

## Material safety data sheet

According to EU Regulation 1907/2006 in the current version

### Black lids for Ambra/Clara Glass containers

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

General name : Lids, caps, packaging from raw material Urea Moulding compounds  
 Utilization: Thermosetting plastics for industrial and professional use  
 Supplier company identification: **Elemental SRL**, Piața Cazărmii no.15, 410188-Oradea, jud.Bihor, Romania  
 Tel/Fax: +40259-436.755, www.elemental.com  
 Emergency: RO: număr național pentru cazuri de urgență: 021 3183606 Institutul de Sănătate Publică București.  
 International emergency number: +49 180 2273-112

#### 2. Hazards Identification

##### 2.1 Classification

No hazardous product as specified in Directive 67/548/EEC and 1999/45/EC and OSHA's Federal Hazard

##### 2.2 Potential health hazard

Prolonged inhalation may cause irritation for mucous membranes and respiratory system.  
 Prolonged contact with the skin may cause localized irritation. The ingestion may cause gastrointestinal irritation.  
 Formaldehyde gases are released during the molding process, in an amount equal to mg/m<sup>3</sup>, may cause irritation to the eyes, mucous membranes of the nose and throat.

**Hazardous substances contained in the product** : Formaldehyde : < 0,2 % (wt/wt) CAS: 50-00-0 EINECS: 200-001-8

##### 2.3 Potential physical hazard

If mixed with air, may cause inflammable/explosive mixtures (see point 7).

##### 2.4 Hazards for environment

No hazards known.

##### 2.5 Other information

Product has no labelling requirement (see point 15).

#### 3. Declaration of ingredients

##### 3.1 Chemical characterization

Composition : Amino- Resin from methylolureas, reinforced with cellulose

Chemical name	CAS_N°	EC_N°	Concentration (%)	Hazard code (1)	Risk phrases (2)
Formaldehyde-urea resin	9011-05-6	//	70	//	//
Cellulose	9004-34-6	232-674-9	30	//	//

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Titanium Dioxide	13463-67-7	236-675-5	0 - 3,0	//	//
Zinc Stearate	557-05-1	209-151-9	max 0,5	//	//
Zinc Sulfate Hexahydrate	13986-24-8	231-793-3	0,05 - 0,24	N, Xn	R 22-41-50/53

(1) Hazard codes: Canc 3 = Cancer, Category 3; T+ = Very toxic; T = Toxic; C = Corrosive; Xn = Harmful; Xi = Irritating; E = Explosive; O = Oxidising; F+ = Extremely flammable; F = Very flammable; N = Dangerous for the environment.

(2) The full text of the phrase is listed under heading 16.

#### 4. First aid measures

##### 4.1 General advice

No special measure required.

In case of accident or if you feel unwell, seek medical advice and show this sheet where possible.

Never give any food or drink to an unconscious person.

##### 4.2 Inhalation

In case of trouble, take the person in open air; If trouble persists, consult a medical.

##### 4.3 Skin contact

Wash with soap and water. If irritation persists, consult a medical.

##### 4.4 Eye contact

Wash with plenty of water. If irritation persists, consult a medical.

##### 4.5 Ingestion

Wash out mouth thoroughly, drink a lot of water, consult a medical.

#### 5. Fire fighting measures

##### 5.1 Suitable extinguishing media

The material is self-extinguishable.

In case of necessity may be used: water spray, foam, powder and CO<sub>2</sub>.

Extinguishing media which shall not be used: high volume water jet.

##### 5.2 Dangerous products of thermal decomposition

The product does not burn easily, but for thermal decomposition, some toxic fumes composed of CO<sub>2</sub>, CO, NO<sub>x</sub>, CH<sub>2</sub>O, NH<sub>3</sub> will give off.

##### 5.3 Safety equipment

Wear protective garments and breathing mask.

#### 6. Accidental release measures

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#### 6.1 Personal precautions

See recommendation point 8.

#### 6.2 Environmental precautions

Do not release in sewerage system or in any watercourse.

#### 6.3 Methods for cleaning up

Collect by mechanical means and dispose in according to local regulations and national legislation

#### 6.4 Other indications

For information relating to the handling, see point 7.

For information on protective equipment, see point 8.

For information on disposal, see point 13.

### 7. Handling and storage

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#### 7.1 Handling

Avoid to generate powder.

A mixture with air at 70 mg/l of urea moulding compounds could cause explosion.

