Section 1 - Product Identification

Chemical Formula: Mixture
Product Use: Architectural panels, specialist applications including sign making and wide format printing.

Manufacturer / Supplier
Multipanel U.K. Ltd
Unit 6, Site 2
Oak Business Units
Thorverton Road
Matford, Exeter
Devon, EX2 8FS

T +44 (0) 1392 823 015
F +44 (0) 1392 829 502

Section 2 - Hazard Identification

GHS-US	Classification	-	Not classified
	Signal word	-	Warning
	Hazard statements	-	H335: May cause respiratory irritation from dust when sawing, etc.
			H315: Causes skin irritation
			Dust from sawing or tearout may cause eye irritation
	Precautionary statements		P280: Wear safety shoes, protective gloves and eye protection

Alupanel Aluminium Composite Panel is defined as an article under the OSHA Hazard Communications standard. The standard applies to “chemicals” but it does not apply to any substance, which is an “article”.The term “article” is defined in the OSHA warning rule, as a manufactured item:

1) which is formed to a specific design during manufacture.
2) which has end use function(s) dependent in whole or in part upon its shape or design use during end use, and
3) which does not release, or otherwise result in exposure to hazardous chemical under normal conditions of use.

Section 3 - Chemical Composition*

Alupanel aluminium composite panels consist of a polyethylene core sandwiched between two aluminium sheets.

Ingredient	CAS Number	Percentage (% by weight)
Polyethylene	9002-88-4	39 - 72
Aluminium	7429-90-5	28 - 61

* The percentage of each ingredient varies according to the overall thickness of the individual panel

Section 4 - First Aid Measures

First Aid: Eyes
Dust from processing: flush eyes carefully with plenty of water or saline for at least 15 minutes. If present, remove contact lenses if easy to do so. Consult a physician.

First Aid: Skin
Dust from processing: wash skin with soap and water for at least 15 minutes. Consult a physician if irritation persists. Molten polymer: If molten polymer gets on skin, cool rapidly with cold water. Do not attempt to peel material from skin. Get medical treatment for thermal burns.

First Aid: Inhalation
Dust from processing: remove to fresh air. If unconscious or severely injured, check for clear airway, breathing and presence of pulse. Perform CPR if there is no pulse or respiration. Consult a physician.

Section 5 - Fire Fighting Measures

Flammable / Combustible Properties
This product does not present fire or explosion hazards as shipped. Small chips, turnings, dust and fines from processing may be readily ignitable.

Fire / Explosion
May be a potential hazard under the following conditions:
- Dust or fines dispersed in the air can be explosive. Even a minor dust cloud can explode violently.
- Chips, dust or fines in contact with water can generate flammable / explosive hydrogen gas. Hydrogen gas could present an explosion hazard in confined or poorly ventilated spaces.
- Dust or fines in contact with metal oxides (e.g. rust). A thermite reaction, with considerable heat generation, can be initiated by a weak ignition source.
- Molten metal in contact with water / moisture or other metal oxides (e.g. rust, copper oxide). Moisture entrapped by molten metal can be explosive. Contact of molten aluminium with other metal oxides can initiate a thermalite reaction. Finely divided metals (e.g. powders or wire) may have enough surface oxide to produce thermalite reactions / explosions.

Extinguishing Media
Use Class D extinguishing agents on dusts, fines or molten metal. Use coarse water spray on chips and turnings.

Unsuitable Extinguishing Media
DO NOT USE:
- Halogenated agents on small chips, dust or fines.
- Water around molten metal.

These agents will react with the burning material.

Fire Fighting Equipment / Instructions
Fire fighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

Section 6 - Accidental Release Measures

Small / Large Spill
Collect scrap for recycling. If molten: contain the flow using dry sand or salt flux as a dam. Do not use shovels or hand tools to halt the flow of molten aluminium. Allow the spill to cool before re-melting as scrap. Do not attempt to take action without suitable protective equipment.

Section 7 - Handling and Storage

Handling / Storage
Avoid generating dust. Avoid contact with sharp edges or heated material. Hot and cold aluminium are not visually different. Hot aluminium does not necessarily glow red. Always use appropriate PPE.

Requirements for processes which generate dust or fumes
If processing of these products includes operations where dust or extremely fine particulate is generated, obtain and follow the safety procedures and equipment guides contained in Aluminium Association Bulletin F-1 and National Fire Protection Association (NFPA) brochures listed in Section 16. Cover and reseal partially empty containers. Use non-sparking handling equipment. Provide grounding and bonding where necessary to prevent accumulation of static charges during dust handling and transfer operation. (See section 15).

Local ventilation and vacuum systems must be designed to handle explosive dusts. Dry vacuums and electrostatic precipitators must not be used. Dust collection systems must be dedicated to aluminium dust only and should be clearly labelled as such. Do not co-mingle fines of aluminium with fines of iron, iron oxide (rust) or other metal oxides. Do not allow chips, fines or dust to contact water, particularly in enclosed areas. Avoid all ignition sources. Good housekeeping practices must be maintained.

Requirements for re-melting of scrap material and / or Ingot.
Molten metal and water can be an explosive combination. The risk is greatest when there is sufficient molten metal to entrap or seal off the water. Water and other forms of contamination on or contained in scrap are known to have caused explosions in melting operations. While the products may have minimal surface roughness and internal voids, there remains the possibility of moisture contamination or entrapment. If confined, even a few drops of water can lead to violent explosions. All tooling and containers which come into contact with molten metal must be preheated or specially coated and rust free. Moulds and ladles must be preheated or oiled prior to casting. Any surfaces that may contain molten metal (e.g. concrete) should be specially coated.

Drops of molten metal in water (e.g. from plasma arc cutting), while not normally an explosion hazard, can generate enough flammable hydrogen gas to present an explosion hazard. Vigorous circulation of the water and removal of the particles minimize the hazards.

