

## Product Specification

<b>Product Code</b>	<b>RPUPS001</b>
<b>Description</b>	50 -89mm x 4mm Round Solid Section Purple Plastic lollipop Sticks
<b>Packaging</b>	Packed in retail packs of 50 with a choice of 2 bags types – -Official Yolli -Clear Unbranded
<b>Material</b>	HIPS (High Impact Poly Styrene) HI 425E
<b>Colour</b>	Purple Silk OM55567
<b>Length Tolerance +/-</b>	1mm
<b>Diameter Tolerance +/- %</b>	3.5
<b>Pack Quantity</b>	50 Pieces
<b>Count Tolerance +/- %</b>	2
<b>Pack Weight Tolerance +/- %</b>	2.5
<b>Suggested Uses</b>	Lollipops, Cake pops Arts and Crafts
<b>Warnings</b>	-Lollipop sticks are a potential choking hazard and are not suitable for children under the age of 3 years. Children under the age of 5 years should be supervised at all times when using lollipop sticks. -Plastic Lollipop sticks are not suitable for oven use – softening point 98° <b>C</b>

## Technical Data Sheet

# HIPS(High Impact Poly Styrene) HI 425E

**Features** High strength extrusion  
**Applications** Disposable cups, Food packing sheet, Wrapping films, Trays,  
 Washing machines

Physical	Test Method	Value
Density	ASTM D792	1.03 g/cm <sup>3</sup>
Melt Flow Index (200°C, 5kg)	ASTM D1238	4.5 g/10min
Mold Shrinkage	ASTM D955	0.3 ~ 0.6 %
Water absorption	ASTM D570	0.03 %

Mechanical	Test Method	Value
Tensile Strength	ASTM D638	280 kg/cm <sup>2</sup> (3,976) (psi)
Elongation	ASTM D638	55 %
Flexural Strength	ASTM D790	350 kg/cm <sup>2</sup> (4,970) (psi)
Flexural Modulus	ASTM D790	17,500 kg/cm <sup>2</sup> (248,500) (psi)
Izod Impact Strength(3.2mm)	ASTM D256	9.5 kgcm/cm (1.76) (ft-lb/in)
Rockwell Hardness(L scale)	ASTM D785	65

Thermal	Test Method	Value
Heat Deflection Temperature(18.6kgf/cm <sup>2</sup> )	ASTM D648	80 °C (176) (°F)
Vicat Softening Temperature(1kg, 50°C/h)	ASTM D1525	98 °C (208) (°F)

Flammability	Test Method	Value
Flame Rating - UL (1.6mm)	UL 94	HB

### Notes

These are just typical properties, not specifications. Users should confirm results by their own test.

**Technical Data Sheet**

**HIPS(High Impact Poly Styrene)**

**HI 425E**

**Processing guide**

<b>Injection Guide</b>	<b>Unit</b>	<b>Value</b>
Nozzle	°C	190~220
Front	°C	190~210
Middle	°C	180~200
Rear	°C	170~190
Hopper Throat	°C	45
Mold	°C	40~60

<b>Extrusion Guide</b>	<b>Unit</b>	<b>Value</b>
Zone 1	°C	170~190
Zone 2	°C	180~200
Zone 3	°C	180~210
Zone 4	°C	190~220
Zone 5	°C	200~220
Screen Changer	°C	190~210
Adaptor	°C	200
Die	°C	190~210

<b>Drying</b>	<b>Unit</b>	<b>Value</b>
Temperature	°C	60~70
Time	hr	1~3

**Notes**

These are only mentioned as general guidelines.

**SAFETY DATA SHEET Corresponding to EC Directive 2001/58/EEC**  
**Omnicolor® Purple Silk OM55567**

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Date of Issue:	05/01/2007	Doc Ref. 040/03
Date of Printing:	05/01/2007	Revision No. 1

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**1. Identification of the Substance or Preparation and of the Company**

**Trade Name:** **Omnicolor® Purple Silk OM55567**

**Use of the substance/preparation:** Industry Sector: Plastics Processing  
Type of use: Colourant preparation for a variety of Polymers

**Company Name:** Clariant Masterbatches UK Ltd.  
Haslemere Industrial Estate,  
Bryn, Wigan, WN4 0BZ.

**Information and Emergency Phone Number:** +44 (0)113 258 4646

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**2. Composition/Information on Ingredients**

Chemical characterisation Carrier: Organic polymer(s)  
Class of additives: Colourant(s)

Hazardous ingredients: None.

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**3. Hazards Identification**

The relevant minimum standards for protective measures in the chemical industry should be observed.

No particular hazards known.

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**4. First Aid Measures**

General Information: No special measures necessary

After contact with the skin: After contact with skin, wash immediately with plenty of water and soap. After contact with molten product cool quickly with cold water, do not pull solidified product off the skin and seek medical advice immediately.

After contact with the eyes: Remove the product, rinse eyes with running water and seek medical advice.

After ingestion: If swallowed do not induce vomiting, seek medical advice immediately and show the Safety Data Sheet.

