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SAFETY HANDBOOK · BITUMEN

MT2 Safety Book

Safety handbook for the handling, transport and delivery of hot bitumen

Check. Protect. Deliver.

For tanker drivers, asphalt plant receiving staff and site managers

resurse sigure pentru drumuri durabile

EDITION 1 · 2026

About this edition

MT2 Safety Book is a practical guide for everyone involved in handling, transporting and delivering the hot bitumen and polymer-modified bitumen supplied by MT Partner Logistics.

The recommendations reflect current knowledge of the hazards of hot bitumen and good practice in the European industry. If the product is mixed with other materials, users must assess any additional risks that may arise.

This handbook does not replace the Safety Data Sheet, the workplace risk assessment, internal health and safety instructions or applicable legislation. MT Partner Logistics makes every effort to ensure the accuracy of the information but accepts no liability for its use outside this purpose.

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DOCUMENT STATUS

Edition 1 · 2026. Safety values are taken from public sources (Eurobitume, ADR 2025, Romanian legislation – Annex B), with the source given in the text. The SDS and data sheet of the delivered product take precedence. Contact: risk@mtpartner.ro.

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The 10 MT2 golden rules

If you remember only one thing from this handbook, remember these ten rules. They apply to every delivery, without exception.

1

Full PPE within 6 m

Helmet with visor, neck protector, FR coverall, gloves, boots.

2

Shower tested before delivery

No working shower – no discharge.

3

Zero water in the system

Dry tanker and tank; never a water jet on bitumen.

4

Temperature under control

Never above 200°C; PMB per data sheet.

5

Right tank, enough room

Grade confirmed, ullage ≥ quantity + 10%.

6

H_2S monitor on

Stand upwind; never lean over lids.

7

Operate from the ground

Nobody on the tanker or tank during discharge.

8

Continuous supervision

Driver at the emergency controls, customer watching the operation.

9

Burn = water 20 min + 112

Do not remove bitumen from the skin.

10

Report every deviation

MT2 dispatch, same day – every signal counts.

01

CHAPTER 01

About this handbook

Hot bitumen is a safe material when it is treated with respect. This handbook brings together, in one place, the rules we apply to every MT2 delivery.

- About MT Partner Logistics
- How to use this handbook
- Who this handbook is for

About MT Partner Logistics

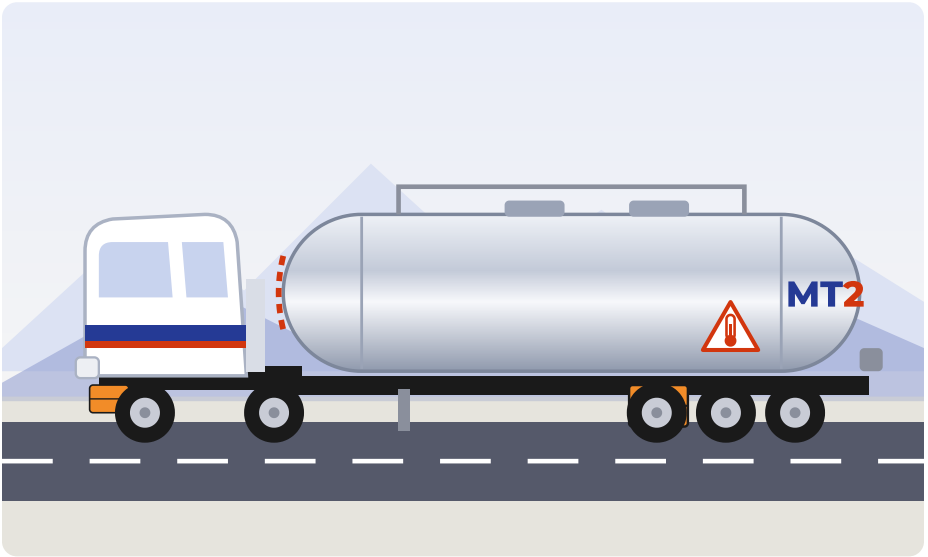
MT Partner Logistics (MT2) is a Romanian distributor of paving bitumen and polymer-modified bitumen (PMB), delivered in insulated tankers directly to asphalt plants and infrastructure sites.

We work on projects where deadlines, quality and safety are not negotiable. That is why we treat every delivery as a controlled operation: verified product, prepared tanker, trained driver and a receipt coordinated with the customer's team.

- Compliant product with complete documents
- Temperature controlled throughout the journey
- Drivers trained in ADR and bitumen specifics
- Clear unloading procedures

Precision Supply for Critical Institutions.

This handbook is our written commitment: the same rules for the MT2 team, for our hauliers and for the partners who receive the product. A safe bitumen discharge is built together, before the hose is ever connected.



Who this handbook is for

Tanker drivers

Loading, ADR transport, tank heating, discharge, documents.

Receiving staff

Asphalt plant operators: tank preparation, supervision, sampling, emergencies.

Site managers & HSE

Organising the discharge point, training, emergency equipment, reporting.

How to use this handbook

Each chapter starts with the risk, continues with the preventive measures and ends with what to do if something goes wrong. The symbols below help you navigate quickly:

Mandatory – equipment or action that must be applied

Warning – a hazard requiring additional measures

Prohibited – an action that is never done

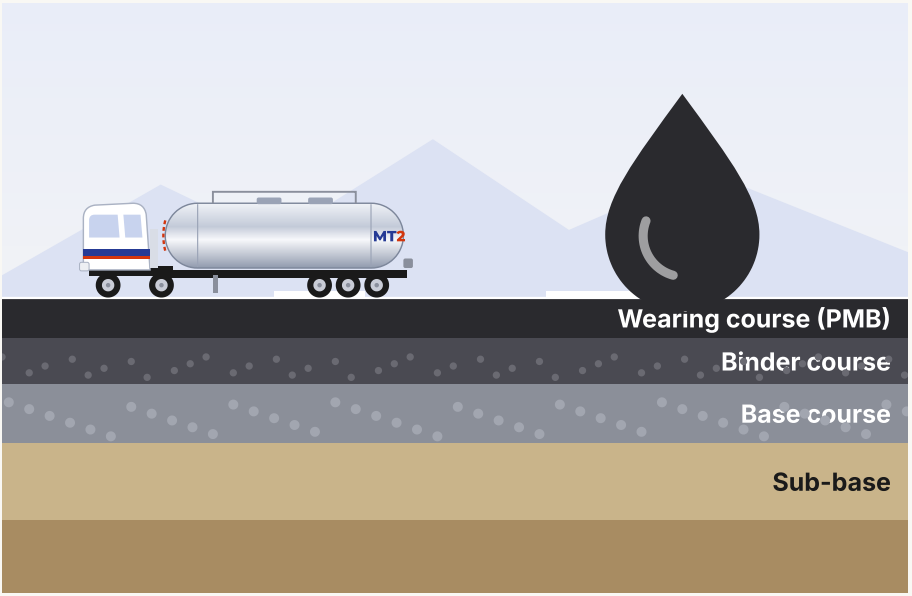
First aid and emergency

IMPORTANT

This handbook does not replace the product Safety Data Sheet (SDS), the workplace risk assessment or each organisation's own health and safety instructions. It complements them.

