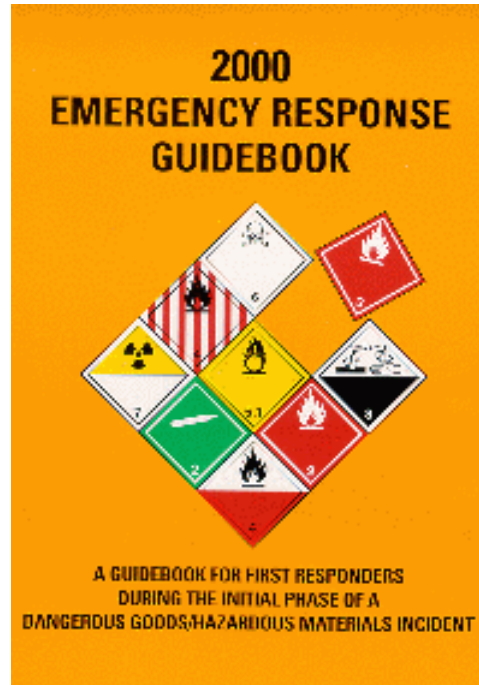


EMERGENCY RESPONSE GUIDEBOOK (ERG)



HAZARDOUS MATERIALS

- Emergency Response Guidebook (ERG)
 - **Initial** guide to aid first responders
 - Quickly identifying specific/generic material hazards
 - Protect responders and public during initial response phase
- United Nations/DOT ID Number
 - Placards have 4 digit number or
 - In orange panel near the placard
- NFPA 704 Placards
 - Nat'l Fire Protection Association
 - Used only for “fixed facilities”
 - Located on wall of building, fence

HAZMAT Definitions

- Toxic Inhalation Hazard (TIH) – Term used to describe gases and volatile liquids that are toxic when inhaled
- Initial Isolation Distance – Distance in which all persons should be considered for evacuation in all directions
- Protective Action Distance – Downwind distance from a spill/leak source within which protective actions could be implemented (differs in day and night). Likely affected first 30 minutes after spill

Identifying the Material

- Shipping document
 - Highway – Bill of Lading in cab of a motor vehicle
 - Rail – Waybill or Consist
 - Water – Cargo Manifest
 - Air – Air Bill
 - Attached to a package
 - Possession of pilot or crew
- Placard
 - Numbered Placard
 - Orange Panel by a Colored Placard
 - NFPA 704 placard

ERG

- **White Pages**
 - General information
- **Yellow-bordered Pages**
 - Index list of chemical in numerical order by four digit ID (Placard) number assigned by UN & DOT
 - Identifies guide (Orange pages) to be used
 - Highlighted listing is TIH or water reactive material
- **Blue-bordered Pages**
 - Index list of chemical in alphabetical order
 - Identifies guide (Orange pages) to be used
 - Highlighted listing is TIH or water reactive material

ERG (continued)

- Orange-bordered Pages
 - Most important section of ERG
 - 62 guides in two-page format
 - Left-hand page is potential hazards and safety information
 - Fire or Explosion/Health (most hazardous listed first)
 - Safety/Protective Clothing/Evacuation
 - Right-hand page is emergency response guidance
 - Fire/Spill or Leak/First Aid

ERG (continued)

- Green-bordered Pages – Table format
 - By ID number and Name of Material
 - Provides ‘Initial Isolation Distance’
 - Provides ‘Protective Action Distance’
 - Provides distances for small (~200 liters or less) spills and large (>200 liters) spills
 - Provides daytime and nighttime distances
 - Initial Isolation distance – radius of circle in which all persons should be evacuated
 - Protective Action Distance – Daytime/nighttime downwind distances from spill/leak with which protective actions should be taken