During melting operations, the following minimum guidelines should be observed:

- Inspect all materials prior to furnace charging and completely remove surface contamination such as water, ice, snow, deposits of grease and oil or other surface contamination resulting from weather exposure, shipment or storage.
- Store materials in dry, heated areas with any cracks or cavities pointed downwards.
- Preheat and dry large or heavy items adequately before charging into a furnace containing molten metal. This is typically done by use of a drying oven or homogenizing furnace. The drying cycle should bring the internal metal temperature of the coldest item of the batch to 400°F and then hold at that temperature for 6 hours.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls
If dust is generated through processing: use with adequate explosion-proof ventilation to meet the limits listed in Section 8, Exposure Guidelines.

Personal Protective Equipment

Respiratory Protection:
If dust is generated through processing: use NIOSH-approved respiratory protection as specified by an Industrial Hygienist or other qualified professional if concentrations exceed the limits listed in Section 8, Exposure Guidelines. Suggested respiratory protection: N100.

Eye Protection:
Wear safety glasses / goggles to avoid eye injury.

Hand Protection:
Wear appropriate gloves. No other skin protection required.

Component Exposure Guidelines

	ACGIH	OSHA Exposure Limit
Magnesium Oxide	ACGIH TWA (mg/m³)	10 mg/m³
Chrome Ore	ACGIH TWA (mg/m³)	0.05 mg/m³

Section 9 - Physical and Chemical Properties

Physical and Chemical Properties	
Physical State	Solid panels
Appearance	Solid sheet of sandwich construction, various colours
Boiling Point	Not applicable
Melting Point	Aluminium: 900-1200°F (482-649°C); Polymer ~ 220°F (104°C)
Vapour Pressure	Not applicable
Vapour Density	Not applicable
Solubility in Water	None
Specific Gravity	See Density
Density	Range: generally 1.10-2.27 g/cm3 (0.040-0.075 lb/in3)
pH Level	Not applicable
Odour	Odourless
Odour Threshold	Not applicable
Octanol-Water Coefficient	Not applicable

Section 10 - Stability and Reactivity Information

Stability
Stable under normal conditions of use, storage and transportation as shipped.

Conditions to Avoid
Temperatures >80°C
Chips, fines, dust and molten metal are considerably more reactive with the following:

Water
Slowly generates flammable / explosive hydrogen gas and heat. Generation rate is greatly increased with smaller particles (e.g. fines and dust). Molten metal can react violently / explosively with water or moisture, particularly when the water is entrapped.

Heat
Oxidizes at a rate dependent upon temperature and particle size.

Acids and Alkalis
Reacts to generate flammable / explosive hydrogen gas. Generation rate is greatly increased with smaller particles (e.g. fines and dust).

Halogenated Compounds
Many halogenated hydrocarbons, including halogenated fire extinguishing agents, can react violently with finely divided aluminium.

Iron Oxide (rust) and other metal oxides (e.g. copper and lead oxides)
A violent thermite reaction generating considerable heat can occur. Reaction with aluminium fines and dusts requires only very weak ignition sources for initiation. Molten aluminium can react violently with iron oxide without external ignition source.

Iron Powder and Water
An explosive reaction forming hydrogen gas occurs when heated above 1470°F (800°C)

Hazardous Decomposition
Combustion of the coatings can generate carbon monoxide, carbon dioxide, aldehydes, metal oxides (of lead, copper, cobalt and antimony) and oxides of nitrogen.

Section 11 - Toxicological Information

Acute toxicity	Not classified

Magnesium Oxide

LD50 oral rat	>5000 mg/kg (Rat; literature study)
LD50 dermal rabbit	>2000 mg/kg body weight (Rabbit; literature study)

Chrome Ore

IARC group	3 - Not classifiable

Section 12 - Ecological Information

Eco toxicity
General Product Information
No information available for product.

Persistence and degradability
Alupanel is stable when used as directed under regular circumstances.

Biodegrading
Alupanel is not biologically degradable.

Section 13 - Disposal Considerations

Disposal Instructions
Reuse or recycle material whenever possible. For disposal, characterise material in accordance with local regulations.

Section 14 - Transportation Information

Road transport, category ADR / RID / GGVS / GGVE:	Non-hazardous product
Domestic Shipping, ADN / ADNR Category:	Non Hazardous Product
Ocean shipping, IMDG / GGV category:	Non-hazardous product
Air transport, ICAO / IATA category:	Non-hazardous product
Additional transport / indications:	None

Special Transportation

	PSN # 1	PSN # 2	PSN # 3	PSN # 4
Proper Shipping Name	Not regulated			
Hazard Class	-			
UN NA Number	-			
Packing Group	-			
RQ	-			
Other - Tech Name	-			
Other - Marine Pollutant	-			

Section 15 - Regulatory Information

REACH - Pursuant to Title II article 7 of the regulation, this product is exempt from registration and notification and is therefore compliant with the REACH regulation.

RoHS - All current colours are compliant with the RoHS standard.

Section 16 - Other Information

Disclaimer

The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. The information above is provided on the condition that parties receiving the product make their own determination as to the suitability of the product for their particular purpose and assume the risk of use of the product. NO WARRANTY OF MERCHANTIBILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT OR THE HAZARDS RELATED TO ITS USE. Multipanel U.K. has no responsibility or liability for any damage or injury resulting from abnormal use or from any failure to adhere to recommended procedures. Multipanel U.K. neither grants, nor shall the party receiving the product imply any authorization to practice any patented invention without a license.

Additional Comments
In the event of any conflict between English and other language versions, the English version shall prevail.

Revision Notes
Revision number 2, Revision date March 27, 2018

End of Safety Data Sheet