

Product Specification

Product Code	RBPS005
Description	50 -150mm x 4.5mm Round Solid Section Blue Plastic lollipop Sticks
Packaging	Packed in retail packs of 50 with a choice of 2 bags types – -Official Yolli -Clear Unbranded
Material	HIPS (High Impact Poly Styrene) HI 425E
Colour	Mid Blue OM5011
Length Tolerance +/-	1mm
Diameter Tolerance +/- %	3.5
Pack Quantity	50 Pieces
Count Tolerance +/- %	2
Pack Weight Tolerance +/- %	2.5
Suggested Uses	Lollipops, Cake pops Arts and Crafts
Warnings	-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° C

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 ³
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 ² (3,976) (psi)
Elongation	ASTM D638	55 %
Flexural Strength	ASTM D790	350 kg/cm ² (4,970) (psi)
Flexural Modulus	ASTM D790	17,500 kg/cm ² (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 ²)	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

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

Extrusion Guide	Unit	Value
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

Drying	Unit	Value
Temperature	°C	60~70
Time	hr	1~3

Notes

These are only mentioned as general guidelines.

Colourmaster

Stock Lane (off Peel Street)
GB - OL9 9EY Chadderton
Great Britain

22531995

05.04.2013

Declaration

OMNICOLOR-Mid Blue OM5011

Introduction

This declaration applies exclusively to the above mentioned product when used as colouring or additive agent of a plastic food contact material and article. Our mixture is not intended to come directly in contact with food in its original form: therefore, since Clariant has no influence on subsequent processing, this declaration can not be extended to the finished material or article. Indeed, the compliance of the end material or article with the food contact regulations is the responsibility of the converter. He is committed to meet all relevant legal requirements and to test the migration limits according the conditions of use (temperature, time, simulants) of the article in its finished form (e.g. volume, geometry, thickness). These conditions are not part of our knowledge and therefore are not under Clariant's control.

Framework Regulation (EC) No. 1935/2004 and GMP Regulation No 2023/2006

Framework Regulation (EC) No. 1935/2004 sets out the general rules that must be met by all classes of food contact materials without giving any specific rule of how to prove the safety of food contact articles: plastic materials are covered by specific measures in relation to component types used in the formulation of our mixtures:

- polymers and additives are regulated by Regulation (EU) No 10/2011 and its amendments.
- colourants (including dyes, organic and inorganic pigments) must not migrate and must also comply with the purity requirements laid down in the national laws of Member States. General requirements for colourants are listed in the EU Resolution of the Council of Europe, AP (89) 1 though this is not legally binding.
- catalysts, solvents and polymer production aids (not yet listed at EU level) shall be assessed with general rules of the Framework Regulation by the substance manufacturer and/or shall comply with the national legislations provisions.

The product is not expected to cause any contravention to the Framework Regulation since the subsequent stages of manufacture, processing and distribution of the end article are in line with the Good Manufacturing Practices (GMP) applicable to food contact materials and article's supply chain, as listed in Regulation (EC) No 2023/2006. In addition, we would declare that our own production process, as a part of this supply chain will conform to the provisions of GMP.

Hereafter the status of the different component types is given according to their applicable legislation and based on the declarations received by Clariant from starting materials suppliers:

Commission Regulation (EU) No 10/2011 and its amendments

All the carriers and the intentionally added additives comply with the requirements of Regulation (EU) No 10/2011 and its amendments published before the release date of this certificate. We would remind you that the assessment of overall migration limits and any other specific migration limits such as the release of aromatic amines in a detectable quantity into food or food simulant are the responsibility of the producer of the finished article (converter). Information regarding components subjected to further specific limitations and concerning the presence of dual-use additives is given hereunder.

Restrictions and Limitations

- n-Octylphosphonic acid, SML = 0,05 mg/kg
- BUTADIENE: $Q_m = 1 \text{ mg/kg}$ in FP or SML = not detectable (DL = 0,02 mg/kg, analytical tolerance included)
- Dioctadecyl 3,3'-thiodipropionate: SML (T) = 5 mg/Kg, see note (14) Annex I / Table 2. Consider correction of specific migration in foods containing more than 20% fat by the fat reduction factor.
- 2,4-Bis(octylthiomethyl)-6-methylphenol: SML(T) = 5 mg/kg (40). Consider correction of specific migration in foods containing more than 20% fat by the fat reduction factor.
- Phosphorous acid, tris(nonyl-and/or dinonylphenyl) ester: SML = 30 mg/kg. Consider correction of specific migration in foods containing more than 20% fat by the fat reduction factor.
- Zinc salts (including double salts and acid salts) of authorised acids, phenols or alcohols: SML = 25 mg/kg (expressed as Zn)
- ACETIC ACID VINYL ESTER: SML = 12 mg/kg
- 2,6-Di-tert-butyl-p-cresol: SML = 3 mg/kg