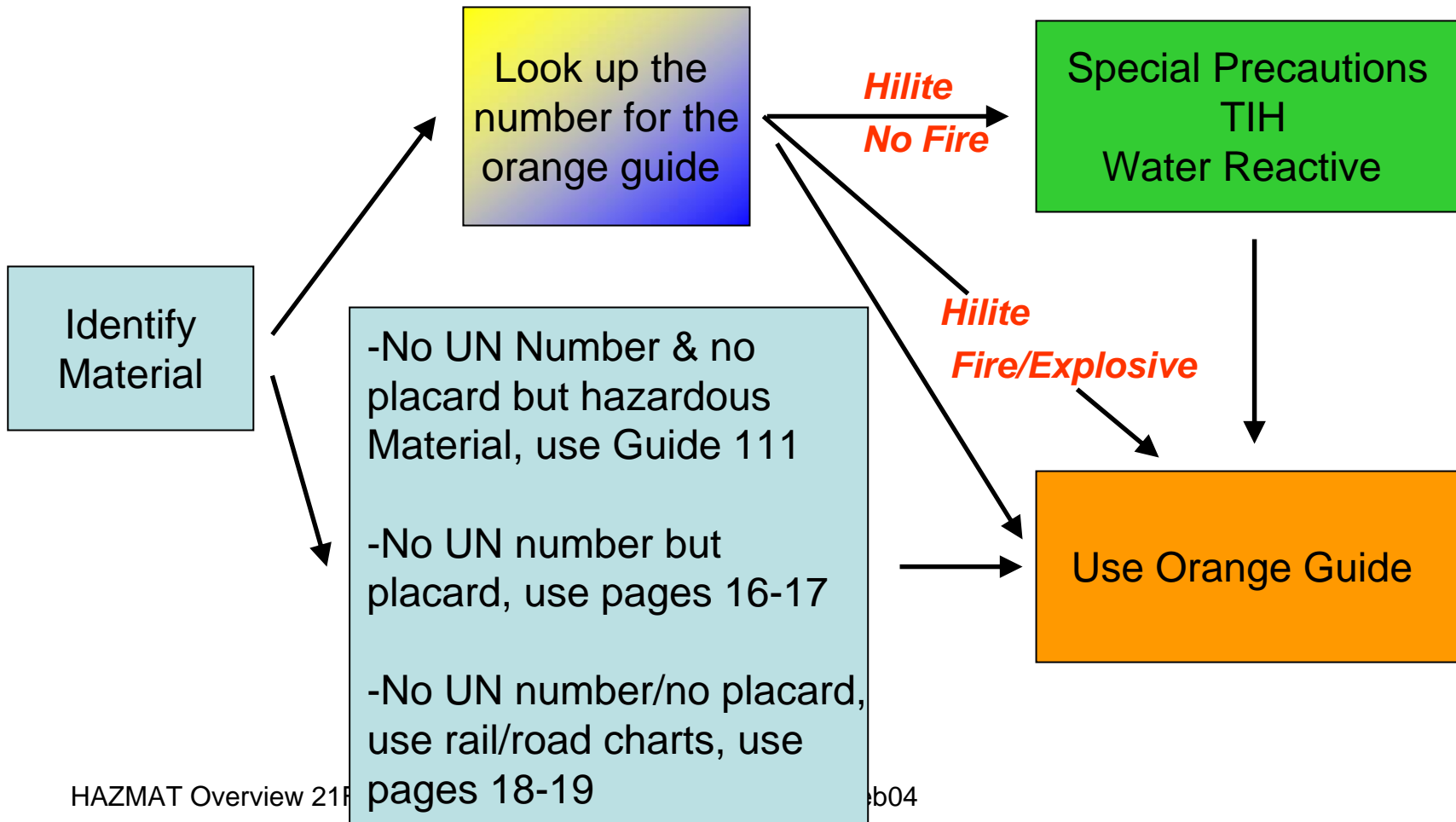
ERG Summary

- Use the Yellow and Blue sections as look up tables to identify the correct guide in the Green and Orange sections
 - Yellow – if you know the 4 digit ID of material
 - Blue – if you know the name of the material
- Orange – Guides for Potential Hazards, Public safety And Emergency Response by material types
- Green – additional guides for toxic inhalation hazards and water reactive materials
 - These are highlighted in yellow and blue look up tables
 - If fire, go directly to Orange section