#### 7.2 Storage

Store in original packaging, in a cool and dry place (storage temperature: max 20 °C/ 68 °F; Relative humidity: <50%).  
Keep packaging closed, in well-ventilated area and away from sunlight and moisture.

#### 7.3 Other data

None.

### 8. Exposure controls / personal protection

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#### 8.1 Precautionary measures to minimize worker exposure

Assure adequate ventilation, in order to maintain the concentration of powders below the limits of exposure.

#### Exposition limits for work place:

ORGANIC DUST\_ TWA: 10 mg/m<sup>3</sup> (inhalable dust), 4 mg/m<sup>3</sup> (respirable dust).

TITANIUM DIOXIDE \_ CAS-n°: (13463-67-7), ACIGH : TLV : 10 mg/m<sup>3</sup>, Short term exposure limit (STEL): 5 mg/m<sup>3</sup>, OSHA PEL: total dust 15 mg/m<sup>3</sup> – 5 mg/m<sup>3</sup>

FORMALDHEYDE \_ CAS-n°: (50-00-0) OSHA PEL: TWA. 0,92 mg/m<sup>3</sup> – 0,75 ppm (8 Hr), ACGIH: TLV\_ 0,37 mg/m<sup>3</sup> – 0,3 ppm \_ CAT. C3 (suspect cancerous for human).

#### 8.2 Exposure controls

All work should be carried out in accordance with strict hygiene practices. All work should take place in suitable premises, in accordance with the existing legislation and regulations. Avoid raising dust. Review the OSHA

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Formaldehyde standard (29CFR 1910.1048) for worker training, work place monitoring, and medical surveillance requirements to ensure compliance

#### 8.3 Personal protective equipment

Respiratory protection: Anti-powder mask.

Hand protection: Chemical-resistant gloves (e.g. Nitrile gloves), certified according to EN 374 or equivalent approved by ASTM F739, should be used to prevent skin contact.

Eye protection: Safety goggles, safety face shield.

Skin protection: Protective clothing should be used to prevent skin contact.

Environmental exposure controls: Waste and spillage should be disposed off according to local regulations and national legislation. Avoid releasing to the environment. Prevent material to enter sewer system. The product has a low biodegradability. Prevent contamination of soil and water.

#### 9. Physical and chemical properties

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Appearance : Solid material

Colour : All colours

Odour : Odourless.

pH (20°C): 5.5/8.0 (10 wt %)

Boiling point : Not applicable Viscosity: Not applicable.

Melting point : Not applicable Evaporation rate : Not applicable.

Vapour pressure : Not applicable. Solubility in water ( 20°C ) : Insoluble

Vapour density : Not applicable. Solubility in alcohol (20°C) : Insoluble

Flammability : 0 (HMIS and NFPA) Solubility in ketone (20°C) : Insoluble

Auto ignition temperature : > 600 ° C (self-extinguishable)

Explosive properties : Explosive mixtures of vapors, dust and air may be formed

Density (kg./m<sup>3</sup>) : 600 – 800 for granular; 400 – 500 for powder

Partition coefficient: n-octanol/water : Not known

#### 10. Stability and reactivity

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##### 10.1 Conditions to avoid

Do not store the material at temperature higher than 50 °C and with relative humidity higher than 75 %.

##### 10.2 Substances to avoid / hazardous reactions

None.

##### 10.3 Hazardous decomposition products

See point 5.

#### 11. Toxicological information

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**Inhalation** Powders Can cause irritations to respiratory apparatus.

**Ingestion** Powders Can cause irritations to mouth, pharynx and gastrointestinal apparatus.

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**Skin contact** Powders can be irritant for particular sensitive subjects.

**Eye contact** Powders can cause eyes irritations.

#### 11.1 Toxicity

LD50 oral rat > 2000 mg./kg . (No acute oral toxicity)

#### 11.2 Other data

No hazardous product as specified in Directive 67/548/EEC 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

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#### 12.1 Eco toxicity

LC50, 96 h\_ fish: 4500 mg./l . Low toxicity for marine organisms.

#### 12.2 Mobility and bioaccumulative potential

No bioaccumulation is to be expected.

#### 12.3 Persistence and degradability

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.

### 13. Disposal considerations

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#### Advised disposal

Dispose of as solid waste according to Federal, State and Local regulation. Observe all applicable Federal, State and Local environmental regulation.

#### FOR EUROPE:

Burn in incinerator or dispose in dumping, accordingly to local regulations.