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**5. Fire Fighting Measures**

General Information:	No special measures necessary
	Dense black smoke could be formed if combustion occurs with reduced oxygen availability.
Suitable extinguishing media:	Water Spray Foam Carbon Dioxide Dry Powder
Extinguishing media that must not be used on the grounds of safety:	Full water jet.
Special hazards from the substance itself, its combustion products or from its vapours:	Carbon Monoxide (CO) Carbon Dioxide (CO <sub>2</sub> )
Special protective equipment for fire fighting:	Self-contained breathing apparatus.

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**6. Accidental Release Measures**

Personal precautions:	See: Exposure controls and personal protection. High risk of slipping if leaked/spilt material is not cleaned up.
Environmental precautions:	Do not allow to enter drains or waterways.
Methods for cleaning up/picking up:	Take up with suitable equipment, dispose of according to local authority's regulations.

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**7. Handling & Storage**

Advice on safe handling	Ensure good general ventilation in the workplace; local exhaust ventilation may be necessary, especially when emptying containers.
Advice on protection against fire and explosion:	Take precautions against accumulation of electrostatic charges.
Requirements for storage rooms and vessels:	Keep container tightly closed in a cool, well ventilated place.
Advice on storage compatibility:	Not required.

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**8. Exposure Controls and Personal Protection**

This preparation has been manufactured initially using pigments in Powder form. Some of these pigments may have an OES assigned to them purely for dust. As the pigments are fully encapsulated in polymer and the product supplied in either a granular or pellet form we do not believe that a dust problem is likely to exist. Should abrasion occur during transport or processing forming a dust we would expect this to be of a very much larger particle size than the original pigments employed precluding it from becoming respirable dust.

General protective measures:	Observe normal standards of industrial hygiene for handling chemicals.
Hygiene measures:	Wash hands before breaks and after work
Respiratory Protection:	Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure
Hand protection:	Plastic or insulated gloves.
Eye protection:	Safety glasses or face shield if necessary.

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**9. Physical and Chemical Properties**

Form:	Pellets
Colour:	Blue
Odour:	Characteristic
Melting point:	> 120°C
Boiling point:	Not applicable
Flash point:	Not applicable
Self-ignition temperature:	Not determined.
Vapour pressure:	Not applicable.
Density:	Not determined.
Solubility in water:	Insoluble
Viscosity:	Not applicable
pH Value:	Not applicable.
Octanol/water partition coefficient: (log Pow)	Not applicable
Viscosity (dynamic):	Not applicable.
Further information:	Not an explosion hazard

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**10. Stability and Reactivity**

Thermal decomposition:	300°C
Hazardous Reactions:	No hazardous reactions when stored and Handled according to prescribed instructions
Hazardous decomposition products:	No decomposition if used as intended.
Conditions to avoid:	Temperatures exceeding the thermal stability of the masterbatch. High concentration of powders. Electrostatic charges.
Materials to avoid:	Not known

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**11. Toxicological Information**

Acute oral toxicity:	LD50 > 2000mg/kg (rat). The product has not been tested. The information is derived from the properties of the individual components.
Irritant effect on skin:	Non irritant.
Irritant effect on eyes:	Non irritant
Sensitisation:	Non sensitising
Remarks:	Determined on raw material components in accordance with Directive 1999/45/EEC

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**12. Ecological Information**

Physico-Chemical eliminability:	The product is not considered to be biodegradable and can be separated out mechanically.
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**13. Disposal Considerations**

Product:	Disposal should take account of local and national regulations. It may be incinerated or dumped with household waste, after consultation with the responsible authority.
Packaging:	Uncontaminated packaging may be re-cycled. Contaminated packaging should be treated as residual product.

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**14. Transport Information**

ADR:	Not Restricted
RID:	Not Restricted
ADNR:	Not Restricted
IMDG:	Not Restricted
IATA:	Not Restricted

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**15. Regulatory Information**

Labelling in accordance with EC-directives:	The product does not require a hazard label in accordance with EC directives.
Other regulations:	All ingredients of the product are registered in EINECS or ELINCS

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**16. Other Information**

Product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with legal regulations. The information given here is based on our current knowledge and is intended to describe our products from the point of view of safety requirements. It should therefore not be construed as guaranteeing specific properties.

As the application of our products is outside our control, the information is given without legal responsibility.

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File No. : QA-2012-106

Issued Date : May. 07, 2012

Receive :

Reference :

Title : Food statement on Regulation (EU) No 10/2011

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### **Product Information**

Grade : HI 425E

Our mentioned product contains substances listed in authorised monomers and other starting substances, additives and polymer production aids of ANNEX I of Commission Regulation (EU) No 10/2011 on plastic materials and articles in contact with food.

- The Monomers and other starting substances listed in ANNEX I
  - Butadiene, CAS No 106-99-0, SML = not detectable
  - Styrene, CAS No 100-42-5

The product does not contain substances authorized as food additives or flavouring with restrictions in the applicable EC directives.

