	<b>Ethylene bis-Stearamide(EBS)</b>			<b>MLA</b> <b>GROUP</b>
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<b>UNIFLOW</b>	Doc. No.:MLA/SPECS/68	Issue No.: 01	Issue Date: 05.04.2014	Replaces: All previous Issues

## Ethylene Bis-Stearamide ( EBS )

**UNILUB EBS-3** is an amide wax ( N,N' Ethylene Bis Stearamide ) and has an excellent colour stability and low viscosity at a high temperature when molten. UNILUB EBS-3 is compatible with most waxes and plasticizers. The polarity of its amide group and the non-polarity of the two fatty acid chains make this product an excellent surface active agent . When incorporated in polymers it blooms to the surface forming a layer which increases the throughput rate.

### TYPICAL PHYSIOCHEMICAL PROPERTIES

PROPERTY	UNIT	UNIFLOW TS-PC
Appearance	-	White powder/ granules
Amine Value	Mg KOH/gm max	3.0
Acid value	Mg KOH/gm max	6.0
Moisture	% max	0.5
Ash Content	% max	0.2
Melting Point	Degree C	140-145
Volatile Matter	% max	1.0
Melt Quality	--	Clear & Transparent

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### APPLICATIONS:

1 **Ethylene Bis Stearmide** is an excellent plastics processing auxiliary which is suitable for almost all thermosetting and thermoplastic plastics. EBS has good lubricant property and good anti-adhesive, anti-static properties and can improve remarkably the dispersion of the plastics and fillers. So it is widely used as lubricant, demoulding agent, slippery opening agent and plastic dispersing agent. Addition in plastics processing can improve the melting flowability, raise the working efficiency and retrieve the insufficiency of the fineness of the moulds to make the processed products smooth with luster as well as uniform and bright in color.

2、 **Ethylene Bis Stearmide** can be used as anti-adhesive agent for various polymer film or sheets. An addition of 0.5-1 % of it can not only prevent the occurrence of air bubbles (fish eye) but also make the plastic bags be slippery so as to be

opened easily.

3、 **Ethylene Bis Stearmide** is used as lubricant with good inner or outer lubricant action and has good coordination when used together with other lubricants as high grade alcohols, aliphatic acid esters, calcium stearate and paraffin. In the processing of ABS, AS, hard PVC, polyformaldehyde, polycarbonate, polyurethane and phenolformaldehyde resins, it is used as lubricant demoulding agent with a quantity of 0.5~1.5 %.

4、 **Ethylene Bis Stearmide** can remarkably enhance the heat-resistant and weather -resistant properties while coordinating with chief stabilizer in formulae of inorganic filler for PVC and polyolefin. As EBS has strong cohesions with pigment or other filler, it can improve the dispersion and coupling property of fillers in the polymers to enhance the commercial value of the products.


5、 **Ethylene Bis Stearmide** can be used as nucleation transparency agent to reduce the nucleating time in compounds such as polyolefins, polyformaldehyde and polyamide, promote the structure of resin to become fine, thus improve the mechanical property and transparency of the products..

6、 **Ethylene Bis Stearmide** can also be used as processing auxiliary of rubber. Besides the lubricant demoulding property and modifying performance of filler surface, it can raise the surface fineness of rubber pipes and rubber plates to act as rubber surface polishing agent. It improves the kneading, processing and vulcanization performance of rubber grains in the processing of fluoro-rubber.

7、 **EBS** can be added in the coating production to increase the uniform dispersion of pigment and filler, improve the surface leveling property of baking paint, prevent the stripping off of paint film and improve water-proof and acid-resistant and alkali-resistant property. In nitrocellulose lacquers, it can bring about the flattening action.

8、 In synthetic fiber industry, EBS can improve the heat-resistant, weather-resistant property of polyester and polyamide and bring about certain antistatic effects. It is used in the spinning of antistatic nylon fiber as additive and also is able to reduce the breaking of yarn.

