

# Adhesion Promoter for Hot and Warm Mix Asphalt DAD-1

## Description

Amphoteric surfactant applied in road construction for enhancement of adhesion of oil asphalt to aggregates made both of acid and basic rocks. There are two types of DAD-1 (A and C) with different commodity form for convenient application in different customer's technological conditions and with similar chemical effect on bitumen.

**DAD-1 Grade «A»** – is a homogeneous brown viscous-flow liquid recommended for manual or semi-automatic adding into a bitumen binder in an asphalt plant.

**DAD-1 Grade «C»** – is a homogeneous brown liquid recommended for automated injection into a bitumen binder in an asphalt plant by means of high-precision dosing equipment.

## Dosage

**Concentration of injection:** 0.3 – 0.8% of bitumen weight.

**Average efficient dosage of the preparation:** 0.5% of bitumen weight.

## Main Advantages

### Universal (Amphoteric Surfactant)

DAD-1 adhesion agent contains anionic and cationic functional group, which allows to improve bitumen adhesion to not only acid rock, but also basic rock and neutral rock and to use a universal approach to selection of the aggregate required for production of asphalt mixes. This is compares DAD-1 agent favourably with common amine-based agents composed of cationic functional groups only.

### Environmentally-Friendly

DAD-1 adhesion agent is produced of absolutely safe and environmentally friendly raw materials. Most of alternative cationic or acid agents are toxic and less safe for use.

### Cost-Effective

DAD-1 is very cheap, therefore, when it allows to save up to 20–30% of adhesion agents cost even despite the higher concentration of injection.

### Adaptable

The agent is available in different viscosity versions adapted for manual and automated addition by dosing equipment. Shipment in small-volume package for convenience of manual loading is possible. Relatively high concentration of injection of the preparation to bitumen allows to define minimal required dosing volume of the product with higher precision.

## Specifications

	DAD-1 Grade «A»	DAD-1 Grade «C»
Mass fraction of water and highly volatile substances not exceeding	2% mass	2% mass
Viscosity at 60°C in accordance with VZ-5 no longer than	50 sek	35 sek
Open-cup flash-point at least	232°C	232°C
Binder adhesion to the aggregate of the mixture in accordance with GOST 12801 at least	4 - 5 points	4 - 5 points



**Guaranteed storage life** is 1 year after manufacturing.

**Package** - metal barrels with volume of 216l or 52l and polymer containers with capacity of 1m<sup>3</sup>.