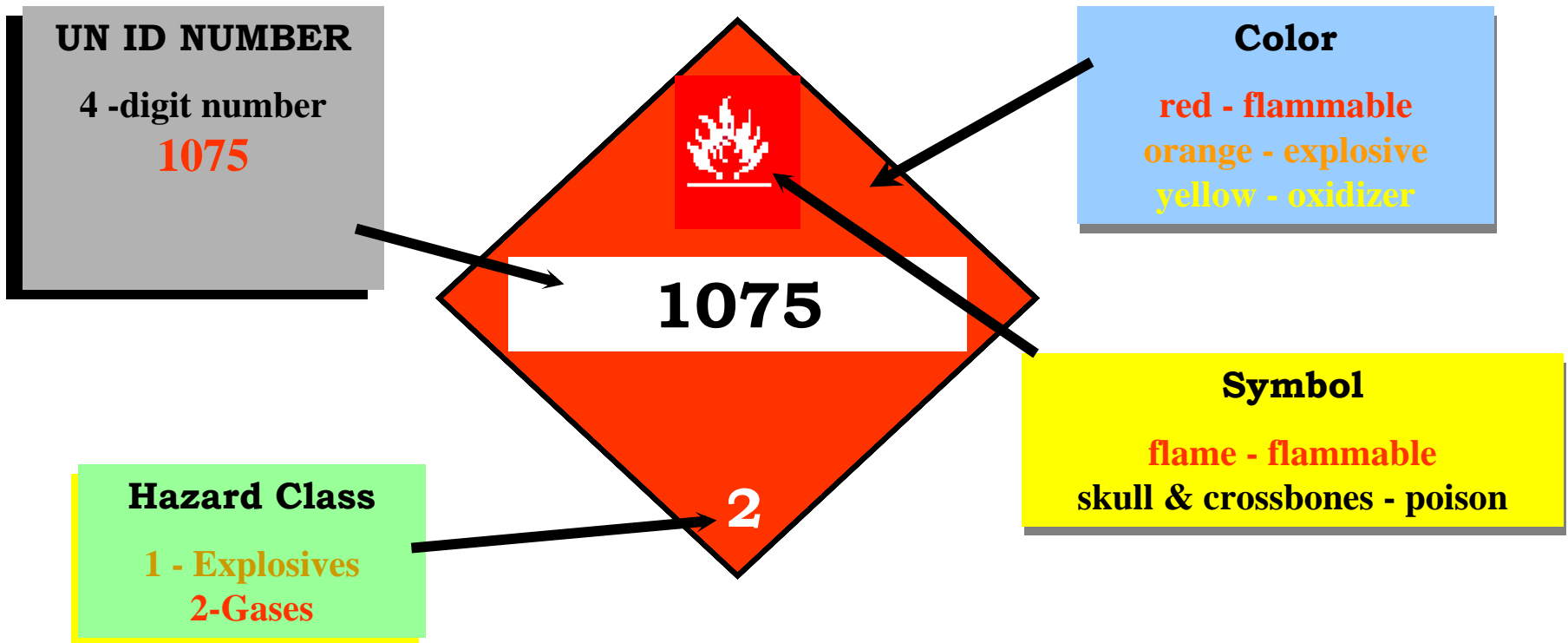
ERG Summary

- If no reference to a guide number can be found and no placard can be seen and the incident is believed to involve dangerous cargo, use Guide 111.
- If a placard can be seen, but no guide number is available, use pages 15-17 for Guide numbers (* on explosives placard refers to Compatibility).
- As last resort, if no reference to a guide number can be found and no placard can be seen, use the table of rail car and road trailer identification charts on pages 18-19 for Guide numbers.

Resist Rushing In !
Approach Incident from Upwind
Stay Clear of All Spills , Vapors, Fumes and Smoke