WHERE THE FIGURES COME FROM

Safety figures come from Eurobitume guidance (Guide to the Safe Delivery of Bitumen, 3rd ed., 2025; Bitumen Burns Card, 2022), the ADR 2025 Agreement and the legislation listed in Annex B; the source is given next to the value. The SDS and data sheet of the delivered product always take precedence.



02

CHAPTER 02

The product: bitumen

Knowing the product means anticipating its behaviour: how it flows, how it cools, how it reacts to water and to overheating.

- What bitumen is
- Quality and contamination
- Paving bitumen and PMB
- Classification, labelling and SDS

What bitumen is

Bitumen is a binder obtained by refining crude oil, made of a complex mixture of high-molecular-weight hydrocarbons. At ambient temperature it is solid or very viscous; to be pumped and mixed with aggregates it must be heated to the temperature given in the product data sheet.

Bitumen must not be confused with coal tar – a completely different product with a different risk profile, no longer used in road building in Europe.

Bitumen types in the MT2 portfolio

Product	Use	Standard
Paving bitumen (e.g. 35/50, 50/70, 70/100)	Asphalt mixes for base, binder and wearing courses	EN 12591
Polymer-modified bitumen – PMB (e.g. 25/55-55, 45/80-65)	Heavily loaded wearing courses, heavy traffic, bridges, SMA	EN 14023
Other binders (emulsions, fluxed bitumen) – on request	Tack coats, surface treatments, repairs	EN 13808 / 15322

Grades shown are examples; the exact list is confirmed in the MT2 offer and technical data sheet.

REMEMBER

The main risk of bitumen does not come from its chemistry, but from the temperature at which it is handled.

Handled hot

Stored in heated tanks

Carried in insulated tankers

Recyclable into new mixes

PMB specifics

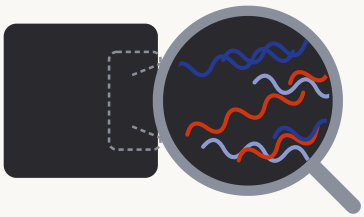
PMB combines bitumen with polymers (usually SBS-type elastomers) for elasticity and resistance to fatigue and permanent deformation. These benefits come with a few extra handling rules.

WHAT IS DIFFERENT

- Higher viscosity – needs higher pumping temperatures than conventional bitumen (exact values in the data sheet).
- Sensitive to overheating: the polymer degrades and properties drop.
- May separate during long storage without agitation or circulation.
- Cools and blocks faster in unheated lines.

WHAT YOU DO

- Respect the temperature range in the product data sheet.
- Discharge into dedicated PMB tanks with agitator or circulation.
- Use insulated, heat-traced lines, as short as possible.
- Never mix PMB with paving bitumen or another PMB type in the same tank.



WARNING

A hose or line blocked with cooled PMB can fail suddenly under pressure when pumping restarts. Never force a blocked line – stop, depressurise and call MT2 dispatch.

PMB TEMPERATURES

Delivery and storage ranges for each PMB grade are taken from the manufacturer's data sheet and SDS.

Quality and contamination

Even small amounts of foreign products change how bitumen behaves in the mix. Contamination is not only a quality issue: residual emulsion or water in a tanker can cause violent foaming when hot bitumen is loaded.

Contamination source	Effect	Prevention
Diesel, solvents, light oils	Softer bitumen, poorer adhesion; lower flash point	Never use diesel for cleaning or as a release agent
Residual emulsion / water	Foaming and splashing during loading (boil-over)	Tanker emptied, dried and checked before loading
Another bitumen grade or PMB	Properties out of specification	Dedicated tankers and tanks; grade check at receipt
Long storage at high temperature	Ageing, hardening, coke deposits	Minimum necessary temperature; stock rotation

The MT2 loading rule

- ☑ The last product carried is known and compatible.
- ☑ The tanker contains no water, emulsion or residues.
- ☑ Grade ordered = grade loaded = grade on the delivery note.
- ☑ Seals are applied and recorded in the documents.

Classification, labelling and SDS

Bitumen is registered under Regulation (EC) No 1907/2006 (REACH). Based on available data, paving bitumen is not classified as hazardous to health or the environment under Regulation (EC) No 1272/2008 (CLP). Mixtures containing solvents, fluxes or additives may, however, be classified differently.

SAFETY DATA SHEET

- Accompanies the first delivery and every updated version.
- Format according to Regulation (EU) 2020/878.
- Must be available at the discharge point.
- Used for risk assessment and staff training.

A PHYSICAL, NOT CHEMICAL, HAZARD

- Carried above 100°C, bitumen becomes ADR dangerous goods (UN 3257).
- Main risks: burns, H_2S, foaming on contact with water, fire.
- These risks are covered one by one in chapters 03–05.

Up-to-date SDS at every plant

Hazard: elevated temperature

Possible presence of H_2S

Fire risk when overheated

WHERE TO FIND THE SDS

The current SDS for each MT2 product is sent to the customer with the first delivery and can be requested at any time from our sales department.

03

CHAPTER 03

Risks and temperatures

Most incidents during bitumen deliveries share the same few causes. Recognise them early and you can prevent them.

- Risk map of a delivery
- Handling and storage temperatures

Risk map of a delivery

Burns

Contact with bitumen at 160–180°C from a hose, flange, valve or sample.

CH. 04

Foaming (boil-over)

Water or emulsion in a tanker or tank; violent reaction with splashing.

CH. 05

Hydrogen sulphide

Toxic gas accumulating in the vapour space of tankers and tanks.

CH. 05

Fire

Overheating, soaked insulation, burner left on, coke deposits.

CH. 05

Spills

Overfilling, burst hose, loose coupling; burn and environmental risk.

CH. 05

Slips and falls

Dirty surfaces, work at height on the tanker or tank.