Additional information

The current formulation of the product contains one or more components considered a dual-use additive as referred to Article 11(3) of Commission Regulation (EU) No. 10/2011 regarding substances authorised as direct food additives by Regulation (EC) No. 1333/2008 or flavourings by Regulation (EC) No. 1334/2008; if this concerns your organisation, the identity and the quantity of these components may be disclosed to you confidentially. As the conversion process can affect migration, only the packaging producer can guarantee that the maximum level of food additives or flavourings into foodstuffs is not exceeded. We remind you that who produces the material or the article intended to be in contact with food must fulfil the restrictions listed in Annex II.

SML	Specific Migration Limit	SML(T)	Specific Migration Limit expressed as Total
DL/LR/NG	Detection Limit	FP/PF/BG	Finished Product or Article

European Resolution AP (89) 1

All the colourants used meet the requirements established in European Resolution AP(89) 1 in regard to the maximum permissible levels of heavy metals, primary aromatic amines, sulphonated aromatic amines and polychlorinated biphenyls.

Belgium: Arrêté Royal from 11.05.1992 of the Moniteur Belge 24.07.1992

All the colourants used meet the purity requirements listed in the Arrêté Royal from 11.05.1992 of the Moniteur Belge 24.07.1992 and its amendments.

France: Jorf

All the colourants used, are listed in the Brochure N° 1227 positive list and meet its purity requirements.

Germany: BfR Recommendation IX

There are no objections to the use of the colourants in this product according to the Recommendation IX of the BfR (Federal Institute for Risk Assessment).

Italy: Decreto Ministeriale

All the colourants used, meet the purity requirements listed in the Decreto Ministeriale of 21.03.1973 and its amendments.

The Netherlands: Warenwet

All the colourants used meet the purity requirements listed in the Dutch regulation Warenwet and its amendments.

Spain: Real Decreto 847/2011 (subsecretaria para Sanidad)

All the colourants used meet the purity requirements listed in Annex II of Real Decreto 847/2011 (subsecretaria para Sanidad) and its amendments.

Turkey: Food Codex Regulation

We currently have no information available about the status of one or more components concerning their compliance with this legislation.

We would also like to inform you of the status of our product in regard to the Directive 94/62/EC, CONEG Regulation status and the content of diarylide pigments:

Directive 94/62/EC and CONEG

Based on the knowledge of the raw materials as well as of the manufacturing process, we are able to confirm that the product does not contain intentionally added heavy metals. The product meets the requirements of the Directive 94/62/EC and the CONEG regulation which limits the content of heavy metals up to 100 ppm (Cd, Pb, Hg, Cr(VI)). National regulations such as D.L.22 del 5/02/97 (IT), Ley de envases y residuos de envases 11/97 (ES) are also satisfied.

Diarylide Pigments

The product does not contain any intentionally added diarylide pigment in its chemical composition.

Clariant Masterbatches Ireland

Country Product Stewardship

This declaration was produced automatically, and therefore does not have an original signature.

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Clariant makes no warranties, express or implied, as to the information's accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Clariant's products for its particular application. Nothing included in this information waives any of Clariant's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing. Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Clariant products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products. For additional information, please contact Clariant.

* For sales to customers located within the United States and Canada the following applies in addition:

NO EXPRESS OR IMPLIED WARRANTY IS MADE OF THE MERCHANTABILITY, SUITABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE OF ANY PRODUCT OR SERVICE.

9/2010

File No. : QA-2012-106

Issued Date : May. 07, 2012

Receive :

Reference :

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

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
1. German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 31.	--
Sensorial examination odour and taste test	PASS
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	PASS
3. European Commission Regulation (EU) No 10/2011	--
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
Comment	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
Comment – Lead and Cadmium	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 ²)	Reporting Limit (mg/dm ²)	Permissible Limit (mg/dm ²)
		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
Comment	--	PASS	--	--

Sample Description :

1. White Plastic

 Note : 1. mg/dm² = milligram per square decimeter
 2. °C = degree Celsius
 3. ND = Not Detected

Remark :

1. Test condition & 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
Comment	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 & simulat were specified by client.



*** End of Report ***

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