

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

TOPIC

- Introduction.
- How are they made?
- Characteristics.
- Advantages/ Disadvantages.
- Guideline-Mixing, Application.
- How to get the best performance.

Presented by

Girish Dubey
President, STAR, Inc.

NPE, FEB 1, 2008, NASVILLE, TN



Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

INTRODUCTION

Blended sealcoatings are mixtures of refined Tar (RTPE) & Asphalt Emulsion (AE) based sealers.

They are supplied as Blends by sealcoating manufacturer.

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

The blends are made either by;

1. Mixing finished sealers (RTPE+AE),
Or
2. Mixing HOT Refined Tar & Asphalt during the manufacturing process.

Method 1 is commonly used.

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

INTRODUCTION

IN WHAT RATIOS?

Confidential-Some Manufacturer
Most Manufacturers tell their customers.

Could be in the Ratio of
REFINED TAR/ ASPHALT EMULSION

80/20

70/30

50/50

30/70

20/80

????

Manufacturers decide what works best,
In their region.

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

SPECIFICATIONS

(ASTM, FED., FAA..)

NONE

Do Not Supply a Blended Product
if the job demands compliance
to a specification.

Please Note

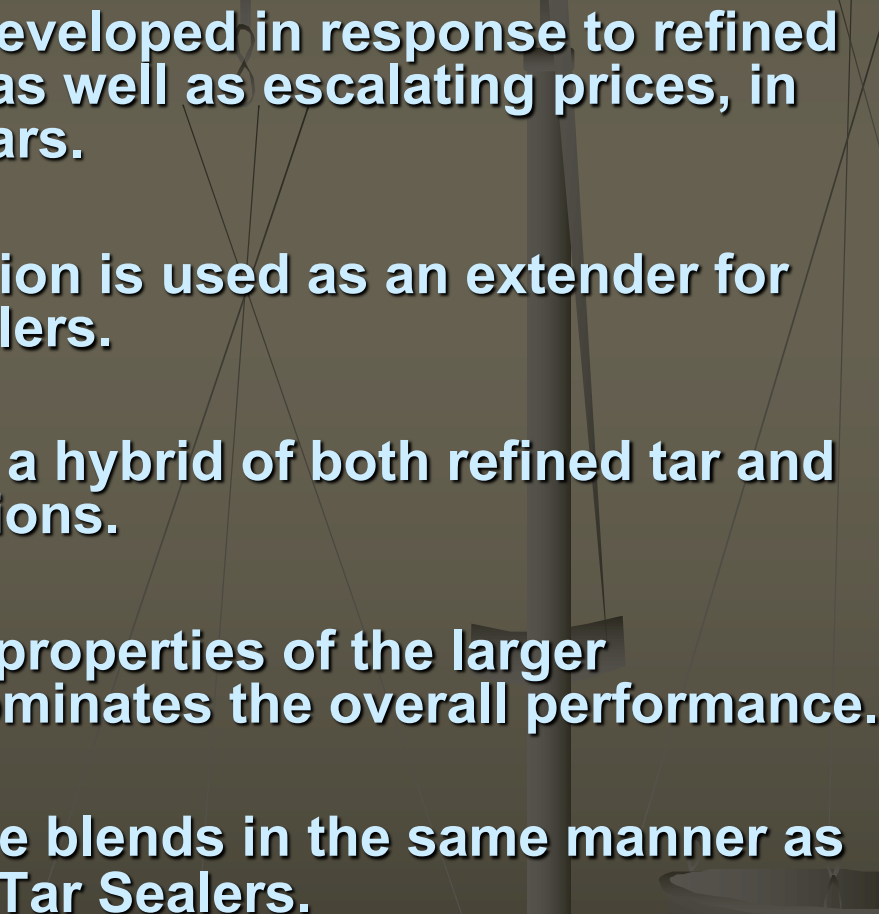
- A. Refined tar (CTPE) sealers meet ASTM 5727-00, FAA P-625, 627,628, etc.
- B. Asphalt SEALERS- No specification designed. ASTM Specification is pending.

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

INDUSTRY CONSENSUS

- 
- Blends were developed in response to refined tar shortages as well as escalating prices, in the last 4-5 years.
 - Asphalt emulsion is used as an extender for refined tar sealers.
 - Properties are a hybrid of both refined tar and asphalt emulsions.
 - In the blends, properties of the larger component dominates the overall performance.
 - Do not treat the blends in the same manner as 100% Refined Tar Sealers.

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

INDUSTRY CONSENSUS

ADVANTAGES OF THE BLENDS

1. **Extends the availability** of refined tar sealers.
2. **Improve the performance** of Asphalt Emulsion sealers, especially color fade resistance, resistance to chemicals.
3. **Reduces the odor and burning** (sensation) of refined tar sealers.
4. **Cost reduction-** May be ???
5. **Application-** Identical to Refined Tar Sealers. No special material preparation or equipment is needed.