Quality Assurance Manager  
**Cheol Hee Yoon**





## Test Report

No.HKHL1303021955JL

Date: MAR 20, 2013

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KUMHO PETROCHEMICAL CO.,LTD.  
#45-25, SEONGNAM -DONG, NAM-GU, ULSAN 680-140, KOREA

The following samples were submitted and identified on behalf of the client as:

HI 425E

SGS Case No. : HKHL130300012375  
SGS Ref No. : AYAA13-10508

Sample Receiving Date : MAR 04, 2013  
Test Performing Date : MAR 04 – 19, 2013

Test Requested : Please refer to the result summary.

Test Method & Results : Please refer to next page(s).

Result Summary :

Test Requested	Conclusion
<b>1. German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 31.</b>	--
Sensorial examination odour and taste test	PASS
<b>2. German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30, European Commission Regulation (EU) No 10/2011 and BfR recommendation.</b>	--
Plastic – Lead and Cadmium	PASS
<b>3. European Commission Regulation (EU) No 10/2011</b>	--
a) Plastic – Overall migration	PASS
b) Plastic – Specific Migration of Heavy Metals	PASS

Signed for and on behalf of  
SGS Hong Kong Ltd.

Che Wai Leuk, Jerry  
Section Manager

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.





## Test Report

No.HKHL1303021955JL

Date: MAR 20, 2013

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Test Results :

### 1. German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 31.

Sensory examination – odour and taste test

Method : With reference to DIN10955:2004-06.

Test Item	Result	Permissible Limit
	1	
Sensorial examination odour (Intensity scale)	1.0	2.5
Sensorial examination taste (Intensity scale)	1.0	2.5
<b>Comment</b>	PASS	--

#### Sample Description :

1. White Plastic

Note : Intensity scale :

- 0 – no perceptible deviation
- 1 – deviation just perceptible
- 2 – moderate deviation
- 3 – distinct deviation
- 4 – large deviation

### 2. German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30, European Commission Regulation (EU) No 10/2011 and BfR recommendation.

Plastic – Lead and Cadmium

Method : i) Lead content : Acid digestion followed by analysis with Atomic Absorption Spectrometry.  
ii) Cadmium content : With reference to EN 1122:2001, Method B

Test Item	Result (mg/kg)	Reporting Limit (mg/kg)	Reference Limit (mg/kg)
	1		
Lead content	ND	2	Absent
Cadmium content	ND	2	Absent
<b>Comment – Lead and Cadmium</b>	PASS	--	--

#### Sample Description :

1. White Plastic

Note : 1. Lead and Cadmium content: mg/kg = milligram per kilogram

2. ND = Not Detected

3. When lead or/and cadmium is/are found to be present but feasibly low in value to migrate, migratable lead or cadmium will be determined to evaluate its compliance.

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Test Results (Con't) :

**3. European Commission Regulation (EU) No 10/2011**

a) Plastic – Overall migration

 Method : With reference to EN 1186-1:2002 for selection of conditions and test methods;  
 EN 1186-3:2002 aqueous food simulants by total immersion method;  
 EN 1186-2:2002 olive oil by total immersion method;

Simulant Used	Test Condition	Result (mg/dm <sup>2</sup> )	Reporting Limit (mg/dm <sup>2</sup> )	Permissible Limit (mg/dm <sup>2</sup> )
		1		
3% Acetic Acid (W/V) Aqueous Solution	10 days at 40°C	ND	3.0	10
50% Ethanol (V/V) Aqueous Solution	10 days at 40°C	ND	3.0	10
Rectified Olive Oil	10 days at 40°C	ND	3.0	10
<b>Comment</b>	--	PASS	--	--

Sample Description :

1. White Plastic

 Note : 1. mg/dm<sup>2</sup> = milligram per square decimeter  
 2. °C = degree Celsius  
 3. ND = Not Detected

## Remark :

1. Test condition &amp; simulant were specified by client.

Test Results (Con't) :

b) Plastic – Specific Migration of Heavy Metals

Method: Sample preparation in 3% acetic acid (w/v) in aqueous solution at 40°C for 10 days with reference to EN 13130-1:2004; followed by analysis using Inductively Coupled Argon Plasma Spectrometry (ICP).

Test Item	Result (mg/kg)	Reporting Limit (mg/kg)	Permissible Limit (mg/kg)
	1		
Specific Migration of Barium	ND	0.25	1
Specific Migration of Cobalt	ND	0.03	0.05
Specific Migration of Copper	ND	0.25	5
Specific Migration of Iron	ND	0.25	48
Specific Migration of Lithium	ND	0.5	0.6
Specific Migration of Manganese	ND	0.25	0.6
Specific Migration of Zinc	ND	0.5	25
<b>Comment</b>	PASS	--	--

Sample Description :

1. White Plastic

Note : 1. mg/kg = milligram per kilogram of foodstuff in contact with  
 2. °C = degree Celsius  
 3. ND = Not Detected

Remark :

1. Test condition & simulatant were specified by client.



\*\*\* End of Report \*\*\*

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