12 00 00	Wastes from shaping and physical and mechanical surface treatment of metals and plastics.
12 01 00	
12 01 99	Wastes not otherwise specified

### 14. Transport information

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#### 14.1 Land transport (ADR/RID)

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Product isn't classified, according to transport regulations for dangerous goods.

#### 14.2 Marine transport (IMO/IMDG)

Product isn't classified, according to transport regulations for dangerous goods.

#### 14.3 Air transport (IATA)

Product isn't classified, according to transport regulations for dangerous goods.

### 15. Regulatory information

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#### 15.1 Classification

Product isn't hazardous material according to CEE Directives 67/548/CEE and 199/45/CE. OSHA's Federal Hazard.

#### 15.2 Labeling requirement

Not subject to labeling in accordance with current regulation in force.

#### 15.3 Hazard class for water

Water hazard class WGK 1 (Self classification): slightly dangerous for water.

### 16. Additional information

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#### 16.1 Other information

International Agency for Research on Cancer (IARC) has classified formaldehyde in group 1, carcinogenic to humans (June 2004). The classification is based upon epidemiological studies indicating an increased risk of throat cancer. However, the cancer causing properties of formaldehyde rely on exposure to high concentrations of the substance over long periods of time.

The information 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 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.

#### R-phrase referred to under heading 3:

Zinc Sulfate Hexahydrate R 22 : Harmful if swallowed. R 41 : Risk of serious damage to eyes R 50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### 16.2 Urochem Moulding Compound 171 Compression Grade

##### Urochem Dry Granulated Compression Grade 171

Urea- formaldehyde resins fortified with highly refined cellulose as filler, and further modified with minor amounts of special purpose additives, pigments, cure regulators and lubricants.

Moulded parts are free from odour; UV stable with good moisture resistance.

Hard, glossy and scratch resistant surface.

Excellent chemical resistance. Fats, oils and common organic solvents like alcohol and acetone do not attack moulded parts which are also resistant to surfactants and weak bases. They will withstand attack from weak acids for a shorter duration.

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### Black lids for Ambra/Clara Glass containers

Excellent electrical properties (arc quenching, tracking, flame resistance). Oxygen index of 30% is achieved without the use of external flame retardants. No halogens are present in the composition.

Compliant with the requirements of widely used material specifications for amino compounds:

BS 1322 type UF A10 (\*)

DIN 7708 type 131.5 (\*)

ISO 2112 type UF A10 (\*)

UL certified

(\*) included in ISO 14527

**Fields of application** The Urochem 171 Dry Granulated Urea Moulding Compound covers all normal applications for urea. Wide array of applications include Electrical accessories, sanitary products, caps and closures.

The broad range of products requires custom tailored compounding with rheological properties adjusted to meet the needs of the specific application and process.

A good melt flow is key characteristic of these dry granulated products.

**Recycling** Products made from Urochem 171 Dry Granulated grades can be recycled. Either the product is ground into a fine powder which is then mixed with virgin injection material just before injection moulding or the products ground into a size suitable for plastic blast media.

**Environment** Most components of our urea formaldehyde compounds are derived from renewable natural resources. On decomposition, products made from urea-formaldehyde compounds end up as natural harmless chemicals like water, nitrogen and carbon dioxide.

Urochem 171 grades are in full compliance to RoHS. Moreover, as potentially carcinogenic flame-retardants are not required, the risk to health is reduced. Therefore the Urochem 171 thermoset compound is the right choice for customers who are working with environmental management systems and sustainable development.

**Packaging and storage** Available in bags, octabins, gaylords or big-bags.

Store product in cool and dry indoor space.

Storage below 20°C will provide a shelf life of least 12 months.

Property	Unit	Value	Test Method
Shrinkage	%	0.6 – 0.9	ISO 2577
Post_Shrinkage	%	0.8 – 1.1	ISO 2577
Density	g/cm <sup>3</sup>	1.50	ISO 1183
Water absorption	mg	< 300	ISO 62
Flexural strength	MPa	≥ 80	ISO 178
Tensile strength	MPa	≥ 45	ISO 527
Impact strength	KJ/m <sup>2</sup>	≥ 5	ISO 179/1 eU
Notched impact strength	KJ/m <sup>2</sup>	≥ 1.1	ISO 179/1 eA