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

INDUSTRY CONSENSUS

DISADVANTAGES OF THE BLENDS

**Performance not as good
as of refined tar sealers.**

- ❑ Reduced resistance to oils, fats, petrochemicals, etc.
- ❑ **Does not last as long.**
- ❑ **Limitations with mix designs.**
 - a. **Water**, max. 25% for blends with 50% or more of asphalt emulsion in the blend.
 - b. **Sand**- Highly recommended.
 - c. **Two coats**- Will yield better longevity.
- ❑ **Higher ambient and cure temperatures than CTPE.** Min. 50 deg. F, because asphalt softens and melts at much higher temperature than refined tar. Refined tar sealers may be applied as low as
- ❑ 40 Deg. F

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

INDUSTRY CONSENSUS

Performance declines with increasing proportion of asphalt sealer in the blend.

What defines Performance?

- ❑ Overall Longevity of the coating.
Fade Resistance- Shall stay dark slate in color.
- ❑ Resist attack by oil, grease, petrochemicals, etc.
- ❑ Resist attack by oil, grease, petrochemicals, etc.

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

MIX DESIGNS

Based upon our experience

1. Blends rich in refined tar sealer portion; (More than 60%)

Blend	100 gal.
Water	30-35% max
Sand/Aggregate	200-300 lb.
Additive (Optional)	1-2 gals.

Sealcoating Options

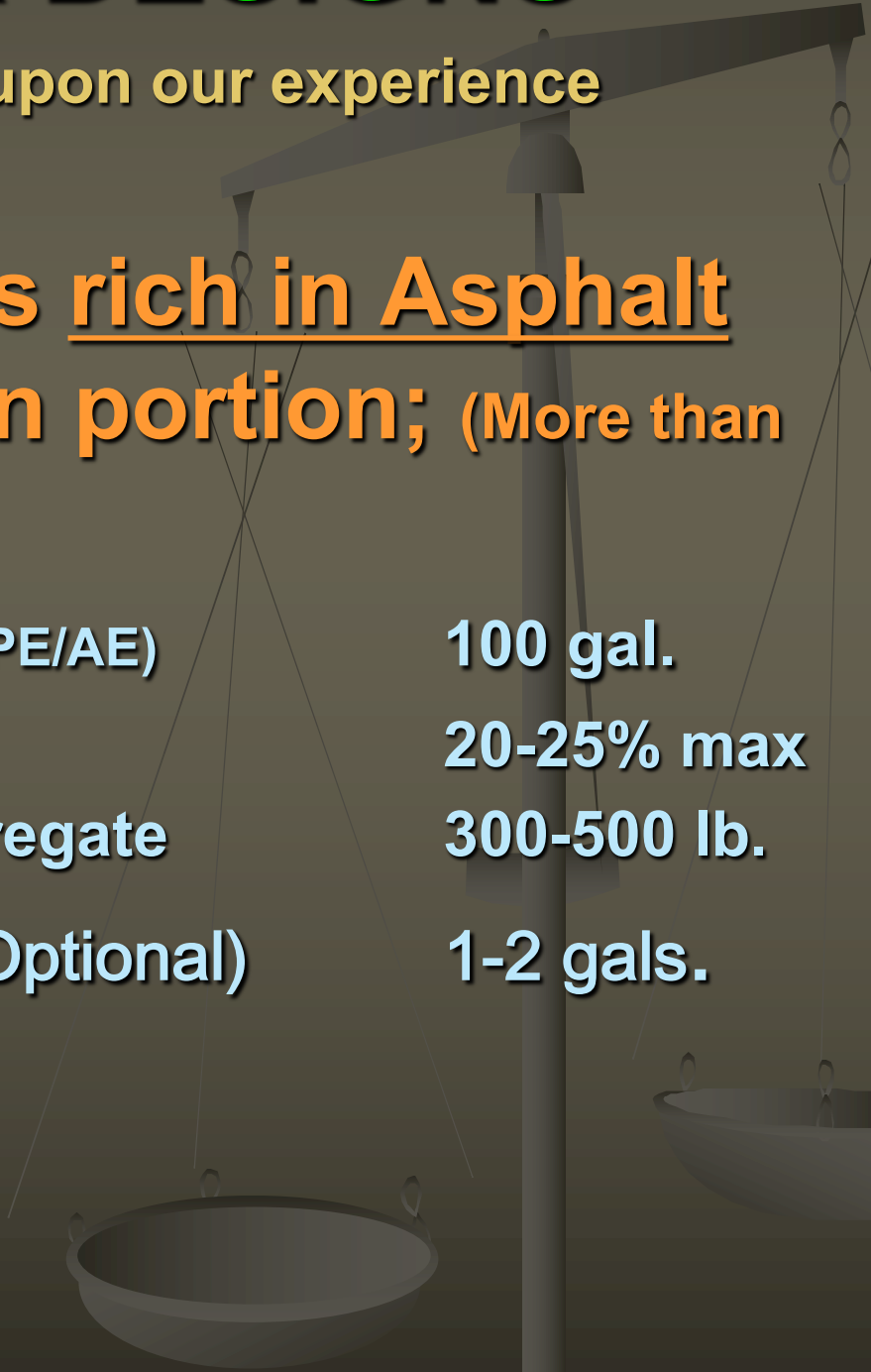
REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

MIX DESIGNS

Based upon our experience

2. Blends rich in Asphalt Emulsion portion; (More than 60%)

A faint, stylized background image of a balance scale is visible behind the text. The scale has a central vertical beam with two pans hanging from it. The left pan is slightly higher than the right pan, suggesting it is lighter. The pans are simple, bowl-like shapes.

Blend, (CTPE/AE)	100 gal.
Water	20-25% max
Sand/Aggregate	300-500 lb.
Additive (Optional)	1-2 gals.

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

APPLICATION RATES

Recommendations

1. Low to Medium Traffic

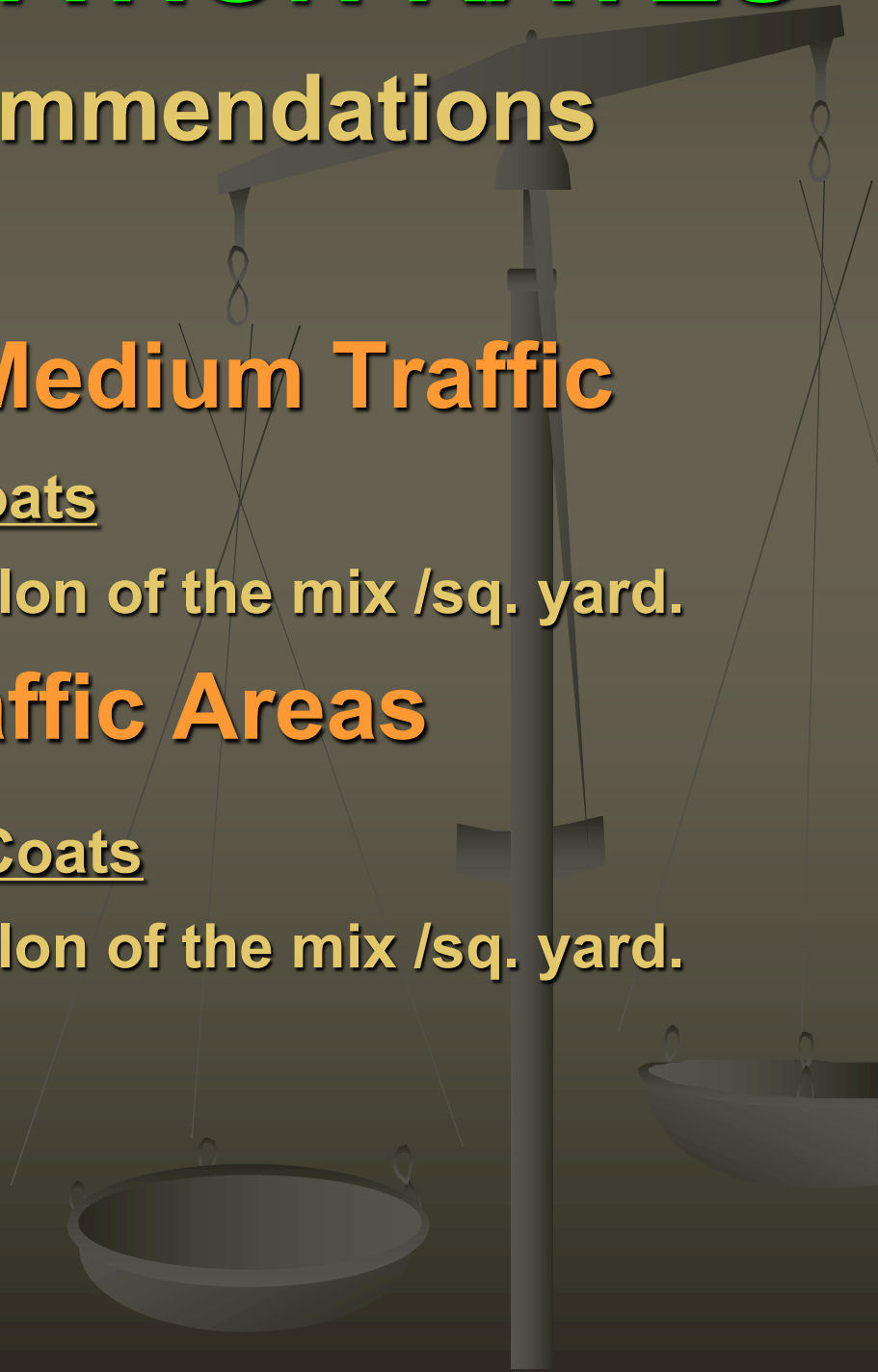
Two (2) Coats

@ 0.25 gallon of the mix /sq. yard.