**Dosage : 0.5 % - 1.5 %**

 <b>UNIFLOW</b>	<b>UNILUB G-748-M</b>			<b>MLA</b> <hr/> <b>GROUP</b>
	<b>M.L.A. INDUSTRIES, 111/230, HARSH NAGAR, KANPUR</b> Tel. : (0512)-2555292, Fax No. : 0512-2545548 E-mail: <a href="mailto:sales@mlagroup.com">sales@mlagroup.com</a> , <a href="mailto:mktg@mlagroup.com">mktg@mlagroup.com</a>			
	Doc. No.:MLA/SPECS/70	Issue No.: 01	Issue Date: 05.04.2014	Replaces: All previous Issues

## UNILUB G-748 M

**UNILUB G-748 M** is an oraganic stearate and can be used as a speciality highly effective lubricant and dispersing agent in plastics such as the compounding of PC/ABS,PP,PET,PBT,POM,ABS GF,PP GF and other polymers and rubber industry .

Compared to PE wax or EBS, it will mix the polymer resin with the additives more uniformly without occurance of any defect spot. Besides this,it also shows easier demoulding of the made-up articles from the moulds, can notably lower the surface tension with the resins and improve the plasticization.

Dosage : 0.5-1 phr

## TYPICAL PHYSIOCHEMICAL PROPERTIES

<b>PROPERTY</b>	<b>UNIT</b>	<b>UNIFLOW TS-PC</b>
Moisture	% max	0.5
Ash Content	% max	0.2
Melting Point	Degree C	55-65
Hydroxyl number	-	25-35
Acid number	--	5 max

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	<b>LUBRICANT ONE PACK FOR MASTERBATCHES- MB1 &amp; MB-2</b>			<b>MLA</b> <hr/> <b>GROUP</b>
	<b>M.L.A. INDUSTRIES, 111/230, HARSH NAGAR, KANPUR</b> Tel. : (0512)-2555292, Fax No. : 0512-2545548 E-mail: <a href="mailto:sales@mlagroup.com">sales@mlagroup.com</a> , <a href="mailto:mktg@mlagroup.com">mktg@mlagroup.com</a>			
<b>UNIFLOW</b>	Doc. No.:MLA/SPECS/L-1	Issue No.: 01	Issue Date: 2.1.2014	Replaces: Nil

**UNILUB MB-1 and 2** are one pack multi-functional lubricants for low masterbatches and filler compounds. MB-1 is designed for low filler and MB-2 for high filler. It replaces zinc stearate with additional benefits.

**PRODUCT DESCRIPTION: -**

UNILUB MB series are proprietary blends of high purity metallic stearates with other organic lubricants, hence providing the following benefits

- Internal Lubricant leading to better flow property / enhanced output
- Better release
- Better shine
- Better binding

**SPECIFICATIONS: -**

Appearance --- White powder or flakes  
 Moisture --- 0.5 % max  
 Metal content --- proprietary  
 Melting point --- 100-105

**TYPICAL END USES**

Applications include polyolefin masterbatches and compounds where zinc stearate is used , but its use alone does not impart required binding and shine.


**RECOMMENDED DOSAGE**

1-2 phr.

**AVAILABLE FORMS**

- 1 ) fine powder
- 2 ) Flakes

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	<b>LUBRICANT ONE PACK FOR MASTERBATCHES and COMPOUNDS – UNILUB MBT-1</b>			<b>MLA</b> <hr/> <b>GROUP</b>
	M.L.A. INDUSTRIES, 111/230, HARSH NAGAR, KANPUR Tel. : (0512)-2555292, Fax No. : 0512-2545548 E-mail: <a href="mailto:sales@mlagroup.com">sales@mlagroup.com</a> , <a href="mailto:mktg@mlagroup.com">mktg@mlagroup.com</a>			
<b>UNIFLOW</b>	Doc. No.:MLA/SPECS/L-2	Issue No.: 01	Issue Date: 2.6.2014	Replaces: Nil

**UNILUB MBT-1** is a one pack multi-functional lubricant for speciality masterbatches and highly filled compounds. It replaces metallic stearates and waxes with additional benefits. Our product is white in colour compared to many other equivalent brands which are yellow to brown in colour.

**PRODUCT DESCRIPTION: -**

UNILUB MBT series are proprietary blends of high purity metallic stearates with other organic lubricants ( amide and other waxes ), hence providing the following benefits

- Internal Lubricant leading to better flow property / enhanced output
- Better dispersion of filler in the polymer matrix
- Partial coupling action of filler with polymer chains
- Better release
- Better shine
- Better binding

**SPECIFICATIONS: -**

Appearance --- White powder or flakes  
 Moisture --- 0.5 % max  
 Metal content --- proprietary  
 Melting point --- 102-108

**TYPICAL END USES**

Polyolefinic, PP and engineering plastic compounds and masterbatches


**RECOMMENDED DOSAGE**

0.5 – 2 phr.

**AVAILABLE FORMS**

granular

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 <b>UNIFLOW</b>	<b>Dry Wax- UNILUB PFW-1</b>			<b>MLA</b> <hr/> <b>GROUP</b>
	<b>M.L.A. INDUSTRIES, 111/230, HARSH NAGAR, KANPUR</b> Tel. : (0512)-2555292, Fax No. : 0512-2545548 E-mail: <a href="mailto:sales@mlagroup.com">sales@mlagroup.com</a> , <a href="mailto:mktg@mlagroup.com">mktg@mlagroup.com</a>			
	Doc. No.:MLA/SPEC/PFW1	Issue No.: 01	Issue Date: 8.5.2014	Replaces: none

**UNILUB PFW-1** low cost highly refined wax that replaced paraffin wax as a very effective external lubricant in PVC and other plastics processing. It is available in easy to handle flakes form free from oily matter, unlike the sticky and oily paraffin wax which is available in slabs..

### **TYPICAL PHYSIOCHEMICAL PROPERTIES**

<b>PROPERTY</b>	<b>UNIT</b>	<b>UNILUB PFW-1</b>
Appearance	--	White to cream flakes
Ash Content	% max	0.10
Melting point	--	60+-5
Moisture	% max	0.5
Free oil content	% max	0.2


5) At the time of packing 5) By IR Moisture Balance 3) IS: 7589-1974 (A-8)

### **APPLICATIONS:**

- 1 ) As an external lubricant in plastics processing, specially rigid PVC
- 2 ) As a shining agent / binding agent in masterbatches and filler compounds

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	<b>STEARIC ACID</b>				<b>MLA</b> <b>GROUP</b>
	<b>M.L.A. INDUSTRIES, 111/230, HARSH NAGAR, KANPUR</b> Tel. : (0512)-2555292, Fax No. : 0512-2545548 E-mail: <a href="mailto:sales@mlagroup.com">sales@mlagroup.com</a> , <a href="mailto:mktg@mlagroup.com">mktg@mlagroup.com</a>				
<b>UNIFLOW</b>	Doc. No.:MLA/SPECS/PE 1	Issue No.: 01	Issue Date: 8.1.2014	Replaces: none	

**UNILUB SA** is a high quality stearic acid , obtained as a distillation production from palm oil source ( vegetable origin ). It is available in various grades as per the Iodine value and purity.

### **TYPICAL PHYSIOCHEMICAL PROPERTIES**

PROPERTY	UNIT	UNILUB SA-C	UNILUB SA-P	UNILUB SA-R
Appearance	--	Snow white flakes	White to slight cream flakes	Cream coloured flakes
Ash Content	% max	0.05	0.05	0.1
Melting point	--	54-56	54-58	55-60
Moisture	% max	0.5	0.5	0.5
Iodine Value	-	1.0	3.0	8.0
Acid Value	-	205-210	200-210	185-205
Saponification Value	-	206-211	201-211	186-206

5) At the time of packing 5) By IR Moisture Balance 3) IS: 7589-1974 (A-8)


### **APPLICATIONS:**

- 1 ) As an internal lubricant and flow modifier in all kinds of plastics processing
- 2 ) As a coating agent for various chemicals and fillers
- 3 ) As a co-additive for vulcanization complex formation with accelerator in rubber

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	<b>UNILUB WAX-C</b>			<b>MLA</b> <b>GROUP</b>
	<b>M.L.A. INDUSTRIES, 111/230, HARSH NAGAR, KANPUR</b> Tel. : (0512)-2555292, Fax No. : 0512-2545548 E-mail: <a href="mailto:sales@mlagroup.com">sales@mlagroup.com</a> , <a href="mailto:mktg@mlagroup.com">mktg@mlagroup.com</a>			
<b>UNIFLOW</b>	Doc. No.:MLA/SPECS/71	Issue No.: 01	Issue Date: 05.04.2014	Replaces: All previous Issues

## UNILUB WAX-C

**UNILUB WAX-C** is an amide wax and has an excellent colour stability and low viscosity at a high temperature when molten. UNILUB EBS-3 is compatible with most waxes and plasticizers. The polarity of its amide group and the non-polarity of the two fatty acid chains make this product an excellent surface active agent . When incorporated in polymers it blooms to the surface forming a layer which increases the throughput rate.

### TYPICAL PHYSIOCHEMICAL PROPERTIES

PROPERTY	UNIT	UNILUB WAX-C
Appearance	-	White powder/ granules
Amine Value	Mg KOH/gm max	3.0
Acid value	Mg KOH/gm max	6.0
Moisture	% max	0.5
Ash Content	% max	0.2
Melting Point	Degree C	140-145
Volatile Matter	% max	1.0
Melt Quality	--	Clear & Transparent

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### APPLICATIONS:

- It is an excellent plastics processing auxiliary which is suitable for almost all thermosetting and thermoplastic plastics. It has good lubricant property and good anti-adhesive, anti-static properties and can improve remarkably the dispersion of the plastics and fillers. So it is widely used as lubricant, demoulding agent, slippery opening agent and plastic dispersing agent. Addition in plastics processing can improve the melting flowability, raise the working efficiency and retrieve the insufficiency of the fineness of the moulds to make the processed products smooth with luster as well as uniform and bright in color.
- can be used as anti-adhesive agent for various polymer film or sheets. An addition of 0.5-1 % of it can not only prevent the occurrence of air bubbles (fish eye) but also make the plastic bags be slippery so as to be opened easily.

- used as lubricant with good inner or outer lubricant action and has good coordination when used together with other lubricants as high grade alcohols, aliphatic acid esters, calcium stearate and paraffin. In the processing of ABS, AS, hard PVC, polyformaldehyde, polycarbonate, polyurethane and phenolformaldehyde resins, it is used as lubricant demoulding agent with a quantity of 0.5~1.5 %.
- can remarkably enhance the heat-resistant and weather -resistant properties while coordinating with chief stabilizer in formulae of inorganic filler for PVC and polyolefin. As it has strong cohesions with pigment or other filler, it can improve the dispersion and coupling property of fillers in the polymers to enhance the commercial value of the products.
- can be used as nucleation transparency agent to reduce the nucleating time in compounds such as polyolefins, polyformaldehyde and polyamide, promote the structure of resin to become fine, thus improve the mechanical property and transparency of the products..
- can also be used as processing auxiliary of rubber. Besides the lubricant demoulding property and modifying performance of filler surface, it can raise the surface fineness of rubber pipes and rubber plates to act as rubber surface polishing agent. It improves the kneading, processing and vulcanization performance of rubber grains in the processing of fluoro-rubber.
- can be added in the coating production to increase the uniform dispersion of pigment and filler, improve the surface leveling property of baking paint, prevent the stripping off of paint film and improve water-proof and acid-resistant and alkali-resistant property. In nitrocellulose lacquers, it can bring about the flattening action
- In synthetic fiber industry, can improve the heat-resistant, weather-resistant property of polyester and polyamide and bring about certain antistatic effects. It is used in the spinning of antistatic nylon fiber as additive and also is able to reduce the breaking of yarn.

**Dosage : 0.5 % - 1.5 %**