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HEALTH, SAFETY AND DATA SHEET FOR USE WITH CATALYTIC GENERATORS & "ETHY-GEN II" FOR THE PRODUCTION OF ETHYLENE

ETHYLENE GAS

HAZARDOUS PROPERTIES – HIGHLY FLAMMABLE ASPHYXIANT GAS. Very high concentrations of ethylene gas in air can cause anaesthesia; it is a simple asphyxiant considered non-toxic. (As a matter of fact, years ago it was used, in very high concentrations, in hospitals as an anaesthetic to perform operations).
Highly flammable in concentrations between 3.1% and 32% v/v in air.

PHYSICAL DATA Ethylene gas is colourless; its distinctive sweetish odour helps to indicate its presence. It is slightly lighter than air (Specific gravity is 0.974, Air is 1.000) Auto-ignition temperature in critical concentrations is 425°C.

SAFE CONCENTRATIONS OF ETHYLENE GAS IN ROOMS WHEN USING A CATALYTIC GENERATOR

The Health & Safety Executive recommended that the maximum gas concentration which can be reached in a closed room should not exceed 25% of the lower flammable limit (i.e. 0.8% v/v) Our American quart of "Ethy-Gen II" concentrate (946cc) produces about 0.34m³ of ethylene gas, so that not less than 42.5m³ of free air space should be available in the ripening room for the adequate dilution of the gas.

EXAMPLE — 85m³ ROOM When filled with boxes full of bananas, about 35% of the room volume is taken up by solid matter, leaving about 55.2m³ of free air space. The generator can therefore be safely used with one quart of concentrate. The **MINIMUM** room size in which it is safe to use one quart of concentrate is 70.7m³.

EXAMPLE — 32.5m³ to 70.7m³ ROOMS When filled with boxes full of bananas, about 35% of the room volume is taken up by solid matter, leaving about 21m³ of free air space in a room of 32.5m³, the generator can therefore be safely used with one pint of concentrate (half a bottle). The **MINIMUM** room size in which it is safe to use one pint of concentrate is 32.5m³

UNDER NO CIRCUMSTANCES should a catalytic generator be used in a room of any description of less than 43m³.

DO NOT USE more than one generator, or more than one quart of "Ethy-Gen II" concentrate in any room.

If in doubt, contact Banana-Rite Ltd.

All calculations on this sheet are made on the assumption that the rooms are completely airtight.