CH. 06

Plant traffic

Reversing, loaders, asphalt trucks.

CH. 06

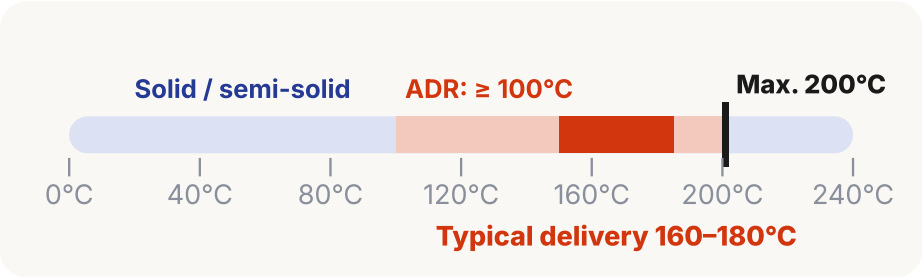
Confined spaces

Entering empty tanks: H_2S, oxygen deficiency, vapours.

CH. 05

Handling and storage temperatures

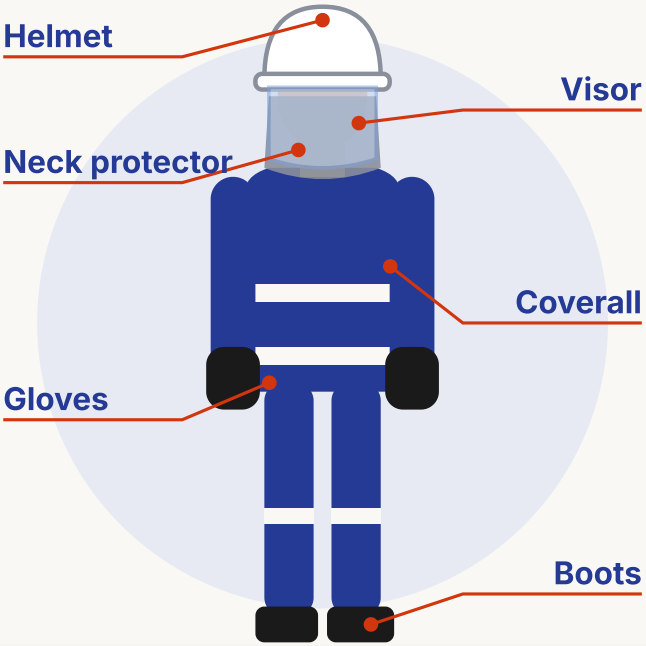
Temperature is the key safety parameter. The basic rule: keep bitumen as cool as possible, but warm enough to pump. Every extra degree means more fume, more H_2S and a higher fire risk.



Parameter	Reference value	Source
Maximum handling and storage temperature – paving bitumen and PMB	200°C	Eurobitume
Minimum margin below flash point	at least 30°C below	Eurobitume / SDS
Delivery temperature – paving bitumen	per data sheet / SDS, below 200°C	Product data sheet
Delivery temperature – PMB	per data sheet / SDS	Manufacturer
Threshold from which ADR applies (UN 3257)	≥ 100°C	ADR

DON'T HEAT IT UP "TO GO FASTER"

Overheating does not make discharge safer or quicker: it increases emissions, degrades PMB and brings the product closer to its flash point.



04

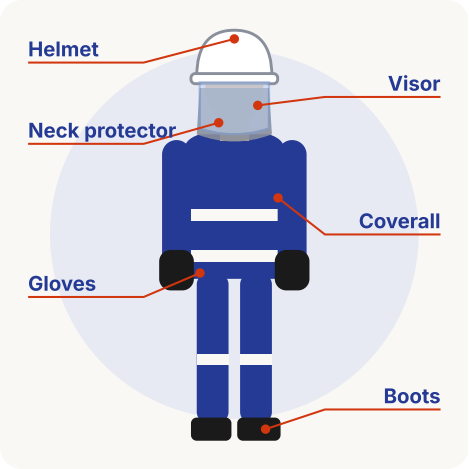
CHAPTER 04

Protection and first aid

Full protective equipment and a working safety shower turn a serious burn into a manageable incident.

- Personal protective equipment
- The safety shower
- Information for medical staff
- PPE by task
- Hot bitumen burns – first aid

Personal protective equipment



Safety helmet
with full visor and, preferably, a chin strap.

Face visor
down for the whole of connection, discharge and disconnection.

Neck protector
heat-resistant, attached to the helmet.

Flame-retardant coverall
EN ISO 11612 and EN 1149-5, with reflective bands; sleeves over the gloves.

Heat-resistant gloves
long cuff, EN 407 / EN 388 (Eurobitume).

Safety boots
quick to remove, no laces; trousers worn over the boot.

Personal H_2S monitor
with alarm, recommended for loading and discharge.

Everyone within 6 m of the discharge point wears full PPE – not just the driver.

PPE by task

PPE is selected on the basis of each job's risk assessment. The table below is the minimum level we apply to MT2 operations.

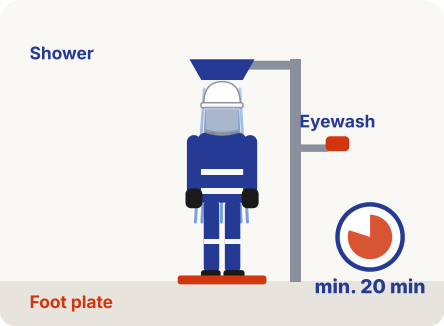
Task	Helmet + visor	Neck protector	FR coverall	Heat gloves	Boots	H_2S monitor
Connecting / disconnecting hose	●	●	●	●	●	●
Supervising discharge (≤ 6 m)	●	●	●	●	●	◐
Sampling	●	●	●	●	●	◐
Opening a manlid	●	●	●	●	●	●
Driving / manoeuvring on site	–	–	◐	–	●	–
Office / weighbridge work	–	–	–	–	–	–

● mandatory ◐ recommended – not required

LOOKING AFTER PPE

Check your equipment before every shift. A coverall soaked with bitumen or diesel no longer protects – replace it. Responsibility is shared between the user and the employer who provides it (Romanian Law 319/2006, Government Decision 1048/2006).

The safety shower



- At least one safety shower in the discharge area.
- Located 6–20 m from the point; if closer than 6 m, shielded from spray (Eurobitume, Safe Delivery Guide 2025, 2.3.5).
- Clean, tepid water for at least 20 minutes, including in winter (Eurobitume, 2.3.6).
- Simple operation: foot plate, push bar or pull handle.
- Signposted, well lit, with a clear access route.
- Recommended: alarm on activation and an eyewash station.

