

PRODUCT BULLETIN



LOW TEMPERATURE TIRE HANDLING AND TREAD CRACKING STATEMENT



Applies To: ITP® Hyper-Adhesion Rubber Compound (H.A.R.C.)
Maximum Grip Tread Compound

1. PURPOSE

This bulletin provides guidance on the risk of tread cracking and structural damage when tires are exposed to low ambient temperatures and subsequently subjected to mechanical stress.

2. CONDITION

Tires exposed to low temperatures may exhibit brittleness and cracking may occur:

- In tread grooves
- Along tread block edges
- As fine (hairline) or visible fractures

3. TEMPERATURE THRESHOLDS

| TEMPERATURE RANGE | CONDITION |
|-------------------|--|
| ≤ 32°F (0°C) | Increased stiffness; reduced flexibility |
| ≤ 20°F (-6°C) | High risk of cracking under load |
| ≤ 0°F (-18°C) | Severe brittleness; high fracture risk |

4. CAUSE

At low temperatures, high traction tread compounds, like H.A.R.C., approach their glass transition region and lose their flexibility.

5. CONTRIBUTING FACTORS

Risk of cracking increases when cold tires are subjected to:

- Immediate vehicle operation after cold exposure
- Impact loading (potholes, curbs, rocks, stumps)
- High inflation pressure
- High load conditions
- Mounting or dismounting or handling while cold
- Dropping or flexing of unmounted tires

6. CORRECTION AND PREVENTION

Before Operation:

- Gently handle tires exposed to the low temperatures detailed
- Allow cold exposed tires to warm to room temperature (68°F / 20°C) for 24 hours before mounting or dismounting
- Do not mount or dismount tires in a work area that is under 50°F (10°C)
- Do not operate tires below the recommended minimum service temperature of 32°F (0°C)

Storage:

- Store and transport tires in a temperature-controlled environment above 32°F (0°C)
- Remove tires from the vehicle and deflate to half the normal air pressure during prolonged periods of non-use

DISCLAIMER: OUR TECHNICAL ADVICE, INFORMATION AND STATEMENTS GIVEN VERBALLY OR IN WRITING ARE OFFERED FOR YOUR GUIDANCE AND WITHOUT WARRANTY. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE. THIS ADVICE IS FURTHER INTENDED FOR TRAINED AND/OR EXPERIENCED INDIVIDUALS AND SHOULD ALWAYS BE READ IN CONJUNCTION WITH TITAN'S SAFETY INFORMATION, WHICH CAN BE FOUND AT WWW.TITAN-INTL.COM/SAFETY.