reasons for resealing

NZ TRANSPORT AGENCY
WAKA KOTAHI

Introduction

The purpose of this note is to rationalise the current *Reasons for resealing* to ensure accurate reporting and analysis. Currently there is duplication within *Reasons for resealing* recorded in RAMM, and many codes are unclear, ambiguous or do not apply to chipsealing.

Categories

Please use only the following *Reasons for resealing* for annual planning spreadsheets, RAMM records and NOMAD. See the following pages for further details on each category.

Category	RAMM Code	Comment	Chip-sealing	Thin AC
Second coat	SE	A second coat is a reseal over the top of a first coat seal.	Yes	No
Flushing	FL	Includes all resealing required due to loss of macrotexture.	Yes	Yes
Cracking	CR	Includes all cracks that may allow water ingress to the underlying pavement.	Yes	Yes
Polished	PS	Failure of the surfacing material where traffic stress polishes the surfacing aggregate below acceptable levels of skid resistance (not just low SC or ESC. See Further details on following pages).	Yes	Yes
Scabbing	SC	Scabbing as a failure mechanism in an old chipseal where the binder fails and chip is lost due to the increased hardness and brittleness of the bitumen.	Yes	No
Ravelling	RA	Loss of chip from an asphaltic concrete or a slurry surface. It occurs where the binder has oxidised and is losing its grip on the surfacing aggregate.	No	Yes
Holding seal	HS	A chipseal constructed in an attempt to extend the life of a failed pavement for a short period.	Yes	No
Special surfacings	SS	All surfacings where the reason clearly does not fit into any other category. Full reasons are required.	Yes	Yes

Further details on each category

Category and RAMM code	Comment	Notes
Second coat, SE 	A second coat is a reseal over the top of a first coat seal. It is designed to ensure the surface is waterproof and durable.	Includes: • second coats over a first coat • second coats over a pavement repair or permanent surface to complete a repair. Note: There is already a function called first coat. Note: Not to be used with thin AC. Use special surfacings, SS.
Flushing, FL 	Flushing includes all resealing required due to loss of macrotexture.	Flushing is the natural end of life condition for most chipseals. Any bleeding shows the chipseal is flushed. Includes: • all causes of loss of macrotexture • flushing due to unstable surface. The reason flushing should be used where the chipseal addresses flushing on any portion of the pavement width, eg a combination chipseal which uses a sandwich seal in the wheel paths and a voidfill seal outside the wheel paths in the un-trafficked areas.
Cracking, CR 	Includes all cracks that may allow water ingress to the underlying pavement.	Includes: • cracking of surfacing • cracks around pavement repairs • potholes. Chipseals will crack if: • pavement deflections are excessive • bitumen is very old, oxidised, hard and brittle. Chipseals may be designed to accommodate large pavement deflections and surfacing strains. The reason for resealing fits into the category cracking where the chipseal is expected to have a reasonable life. The category holding seal should be used when a chipseal is applied as a short term holding strategy before major works.

Polished, PS 	Polishing is a failure of the surfacing material where traffic stress polishes the surfacing aggregate below acceptable levels of skid resistance. All causes of polishing are included.	To fit into the category polished the surfacing must have low skid resistance and meet the following criteria: 1. For chipseals macrotexture > 1.0 mm MPD. Note: If texture is < 1.0 mm, use flushing, FL. 2. The proposed resurfacing must use an aggregate with a higher polishing resistance and be expected to provide skid resistance above the investigatory level for the design life of the surfacing.
Scabbing, SC 	Scabbing as a failure mechanism in an old chipseal (typically aged > 10 years old) where the binder fails and chip is lost due to the increased hardness and brittleness of the bitumen.	Scabbing relates to all chip loss not attributable to a construction failure. I.e. when initial scabbing occurs > 12 months after chipseal construction. Note: Where initial chip loss occurs < 12 months after chipseal construction, use special surfacings. Note: Not to be used with thin AC. Use ravelling, RA.
Ravelling 	Loss of chip from an asphaltic concrete or a slurry surface. It occurs where the binder has oxidised and is losing its grip on the surfacing aggregate.	Note: Not to be used with chipsealing. Use scabbing, SC.
Holding seal, HS 	A chipseal constructed in an attempt to extend the life of a failed pavement for a short period.	The chipseal will not be included in chipseal life statistics. Note: A reseal will not fix a pavement failure. The reason for resealing fits into the category cracking where the chipseal is expected to have a reasonable life. The category holding seal should be used when a chipseal is applied as a short term holding strategy before major works. Note: Not to be used with thin AC.

Special surfacings, SS	All chipseals where the reason clearly does not fit any other category. Full reasons are required.	Special seals include: • traffic threshold (approaches to urban areas) • urban issues (noise etc) • damage (eg spillage on the road, fire on road, gouging) • high skid resistance and location specific treatments (eg bolidt, calcined bauxite) • rumble strips (as part of a traffic threshold) • where specialist chipsealing techniques are used to rut fill wheel paths but the remainder of the surfacing width is not resealed.

Categories not allowed

The following categories, currently in use, are not allowed in the future:

- aged
- birthday seal
- brittle binder (use cracking or scabbing)
- condition
- skid resistance (must use either flushed or polished)
- stress
- traffic volumes (use special surfacing)
- urban issues (use special surfacing).

Multiple reasons

If there are multiple reasons, record only the dominant *Reason for resealing.* Generally this would be expected to be either flushing or scabbing.