NO WORKING SHOWER, NO DISCHARGE

A garden hose, a bucket or an extinguisher are not acceptable alternatives. If the shower is out of order, the customer must provide an equivalent solution before the delivery.

Quick check before delivery

- ☑ The shower starts first time and the flow is steady.
- ☑ The water is neither frozen nor hot.
- ☑ Access is not blocked by materials or machines.
- ☑ The periodic test is recorded in the log.

Hot bitumen burns – first aid

1. **Stop and alert**
   Stop the discharge if it can be done safely. Call 112 and say clearly: “hot bitumen burn”.

2. **Cool immediately**
   Shower or clean, tepid water for at least 20 minutes (Eurobitume Burns Card). For burns larger than the palm of a hand, use warmer water after initial cooling to avoid hypothermia.

3. **Eyes**
   Rinse with plenty of water for at least 5 minutes (Eurobitume Burns Card), holding the eyelids open. Continue until medical staff take over.

4. **Do not remove the bitumen**
   Cooled bitumen protects the wound. Do not peel it off, do not use solvents, diesel or ice, and do not pull off clothing stuck to the skin.

5. **Cover and transport**
   Cover the burn loosely, without removing the bitumen. The MT2 burn card goes with the casualty to hospital.

6. **Report**
   Inform MT2 dispatch and the plant HSE officer. Keep the hose and parts involved for investigation.

DO

- ✔ Water, as fast as possible, at least 20 min
- ✔ Casualty supervised at all times
- ✔ Burn card handed to the doctor

DON’T

- ✕ Do not remove bitumen from the skin
- ✕ No solvents, diesel or ointments
- ✕ No ice directly on the burn

Burn card – for the doctor

Hot bitumen burn card

WHAT HAPPENED

The patient suffered a burn from contact with hot bitumen (delivery temperature approx. per data sheet / SDS, below 200°C). Product: paving bitumen / PMB – see attached SDS.

FIRST AID GIVEN

Cooling with water: ___ minutes. Time of incident: _____. Eyes affected: YES / NO.

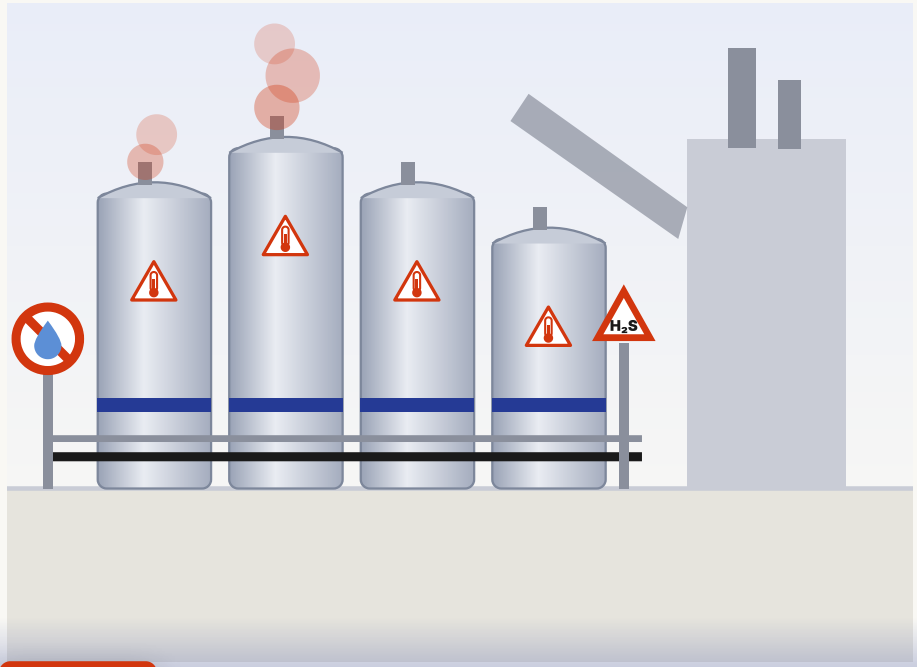
REMOVING THE BITUMEN

Only under medical supervision, using suitable softening agents (e.g. paraffin gauze or olive oil – Eurobitume Bitumen Burns Card). Forced removal may worsen the injury and increase the risk of infection.

ASSESSMENT

Initially it is not essential to know whether the burn is superficial or deep; the priority is removing the bitumen without causing further damage. If needed, contact a burns centre.

Cut out or copy this page and keep it at the safety shower and in the tanker's first aid kit. Content aligned with Eurobitume recommendations on bitumen burns (Bitumen Burns Card, 2022 edition).



05

CHAPTER 05

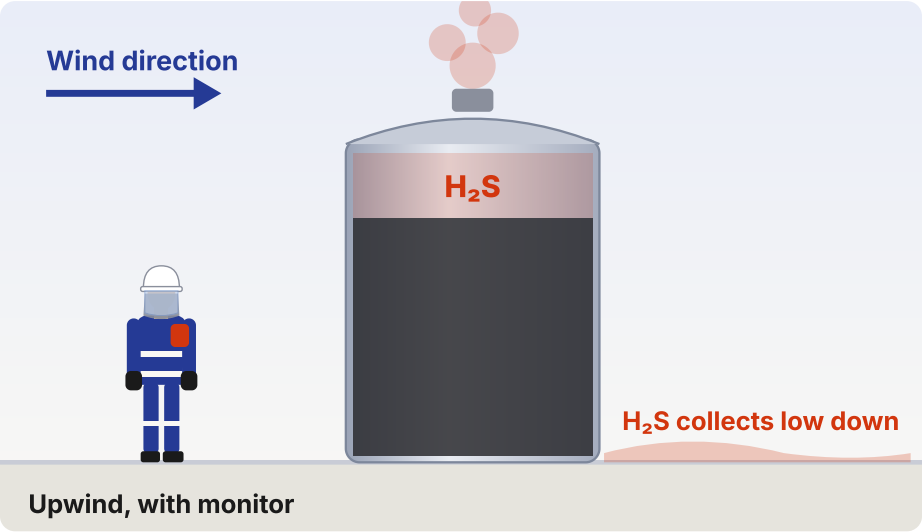
Specific hazards

The gas you cannot see, the water you don't expect, the heat trapped in insulation. These are the hazards that surprise even experienced teams.

- Hydrogen sulphide (H_2S)
- Fire and extinguishing
- Environment and spills
- Hot bitumen and water
- Bitumen fumes
- Confined spaces

Hydrogen sulphide (H_2S)

H_2S is a toxic and flammable gas that can be released from hot bitumen and accumulate in the vapour space of tankers and tanks. It is heavier than air and collects in low and enclosed areas.



Gas escapes through the manlid and vents; position yourself upwind.

WHY IT IS DECEPTIVE

- The “rotten egg” smell disappears at high concentrations – the gas paralyses the sense of smell.
- The smell of hot bitumen masks it.
- Symptoms: eye irritation, nausea, dizziness, headache; at high concentrations – loss of consciousness.

EXPOSURE LIMITS IN ROMANIA

- 8 hours: 7 mg/m³ (5 ppm)
- Short term (15 min): 14 mg/m³ (10 ppm)
- Source: Government Decision 1218/2006 (republished), Annex 1 – same values as the EU limits

H_2S – prevention and first aid

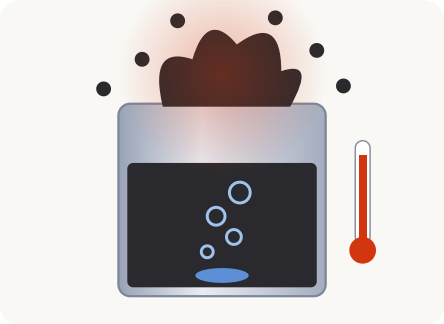
Prevention

- Operate the tanker from the ground whenever possible; do not climb on the tanker during discharge.
- Wear the personal H_2S monitor, switched on and bump-tested (Eurobitume recommendation).
- Open the manlid only after depressurising, then step away immediately. Never lean over it.
- Stand upwind when opening lids and when sampling.
- Plant tank vents must point away from the discharge point and be signposted.
- Access to tank roofs during filling is prohibited.

If someone feels unwell

1. **Do not follow the casualty in unprotected**
   Rescue from an H_2S area is done only with self-contained breathing apparatus and a rescue line, by trained teams.
2. **Move the casualty to fresh air**
   Only if you can do so safely. Call 112.
3. **Support breathing**
   If trained, start resuscitation. Oxygen may help. Affected eyes are rinsed with water for at least 5 minutes.

Hot bitumen and water



When water meets bitumen above 100°C it instantly turns to steam and expands more than a thousand times (about 1,700 times at 100°C – a physical property of water). The result is violent foaming (boil-over): hot bitumen thrown out through lids, vents and pipes.

A FEW LITRES ARE ENOUGH

There is no “safe” amount of water in a bitumen tanker or tank.

Typical risk situations

Tanker previously carried emulsion

The water left from emulsion reacts on contact with hot bitumen.

Cold tanker or tank

Condensation on the walls is enough to cause foaming.

Tank after maintenance

Water left after washing or pressure testing.

Steam used to clear lines

Puts water straight into the system.

Preventing boil-over

- [x] Tanker and tank are completely dry; the last product is known.
- [x] Tankers that carried emulsion are steam-cleaned and dried before bitumen.
- [x] A new or returned-to-service tank is filled slowly at first, so moisture can evaporate.
- [x] Cold bitumen in a tank is heated gradually to about 120°C before adding hot bitumen (Nynas, Safe Handling of Bitumen, 2025).
- [x] Heating coils stay covered by product during heating.
- [x] Lines are cleared with dry compressed air or suction – never with steam.

SHARED RESPONSIBILITY

The driver is responsible for the tanker; the customer for the tank and lines. If either has any doubt about water being present, discharge does not start until it is cleared with MT2 dispatch.

Boil-over risk

No water in the system

Gradual heating

Tank checked

Fire – causes and prevention

Bitumen does not ignite easily, but once it burns it is hard to extinguish. Most fires start from a combination of overheating, accumulated vapours and an ignition source.

Cause	What you do
Overheating above maximum temperature	Respect 200°C maximum and at least 30°C below flash point.
Insulation soaked with bitumen	Can ignite from the hot surface even below 100°C; replace after any overfill.
Uncovered heating elements	Minimum product level above coils / flue tubes.
Pyrophoric coke deposits	Regular cleaning and inspection; controlled venting before opening.
Tanker burner running	Off during loading, discharge and parking in risk areas, per the tanker manufacturer's instructions.
Ignition sources	No smoking and no naked flames in the discharge area.

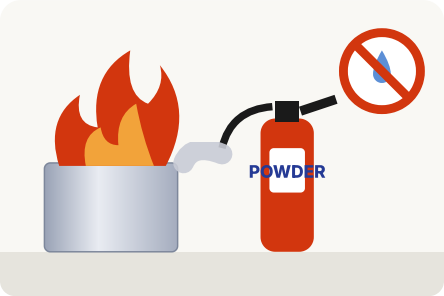
No smoking

Fire hazard

Max. 200°C

Extinguisher at the point

Extinguishing a bitumen fire



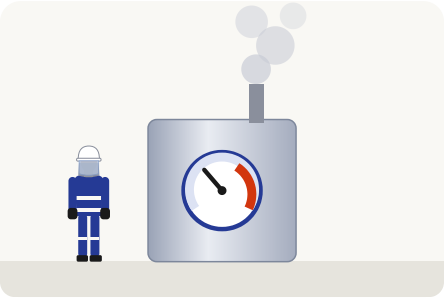
NEVER USE A WATER JET!

Water on burning bitumen causes foaming and spreads the flames. The fire is put out by smothering – by cutting off the oxygen.

- Small fire: dry powder, foam or CO_2 extinguisher.
- Large fire: foam or powder; beware of re-ignition – the effect does not last.
- Fire in insulation: steam or powder.
- At the discharge point: at least one dry powder extinguisher of minimum 9 kg, ideally 50 kg, weather-protected (Eurobitume, 2.3.3–2.3.4).

1. **Stop**
   Stop the pump and close the emergency valves, if you can do so safely.
2. **Alert**
   Call 112 and state “bitumen fire”.
3. **Clear**
   Move people out of the area; don’t move the tanker unless it is safe.

Bitumen fumes



Fumes rising from hot bitumen can irritate the eyes, nose and airways at high concentrations. Their amount and composition increase with temperature.

There is no binding EU limit value for bitumen fumes; some countries have national values. For Romania, exposure is assessed under Government Decision 1218/2006 and the employer's risk assessment.

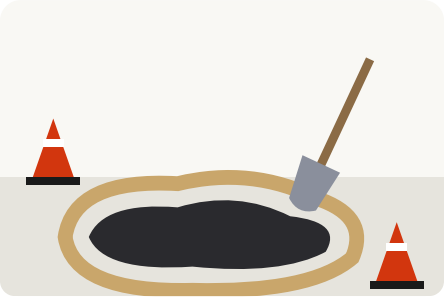
How to reduce exposure

- Lowest practicable temperature
- Stand upwind
- Closed systems, local ventilation
- No diesel for cleaning

GOOD TO KNOW

Do not use diesel as a cleaning or release agent: it increases emissions, contaminates the product and lowers the flash point.

Environment and spills



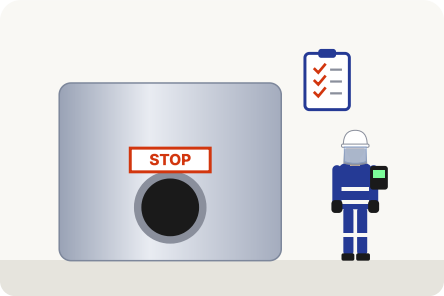
Bitumen does not dissolve in water and, once cooled, becomes solid and inert. The immediate danger of a spill is burns; the long-term danger is physical contamination of soil and water.

Situation	Response
Small spill	Let the bitumen cool and solidify. Remove it mechanically (shovel, rake) into containers for disposal in line with the law.
Large spill	Stop the source if safe. Contain with sand or earth (bund, trench). Protect drains. Call 112 and the environmental authorities.
Spill into water	Bitumen usually sinks; alert the authorities immediately. Do not try to disperse it with chemicals.

MT2 REPORTING

Any spill, whatever its volume, is reported to MT2 dispatch the same day. Reporting thresholds to authorities apply according to current environmental legislation.

Confined spaces



An empty bitumen tank or tanker may contain H_2S, carbon monoxide, flammable vapours, oxygen-deficient air and pieces of coke that can fall.

Entry is the last resort.

- First assess all alternatives (camera inspection, cleaning from outside).
- If entry is unavoidable: risk assessment, confined-space permit to work, ventilation and atmosphere testing before and during the work.
- Suitable breathing apparatus, harness and rescue line, attendant at the entrance.
- Rescue plan agreed and rehearsed before entry.

MT2 DRIVERS

MT2 drivers and partner hauliers' drivers never enter the tanker or the customer's tanks.

06

CHAPTER 06

Transport, loading and delivery

A safe delivery is the result of cooperation between supplier, haulier and customer. Each has a clear role.

- Roles and responsibilities
- The heated tanker
- Before, during and after discharge
- Delivery documents
- ADR transport – UN 3257
- Discharge point requirements
- Sampling
- Training

Roles and responsibilities

MT2 (consignor)	Haulier / driver	Customer (consignee)
Classifies the product and issues transport documents	ADR-compliant vehicle, marked and equipped	Authorises the delivery and confirms the tank
Provides the SDS and quality certificate	Driver with valid ADR certificate (tanks)	Ensures enough ullage in the tank (+10%)
Plans the delivery and temperature	Follows discharge procedure and PPE	Shower, extinguisher, lighting, escape route
ADR safety adviser	ADR safety adviser	Site-specific induction for drivers on arrival
Investigates reported incidents	Reports defects and incidents	Supervises discharge; signs the receipt

The legal responsibilities of each party remain those set by ADR, Romanian Law 319/2006 and the supply contract.

ADR transport – UN 3257

Orange plate and elevated temperature mark

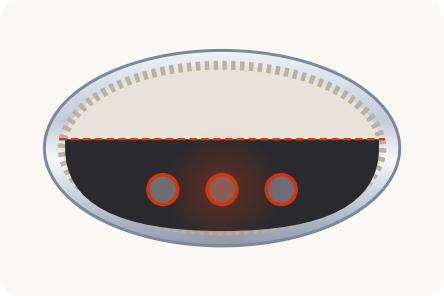
UN number	**UN 3257**
Proper shipping name	**ELEVATED TEMPERATURE LIQUID, N.O.S. (bitumen)**
Class	**9**
Classification code	**M9**
Packing group	**III**
Hazard identification no.	**99**
Additional mark	**Elevated temperature mark**
Tunnel code	**(D) – ADR 2025, Table A**

Bitumen becomes ADR dangerous goods when carried at or above 100°C but below its flash point. Below 100°C UN 3257 does not apply; transport classification is checked in section 14 of the SDS.

Mandatory on board

- Transport document with ADR particulars and the ADR instructions in writing (5.4.3).
- The driver's ADR certificate and the vehicle's approval certificate.
- Equipment required by ADR 8.1.5 (wheel chock, warning signs, torch, eye rinsing liquid, etc.).
- Orange plates 99/3257 and marks correctly displayed.

The heated tanker



MT2 tankers are thermally insulated to keep the product at temperature on the road. Some tankers may be fitted with a heating system (burner with flue tubes or thermal oil) for controlled reheating.

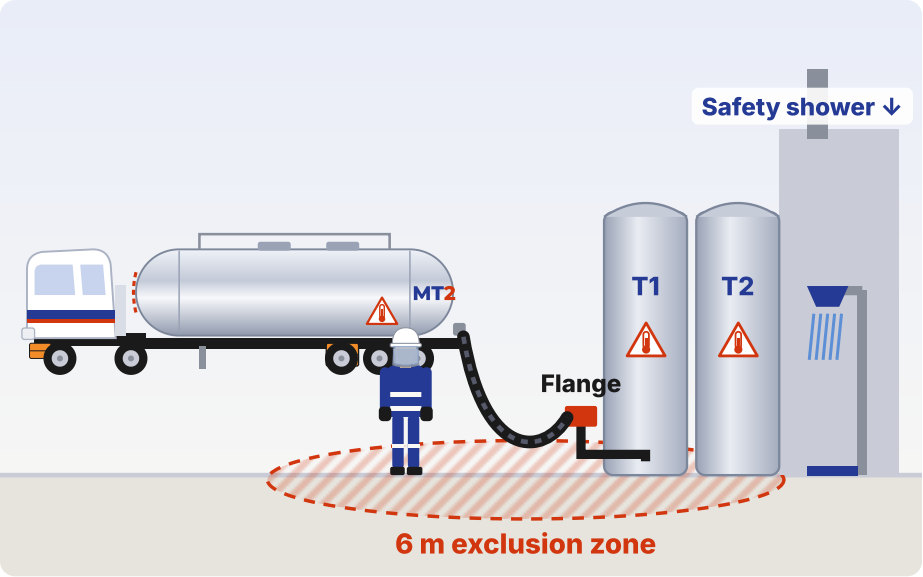
Heating rules

- Heating is switched on only if the flue tubes / coils are fully covered by product (red line in the picture).
- The burner is off during loading, discharge, refuelling and in areas at risk of flammable vapours.
- The temperature is read on the tanker thermometer and recorded on the delivery document.
- Never exceed the maximum temperature in the data sheet; heat PMB slowly and evenly.
- Any anomaly (smoke, burning smell, uncontrolled rise) – stop heating and call dispatch.

MANUFACTURER'S INSTRUCTIONS

For each tanker, the manufacturer's instructions for the heating system are followed and kept with the vehicle documents.

Discharge point requirements



6 m exclusion zone around the discharge point; safety shower 6–20 m away.

- Marked access, level surface, good lighting.
- Numbered tanks with product and safe working capacity displayed.
- Level gauge visible from the driver's position.
- High-level alarm at 90% of available capacity and independent high-high alarm at 92.5% (Eurobitume, 5.4.3).
- Vertical flange 0.5–1.0 m above ground, with anti-spray shroud (Eurobitume, 5.6.4–5.6.6).
- Insulated, heat-traced lines; ground-based pump – the preferred solution.
- Drip receptacle (sand bed).
- Safety shower, extinguisher, clear escape route.

Before discharge

1. **Induction on arrival**
   The driver receives the site-specific induction (first delivery and start of every season), documented and signed.
2. **Product confirmation**
   The customer confirms the grade and quantity on the delivery note and the receiving tank – preferably in writing.
3. **Tank ullage**
   The delivered quantity + 10% safety margin must fit into the tank.
4. **Vehicle secured**
   Parking brake applied, engine off unless needed for the pump, wheel chocks if required.
5. **Emergency equipment**
   The shower is tested, the extinguisher in place, the 6 m zone clear.
6. **Full PPE**
   Driver and plant operator wear full PPE and an H_2S monitor.

Grade and quantity confirmed

Ullage ≥ +10%

Shower tested

Full PPE

STOP IF ANYTHING IS WRONG

The MT2 driver has the right and the duty not to start discharge if any safety condition is not met. No delivery is that urgent.

During discharge

- Only people involved, in full PPE, may enter the 6 m zone.
- The driver stays next to the controls and emergency shut-off valves throughout the discharge.
- The customer supervises the discharge: visually, by camera or by regular checks; for lone working a personal alarm is used.
- Nobody climbs on the tanker or tank during discharge.
- At start-up the risk of splashing is highest: increase the flow gradually and watch the couplings.

STOP IMMEDIATELY IF…

- the high-level alarm sounds;
- a leak appears at a coupling or hose;
- people without PPE enter the 6 m zone;
- vehicles manoeuvre nearby;
- there is a strong smell, smoke or unusual noise.

GROUND-BASED PUMP

With a leak, never tighten the coupling while the pump is running. Stop, depressurise, then act.

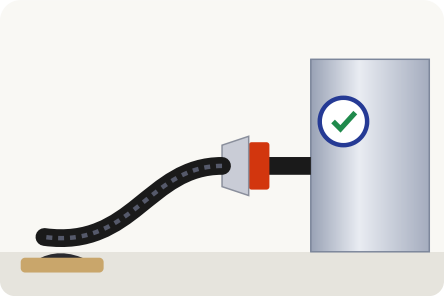
Do not climb the tanker

No unauthorised access

No naked flames

H_2S monitor on

After discharge · Split loads



The end of the discharge matters as much as the start: the hose is still hot and under residual pressure, and lids release vapours.

After discharge

- Clear the line and hose; limit the air blown into the tank to avoid a flammable atmosphere.
- Disconnect the hose with the visor down; hose drainings go into the dedicated receptacle.
- Let vapours disperse before closing lids; stand upwind.
- The customer signs the receipt documents and refits the connection lock.
- Defects found at the plant are reported to the customer and MT2 dispatch.

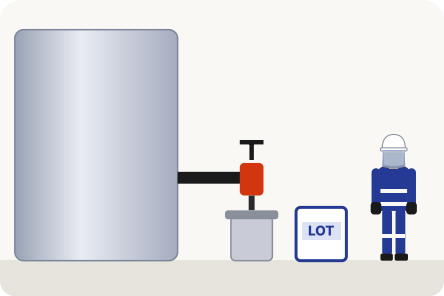
Split loads (into several tanks)

Avoided whenever possible. If needed, each tank is treated as a separate delivery: grade and ullage check, full connection and disconnection, recorded in the documents for each tank.

FEEDBACK

Any deviation from plant rules or from the MT2 procedure is reported the same day, so it can be reviewed and corrected together.

Sampling



Sampling hot bitumen is one of the operations with the highest burn risk. It is done only with the right equipment and following local instructions.

- Samples are not taken directly from the tanker or the hose, unless the vehicle has a device designed for it.
- A dedicated sampling valve is used, fitted to the tank or its line, in a protected area.
- Full PPE, visor down, standing to the side of the jet.
- Clean, dry metal container with lid; do not fill to the brim.
- The label shows: product, batch, delivery note no., tank, date and time, signatures.
- The retained sample is kept as per contract.

Visor down

Long-cuff gloves

FR coverall

Complete label

Delivery documents

- Delivery note / invoice
- ADR transport document and instructions in writing
- Quality certificate (test report) per batch
- Declaration of performance and CE marking (EN 12591 / EN 14023)
- SDS – with the first delivery and every update
- Weighbridge ticket, delivery temperature
- RO e-Transport UIT code, where applicable

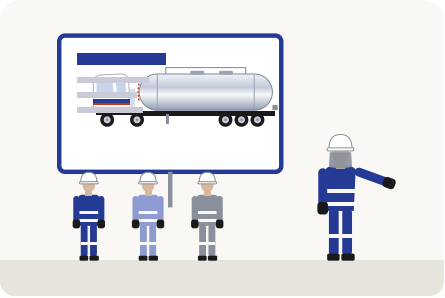
DIGITAL HANDBOOK AND SDS

The digital version of this handbook, the product SDS and emergency contacts are available from MT2 on request: risk@mtpartner.ro.

At receipt, the customer checks

- ☑ Product and grade match the order.
- ☑ Seals are intact and match the documents.
- ☑ The delivery temperature is recorded.
- ☑ Documents are signed by both parties.

Training and induction



Training is the most effective preventive measure. Romanian Law 319/2006 requires employers to train workers; industry guidance additionally calls for bitumen-specific training.