2. High Traffic Areas

Three (3) Coats

@ 0.35 gallon of the mix /sq. yard.



Sealcoating Options

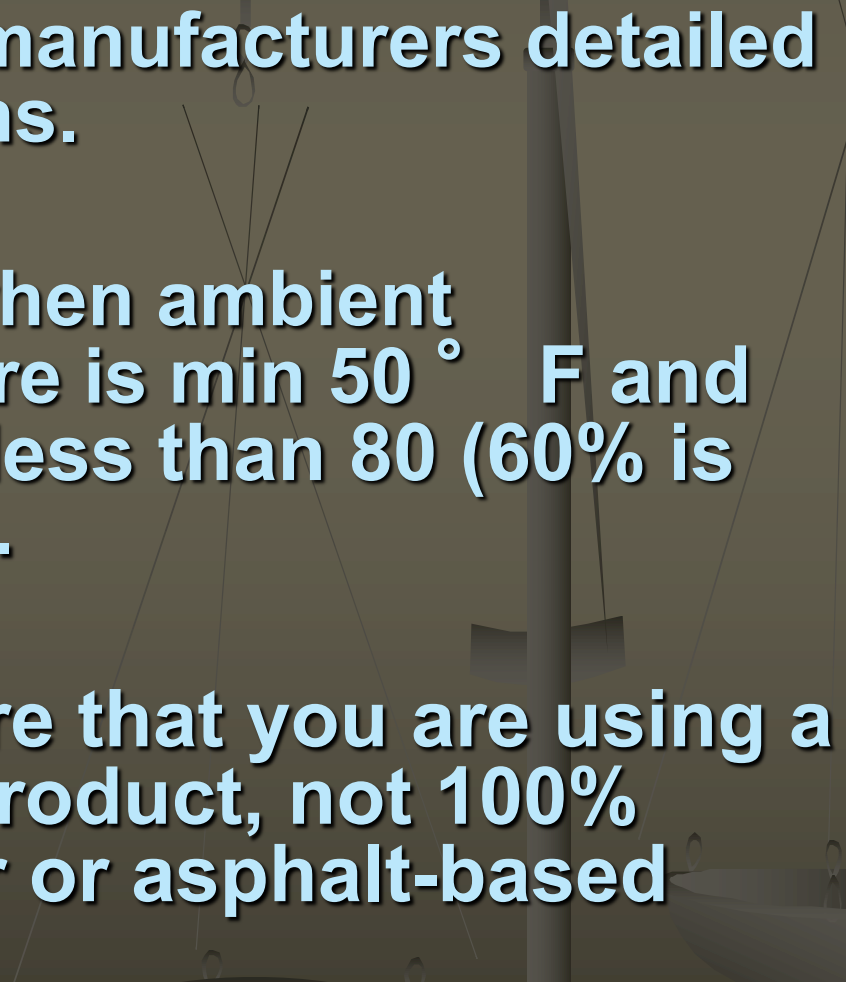
REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

APPLICATION

Do's & Don'ts

Do:

1. Follow manufacturers detailed instructions.
 2. Apply when ambient temperature is min 50 ° F and Humidity less than 80 (60% is preferred).
 3. Be aware that you are using a blended product, not 100% refined tar or asphalt-based sealer.
- 

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

APPLICATION

Do's & Don'ts

Do Not:

1. **Over-dilute.** Follow mix design recommendations.
2. **Apply when rain is in the forecast** for 8 hrs. or on a foggy or humid day.
3. **Apply over gilsonite or chip sealed surfaces.**

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

SUMMARY

- ❑ **Blended Sealers** are mixtures of refined tar and asphalt based sealer.
- ❑ **Developed in response to tar shortage** and escalating prices.
- ❑ **Used primarily to extend refined tar sealers.**
- ❑ **They have certain advantages** but do not match refined tar sealer in overall performance and longevity.
- ❑ **The application is similar** to that of identical to refined tar sealers, with the following variations;
 - a. Mix designs- Dilution, Sand Loadings,
 - b. Ambient conditions
 - c. Number of coats.
- ❑ **Follow manufacturers instructions.**

Sealcoating Options

REFINED TAR/ ASPHALT EMULSION

Blended Sealcoatings

QUESTIONS??

**HAVE A NICE 2008
SEALCOATING SEASON**

Want a copy of this presentation?

Call STAR, INC. @ 800-759-1912 or

E-Mail gcdubey@starseal.com