

# PHOTOGRAPHERS FORMULARY

## FIXED GRADE BLACK & WHITE LIQUID SILVER GELATIN EMULSION

### **Description/Application**

This fixed grade black & white liquid emulsion is a light-sensitive, silver chlorobromide emulsion which can be applied to various supports such as glass, ceramics, art paper, fabrics, plastics, and photographically exposed with a pictorial or graphic subject. It must not be coated directly on to metal, because this would adversely affect the photo-chemical properties of the emulsion. The emulsion corresponds in sensitivity and contrast to Kentmere Kenthene grade 2 paper.

### **Storage**

The emulsion should be stored upright, and in cool conditions (refrigerator, or preferably around 10C).

### **Safelight Conditions**

The bottle must only be opened, and coated under a darkroom safelight (red).

### **Contents**

250 ml (solidified). The solid photographic emulsion is liquefied by heating, to permit removal from the bottle and coating on to the chosen surface.

### **Safety Precautions**

It is advisable to use the product in well-ventilated rooms, using appropriate PPE (personal protective equipment) such as gloves, lab coat, and safety glasses.

Do not ingest.

Keep out of reach of children.

Avoid contact with skin, mouth and eyes, but in the event that contact does arise, flush extensively with plenty of water.

### **Preparation**

Loosen the bottle lid, and then place the bottle of solidified emulsion in a water bath with a temperature of 40°C/104°F to a maximum of 45°C/113°F.

It takes about 45 to 60 minutes for the complete contents to be liquefied by the action of the heat.

Correspondingly less time is needed for part-quantities.

On no account shake the contents, because this would create air bubbles in the emulsion.

Take care on handling the bottle when being heated.

### **Pre-treatment of Emulsion Base**

If the emulsion cannot be properly coated on to the chosen base, the surface can be pre-treated. For this purpose, normal household gelatine is dissolved in accordance with the instructions, and the solution is coated on to the base.

When it has dried completely, the fixed grade emulsion can be applied.

This treatment is mainly necessary on highly absorbent bases. Glass, ceramics, plastic and painted surfaces should be thoroughly cleaned or degreased (with methylated spirits) before applying the emulsion.

### **Coating**

Depending on the nature of the base, 100 to 150mls are needed per m<sup>2</sup>.

Apply the emulsion very evenly to the relevant surface. Make sure that the coating is free from air bubbles.

The emulsion is spread on firm surfaces such as glass, wood, ceramics etc, by tilting the base in various directions, or by brushing with a soft flat brush.

Preheating the base (with a hair dryer) to the temperatures of the emulsion improves the flowing properties and even spread of the emulsion.

On materials with uneven surfaces, the coat is best applied by immersion.

### **Drying - Unprocessed**

After coating, keep the base horizontal. The emulsion is solid after approximately 30 minutes and slightly dry on the surface. For complete drying, the coated material must be left in the dark for one to two days.

Alternatively, you can use a hair dryer without the heating switched on. This takes about 30 minutes.

### **Exposure**

The emulsion should be treated as a Kentmere Kenthene Grade 2 paper, for attaining guide exposure times.

Variations in thickness of the coating and incomplete drying considerably impair / reduce the sensitivity.

### **Disposal**

Do not throw away large volumes of waste emulsion down drains.

For further information on disposal, please consult the Health and Safety data sheet.