Who	What training	Frequency
MT2 and partner drivers	ADR (tanks, class 9) + bitumen-specific training	ADR: per certificate; specific: periodic refresher as required (Eurobitume, 7.1.5)
Drivers at the customer plant	Documented site-specific induction	First delivery + start of season
Receiving staff	Safe handling, receipt, emergencies	On hiring + periodically (Eurobitume, 7.2.4)
Plant emergency team	Emergency drill with shower and extinguishers	Yearly, at the start of the season

MT2 SAFE DELIVERY SESSION

On request, the MT2 team delivers a free 60–90 minute session at the customer's site based on this handbook, with a practical exercise at the discharge point.

07

CHAPTER 07

Annexes

Practical tools for every delivery: the checklist, the legal framework, the glossary and emergency contacts.

- Discharge checklist
- Glossary
- Legal framework and references
- Emergency contacts

Discharge checklist

DATE / TIME _____ PLANT / TANK _____

DELIVERY NOTE NO. / PRODUCT _____ DRIVER / VEHICLE NO. _____

	Driver	Customer
Site-specific induction done and signed	☐	☐
Grade and quantity confirmed for the correct tank	☐	☐
Tank ullage ≥ quantity + 10%	☐	☐
Level alarms working	☐	☐
Safety shower tested, extinguisher in place	☐	☐
6 m zone clear and signposted	☐	☐
Vehicle secured, burner off	☐	☐
Full PPE and H_2S monitor on	☐	☐
Hose visually checked, gaskets in good condition	☐	☐
Product temperature recorded: ___ °C	☐	☐
Discharge supervised throughout	☐	☐
Hose cleared and safely disconnected	☐	☐
Area clean, connection locked	☐	☐
Documents signed, defects reported	☐	☐

Driver signature _____ Customer representative signature _____

Legal framework and references

Occupational health and safety (Romania)

§ Law no. 319/2006 on occupational safety and health; GD no. 1425/2006 – implementing rules
§ GD no. 1048/2006 – personal protective equipment; Regulation (EU) 2016/425
§ GD no. 1218/2006 – chemical agents, occupational exposure limits
§ GD no. 971/2006 – safety signs; GD no. 1146/2006 – work equipment
§ Law no. 307/2006 on fire protection

Transport of dangerous goods

§ ADR Agreement, 2025 edition – UNECE (unece.org/adr-2025-files)
§ GD no. 1175/2007 on road transport of dangerous goods, as amended
§ GO no. 27/2011 on road transport; ARR – safety advisers

Chemicals and construction products

§ Regulation (EC) No 1907/2006 (REACH); Regulation (EC) No 1272/2008 (CLP)
§ Regulation (EU) 2020/878 – SDS format
§ EN 12591 (paving bitumen), EN 14023 (PMB); Regulation (EU) 2024/3110 (CPR)

Industry guidance

§ Eurobitume – Guide to the Safe Delivery of Bitumen, 3rd ed. (2025)
§ Eurobitume – Bitumen Burns Card; Safe Handling Card; H_2S, safety shower and storage guidance
§ Energy Institute – Model Code of Safe Practice Part 11: Bitumen safety code

The list is not exhaustive. Legal references are updated at each edition.

Glossary

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road.
Boil-over	Violent foaming of hot bitumen on contact with water.
CLP	EU Regulation on classification, labelling and packaging of substances.
Safety adviser (DGSA)	ADR-certified person overseeing compliance of dangerous goods transport.
PPE	Personal protective equipment.
SDS	Safety Data Sheet of the product.
H_2S	Hydrogen sulphide – a toxic and flammable gas.
HLA / HHLA	High-level alarm / independent high-high-level alarm.
PMB	Polymer-modified bitumen.
Flash point	Lowest temperature at which vapours can form a flammable mixture.
REACH	EU Regulation on registration and evaluation of chemicals.
Ullage	Free volume available in the tank before delivery.
UN 3257	UN number for liquids carried at elevated temperature.
OEL	Occupational exposure limit.
Exclusion zone	The 6 m zone around the discharge point, accessible only in full PPE.

Quick emergency plan

Burn	Shower / water min. 20 min	Do not remove the bitumen	**112 + burn card**
Fire	Stop pump, close valves	Powder / foam – no water	**112: "bitumen fire"**
H_2S / collapse	No entry without breathing apparatus	Fresh air, if safe	**112 + CPR if trained**
Spill	Stop the source	Contain with sand / earth	**Inform MT2 and authorities**
Boil-over	Stop discharge	Evacuate the 6 m zone	**No restart until cleared**

YOUR SAFETY COMES FIRST

Act only if you can do so without putting yourself at risk. Then always inform MT2 dispatch: +40 739 999 199.

Driver site induction record

Completed at each driver's first delivery and at the start of every season. The original stays at the plant, a copy is sent to MT2.

PLANT / ADDRESS

INDUCTION DATE

DRIVER NAME / HAULIER

INSTRUCTOR (PLANT)

	Shown	Understood
Site route, speed limits, pedestrian areas	☐	☐
Discharge point and tanks (numbering, products)	☐	☐
Level gauges and high-level alarms	☐	☐
Safety shower, extinguishers, first aid kit	☐	☐
Escape route and assembly point	☐	☐
Lone working procedure / personal alarm	☐	☐
Plant contacts and emergency numbers	☐	☐
Site-specific rules (permit to work, smoking, phone)	☐	☐

Driver signature

Instructor signature

Emergency contacts

112

Emergency – ambulance, fire brigade, police

Say: "hot bitumen burn" / "bitumen fire", the exact address and the number of casualties.

MT2 – Dispatch and delivery emergencies — **+40 739 999 199**

24/7

MT2 – Sales department — **+40 728 000 022**

Mon–Fri, office hours

Website — **www.mtpartner.ro**

SDS, documents, digital handbook

TO BE COMPLETED BY THE CUSTOMER PLANT

Plant manager

HSE officer

Dispatcher / tank operator

Nearest hospital / burns centre

Plant address and GPS coordinates

WHAT TO SAY TO 112

1. What happened (burn, fire, poisoning)
2. Where – address and access point
3. How many people are affected and their condition
4. Which product: hot bitumen (temperature on the delivery note)

Notes

Site-specific instructions, remarks, useful numbers

Notes

Site-specific instructions, remarks, useful numbers

Every safe delivery starts with the right information.

Scan for the digital version and updates

www.mtpartner.ro

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MT2

resurse sigure pentru drumuri durabile

Precision Supply for Critical Institutions.

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