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HDT 8.0 MPa	°C	≥ 90	ISO 75
Glow bar 960 °C 180 sec.	Class	≤ B H2-10	IEC 707
Flammability UL 94	Class	V-0	UL 94
Oxygen Index	%	> 30	ASTM D2863
Surface resistance	logΩ	≥ 10	IEC 93
Volume resistivity	Log Ω cm	≥ 11	IEC 93
Dissipation factor, 1 kHz	Delta tan	≤ 0.1	IEC 250
Dielectric constant	-	5	DIN 53483
Proof_Tracking Index	V	≥ 600	IEC 112

The information given in our data sheet, which to our knowledge is correct, does not constitute any kind of warranty or other undertaking of responsibility, but serves only as general information with respect to possible applicability of the products as well as the characteristics and handling of the products.

#### Certificate of Conformance Packaging Materials

This is to certify that all raw material supplied by Chemiplastica AB (Urochem) for production of packaging items supplied to Acheson & Acheson by are in compliance with the requirements for trace elements and impurities in packaging materials as laid down in Article 17 of the Cosmetic Regulation, EC 1223/2009, as amended, and Article 3 of the Regulation Concerning Food Contact Materials, (EC) No 1935/2004, as amended.

This certificate confirms all goods manufactured by the company for Acheson & Acheson, have been produced using raw materials in compliance with the required level of quality assurance.

All items delivered have been produced in line with A&A specification and approved by A&A as per agreed procedure. All comply in full with manufacturing standards in place at Chemiplastica AB.

This certificate is valid for 12 months from the date of issue.

#### 16.2 Urochem Moulding Compound 371 Compression Grade

##### Urochem Wet Granulated Compression Grade 371

Urea- formaldehyde resins fortified with highly refined cellulose as filler, and further modified with minor amounts of special purpose additives, pigments, cure regulators and lubricants.

The Urochem 371 Moulding Compounds can be supplied in an almost unlimited range of colours from translucent light pastels to black.

Moulded parts are free from odour; UV stable with good moisture resistance.

Hard, glossy and scratch resistant surface.

Excellent chemical resistance. Fats, oils and common organic solvents like alcohol and acetone do not attack moulded parts which are also resistant to surfactants and weak bases. They will withstand attack from weak acids for a shorter duration.

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Compliant with the requirements of widely used material specifications for amino compounds:

BS 1322 type UF A10 (\*)

DIN 7708 type 131.5 (\*)

ISO 2112 type UF A10 (\*)

UL certified

(\*) included in ISO 14527

**Fields of application** The Urochem 371 Urea Moulding Compound covers all normal applications for Urea Moulding Compounds.

Particularly well suited for electrical accessories, sanitary products, caps and closures.

The broad range of products requires custom compounding as well as specifically formulated rheological properties to meet the specific needs of the process and application.

A high apparent density and very good melt flow are key characteristics of these wet granulated products.

**Recycling** Products made from our Urochem 371 Wet Granulated grades can be recycled. Either the product is ground into a fine powder which is then mixed with virgin injection material just before injection moulding or the products ground into a size suitable for plastic blast media.

**Environment** Most components of our urea-formaldehyde compounds are derived from renewable natural resources. On decomposition, products made from urea-formaldehyde compounds end up as natural harmless chemicals like water, nitrogen and carbon dioxide. Urochem 371 grades are in full compliance to RoHS. Moreover, as potentially carcinogenic flame-retardants are not required, the risk to health is reduced.

Therefore the Urochem 371 thermoset compound is the right choice for customers who are working with environmental management systems and sustainable development.

**Packaging and storage** Available in bags, octabins, gaylords or big-bags.

Store product in cool and dry indoor space.

Storage below 20°C will provide a shelf life of minimum 6 months.

Property	Unit	Value	Test Method
Shrinkage	%	0.8 – 1.0	ISO 2577
Post_Shrinkage	%	1.2 – 1.4	ISO 2577
Density	g/cm <sup>3</sup>	1.50	ISO 1183
Water absorption	mg	< 300	ISO 62
Flexural strength	MPa	≥ 80	ISO 178
Tensile strength	MPa	≥ 45	ISO 527
Impact strength	KJ/m <sup>2</sup>	≥ 5	ISO 179/1 eU
Notched impact strength	KJ/m <sup>2</sup>	≥ 1.1	ISO 179/1 eA

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Oxygen Index	%	> 30	ASTM D2863
Surface resistance	logΩ	≥ 10	IEC 93
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**16.3 Disclaimer**

This information is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist.