13463-67-7 / 236-675-5
Iron Oxide	<0.01	1309-37-1 / 215-168-2
Zinc Stearate	<0.01	557-05-1 / 209-151-9
Barium Sulfate	<0.01	7727-43-7 / 231-784-
QAC, Anti Static Solution Benzalkonium Chloride	<0.001	63449-41-2 / 264-151-6

3. Hazard Identification.

3.1 Classification
No hazardous product as specified in directive 67/548/CE, exempt under REACH Regulation 1907/2006 (Recycled material and polymer category exemption).

3.2 Human Health Effects: The material is not considered hazardous in normal use but the following potential hazards should be recognised;

(a) Dust - Inhalation. (Sect 8.0)

(b) Skin irritation in susceptible individuals.

(c) Noxious fumes evolved during fire. (Sect 5.0)

(d) Risk of dust explosion. (Sect 10.0)

3.3 Environmental Effects: On the basis of information available, these products are not expected to produce any significant adverse environmental effects when recommended use instructions are followed. They are slowly biodegradable and are used as slow release nitrogen sources when used in pure form.

4. First Aid Measures

4.1 Skin Contact: Wash with plenty of water or soap and water. If irritation persists or any sign of tissue damage is apparent, obtain medical advice immediately. As with any industrial product, contact with skin can cause irritation leading in some cases to dermatitis and it is wise to take the usual precautionary measures of obtaining medical clearance for employees who have a history of skin disease or allergy. The use of an emollient such as white petroleum jelly (Vaseline) is useful to minimise dryness of the skin if it occurs. Always seek professional medical advice if irritation persists.

4.2 Eye Contact: Irrigate with copious quantities of water for at least ten minutes and obtain medical advice if irritation persists or if there is any tissue damage.

4.3 Inhalation: In the event of exposure to levels above those stated at section 8.0, evacuate individuals concerned to a dust free environment, preferably into fresh air - if respiratory difficulties are encountered seek medical advice immediately. We recommend the use of approved dust masks or where abrasive blasting operations are conducted then appropriate extraction plant should be utilised or approved breathing apparatus or ventilation air changes of 75 times per hour (min). Please note these recommended air changes do not mean that a blast chamber can be entered without suitable respiratory protection, this is merely for optimum operational conditions.

4.4 Ingestion: The material should not be ingested and for this reason the preparation and consumption of food and drink in working areas should not be allowed. Rinse mouth with water and obtain medical advice immediately where accidentally ingested.

5. Fire Fighting Measures

5.1 Extinguishing Media: Any available such as CO2, Extinguishing Powder, and Water Fog. **DO NOT USE WATER JET (HIGH VOLUME WATER JET)**

5.2 Exposure Hazards: This product will not ignite unless suspended as dust in sufficient concentration in air. In which case for decomposition and explosion limits refer to section 10.

5.3 Protective Equipment: Fire fighters & others exposed must wear self-contained breathing apparatus and be aware of other combustible substances involved in any fire.

6. Accidental Release Measures

6.1 Personal Precautions: Avoid dust inhalation; observe occupational exposure limits detailed in section 8.

6.2 Environmental Precautions: Do not allow to enter drains & water courses.

6.3 Methods of Cleaning Up: Vacuum or sweep up, for disposal see section 13. If sweeping be mindful of dust generated by sweeping action, restrict where possible.

7. Handling & Storage

7.1 Handling: Handle in normal manner and be mindful of manual handling methods (weights), keep dust formation to a minimum.

7.2 Storage: Store in closed bags / containers in dry well ventilated areas <50% humidity and ambient temperatures below 30 degrees centigrade.

8. Exposure Controls/Personal Protection

8.1 Engineering Measure: In a blast cabinet with dust collectors or a closed circuit blast cleaning system are preferred methods of use. If a blast room is used it must have a dust extraction system to keep dust levels below the occupational exposure limits. Ventilation of cabinets and rooms should be 75 air changes per hour for optimum operational conditions.

For use in slip resistant products, bonded & coated abrasives and other applications where product is added, poured or applied the occupational exposure limits for the given product must be adhered to.

8.2 Occupational Exposure Limits:
All dusts have been assigned exposure limits. The following information has been taken from Guidance Note E.H.40/2005 from the Health and Safety Executive (Occupational Exposure Limits 2005);

Organic Dusts; TWA; 10 mg/m3 (inhalable), 4 mg/m3 (respirable)

8.3 Respiratory & Eye Protection: In blasting environments if a blast room is used, an air fed blast helmet with built in visor to EN146 must be used. For applied, poured and added applications wear approved dust mask and eye protection if applicable.

8.4 Skin & Hand Protection: Refer to sect 4.1

8.5 Ear Protection: Wear hearing protection when blasting and in other applications abide by noise regulations dictated by employer/workplace regulations and legislations.

