GREENSEAL BT

Ref.Catalogue : B20

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USE

TRIFUNCTIONAL ADDITIVE FOR BITUMINOUS BINDERS

APPLICATIONS

Additive for working up asphalt till 160°F / 70 °C

Additive for confection of low temperature asphalt at<= 220°F/105°C

Additive for higher wetting and dispersion of bitumen in agregates

SPECIFICATIONS

Characterisctics	Méthods	Units	Typical values
Viscosity at 75°F /25°C	EN 13072-2	mPa.s	85
Specifyc gravity at 60°F/15°C	DIN 51757	g/cm³	0,95
Flashpoint	EN-ISO 22719	°F/°C	>355/180
Numbers			minimum
saponification- (IS)	ASTM D803-15	mg KOH/g	120
acid- (IA)	ISO 1242	mg KOH/g	90
Iodine- (II)	NF EN ISO 3961	gI_2/100g	105
IRe	Σ = IA + IS+ II	ppm	>1260000
Fatty acids and their esters		%	99

DOSAGES

for **handling** the asfalt **< 160 °F/ 70°C**,

added to bitumen
0,15 – 0,3 % relative to the binder amount of the asphalt

-for **manufacturing** low temperature asfalt at **<= 220°F** /: **105°C,**

added to bitumen
0,8 – 1,0 % related to the binder amount of the in asfalt

REACTIVITY

« GREENSEAL BT » liquid at ambient temperature,is a binary mix consisting of middle and heavy distillates of fatty acids and their esters.

Added to bituminous binders **GREENSEAL BT** has an impact on their rheology by increasing the penetrability and decreasing the viscosity at lower temperature, usefull for a beter **wetting** and **dispersion** to the mineral aggregates and providing an excellent **working up of the asfalt** till 160°F / 70°C while assuming an **optimal compactness** of the asfalt.

In the table below : the radicals
IA = carbonacids ***« R- COOH «* ,**
II = double bindings ***« R > C = C < R »*** and
IS = esterified fatty acids ***« R – COOR »*** *are the measurable parameters,and forms together the* ***reactivity inde****x* = **IRe** for **GREENSEAL BT** expresses **in > 1260000 ppm .**

IA	IS	II	IRe/ ppm
>90 mgKOH/g	>120 mgKOH/g	>105 gI_2/100g	**>1260000**
ISO 1242	ASTM D803-15	NF EN ISO 3961	Σ IA+IS+II

GREENSEAL BT modifies chemicaly the molecular structures of bitumen and increases his original indexes and also his **polarity** and consequently his **adhesivity** regarding the mineral aggregates and higher **cohesion** of the asphalt...

The accumulated impact of **GREENSEAL BT** on the rheology of bitumen and the chemical modification of their molecules allowes the production of **low temperature asphalt** at **<220°F /105°C** with **equivalent** mechanical and physical performances as hot asphalt..

INFORMATIONS

ENVIRONNEMENTAL : **GREENSEAL BT by producing** low temperature asphalt. is fully favorable for the environement and the **carbon footprint** of the asphalt plant and **Life Cycle Analyses** (LCA) of asphalt.

TOXICOLOGY : G**REENSEAL BT**, free of dangerous and harmfull materials and allowing production of low temperature asphalt does not release « blue smoke » favourable for the highway workers , environment,fauna ans flora.

CERTIFICATIONS : **GREENSEAL BT** is made in accordance with ISO 9001 norm in a workship certified ISO 14001 and their present substances are « REACH » registrated by the producers..

HISTORY : **GREENSEAL BT,** earlier named GREENSEAL F (ref B10), developped and produced by GREENWOLRD s.à.r.l., is being exclusively commercialized since October 2006 by s.à.MECAROUTE.

PACKAGING : IBC = 900 kg or loose by min.20 t.