9. Physical / Chemical Properties

9.1	**Form**	Multi colour – white /beige granules
9.2	**Odour**	None
9.3	**pH Value**	4-8 (at 250 g/l H_2O – 20^{O}C)
9.4	**Ignition Temperature**	475 ^{O}C
9.5	**Explosion Limits**	60 g/m^3
9.6	**Thermal Decomposition**	450 ^{O}C
9.7	**Density**	1.50 g/cm^3
9.8	**Bulk Density**	0.70 g/c m^3
9.9	**Solubility in water**	Insoluble

10. Stability & Reactivity

10.1 Conditions to avoid: Excessive thermal exposure to decomposition points. Exposure to very strong acids, bases and oxidising agents

10.2 Hazardous Decomposition: Product is a self extinguishing thermosetting plastic ignitable by flame or temperatures above decomposition point, it does not burn easily.

10.3 Dangerous Products: At temperatures above decomposition point smoke containing C0, CO2, NOX, CH2O and NH3 can be given off.

11. Toxicological Information

11.1 Inhalation Can cause irritation to respiratory tract.

11.2 Ingestion Extremely low order of toxicity.

11.3 Skin Contact Powders can be irritants for particular sensitive subjects.

11.4 Eye Contact Powders can cause eye irritations.

11.5 Toxicity LD_{50} oral rat > 2000mg/kg on uncured moulding powder, no acute oral toxicity. Final product is inert moulded product with lower toxicity.

11.6 Other Data No hazardous product as specified in Directive 67/548/CE (CLP) and OSHA (Federal Hazard Communication Standard). According to our present knowledge, no adverse health effects are expected when the product is handled and used with due care and attention, in the intended field of application.

12. Ecological Information

12.1 Eco Toxicity LC_{50}, 96 h_fish; >4500kg/l. Low toxicity for marine organisms. This data pertains to uncured moulding powder; toxicity for cured product is expected to be even lower. The final product is manufactured from cured inert mouldings.

12.2 Mobility & Bioaccumulation No bioaccumulation is to be expected.

12.3 Persistence & biodegradability The product has a low biodegradability.

12.4 Other Information Water hazard class 1 (D) (Self Classification); slightly dangerous for water. Do not allow undiluted or large amounts into the groundwater, surface water or drains. This data pertains to uncured moulding powder; product is manufactured from inert cured mouldings. Good practise would also recommend the above criteria.

Test Results: Mac'Ants Group has not conducted any environmental studies on these products, and no information has been found in a search of literature for moulded product. The above toxicological and ecological data relates to uncured moulding powders. These products do not contain any substances that are classified under EC legislation for environmental effects.

13. Disposal Considerations

13.1 Advised Disposal In accordance with the Environmental Protection Act (Duty of Care) Regulations 1991, in use as a blast media the product is likely to become mixed with the stripped coating and or some substrate. These need to be taken into account during disposal. Similarly the inclusion of these products in applied, poured and bound products/applications the binding materials / materials worn against them must be borne in mind and their disposal implications taken into consideration. Subject to material removed by media in application the material can be incinerated, land filled or in certain circumstances it may require pre treatment or hazardous disposal. This latter will only occur if a coating/substrate is classed as hazardous

14 Transport Information

14.1 Land Transport (ADR/RID) Not classified according to Transport Regulations for Hazardous / Dangerous Goods.

14.2 Marine Transport (IMO/IMDG) Not classified according to Transport Regulations for Hazardous / Dangerous Goods.

14.3 Air Transport (IATA) Not classified according to Transport Regulations for Hazardous / Dangerous Goods.

15. Regulatory Information

15.1 Classification This product range is not hazardous according to Directive 67/548/CE and 199/45/CE, OSHA's Federal Hazard.

15.2 Labelling Requirement Not subject to labelling in accordance with current regulations in force.

16. **Other Information**

16.1 Use: These products are to be used as blast medias, slip resistant materials, abrasive aggregates. If they are used for any other purpose, the advice of Mac'Ants Group should be sought regarding any additional hazards that may arise.

16.2 REACH Regulation: The products detailed herein are exempt for registration under REACH criteria (European Regulation 1907/2006) on the basis they are (i) Recycled Materials and (ii) Polymers.

16.2 **General:** The information contained in this safety data sheet is based upon our present knowledge. The information is presented with the intention of describing the safest way of handling the product. The safety data sheet is therefore a not to be regarded as a complete chemical description of the product. Consequently, the user is responsible for making sure that the product is meant to be used in the actual field of application and that it serves the purpose intended.

The safety data sheet has been revised according to: REACH Regulation formats, CLP regulation and OSHA's Federal Hazard (29CFR 1910.1048).

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