PLACARDS



TRACTOR TRAILER MARKINGS



RAIL CAR MARKINGS

Photos by Robert Burke



**DEDICATED
CAR**

**RAIL CAR
OWNER**

**PHONE
NUMBERS**

**TEST
PRESSURE**

**TANK
CAPACITY**

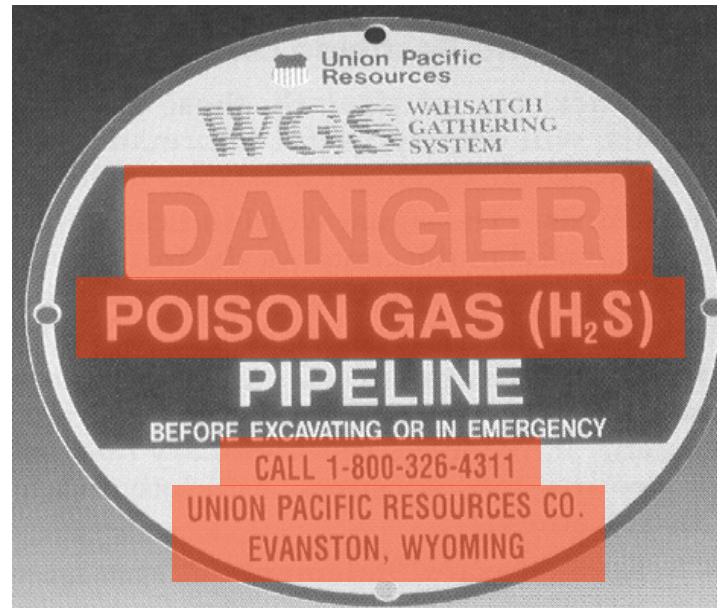
PIPELINE MARKERS

Line ownership

Warning label

**Emergency / non-emergency
phone numbers**

Types of products



Stolt
Tank Containers

UTCN 111030 6
USA 2078

UTCN 1110



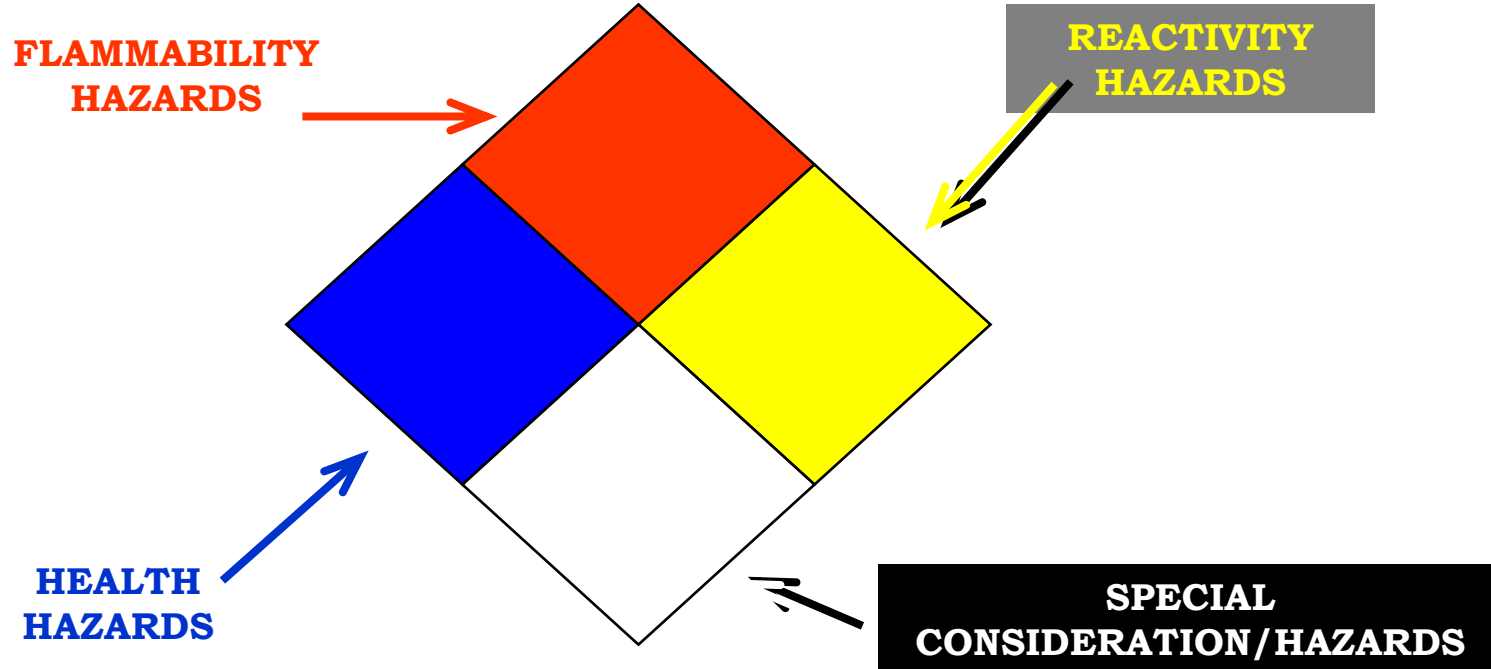
27 200



NFPA 704 PLACARDING

- Used to mark *FIXED FACILITIES*
- For emergency responders
- Represents *BASIC EMERGENCY INFORMATION*

NFPA 704 COLORS



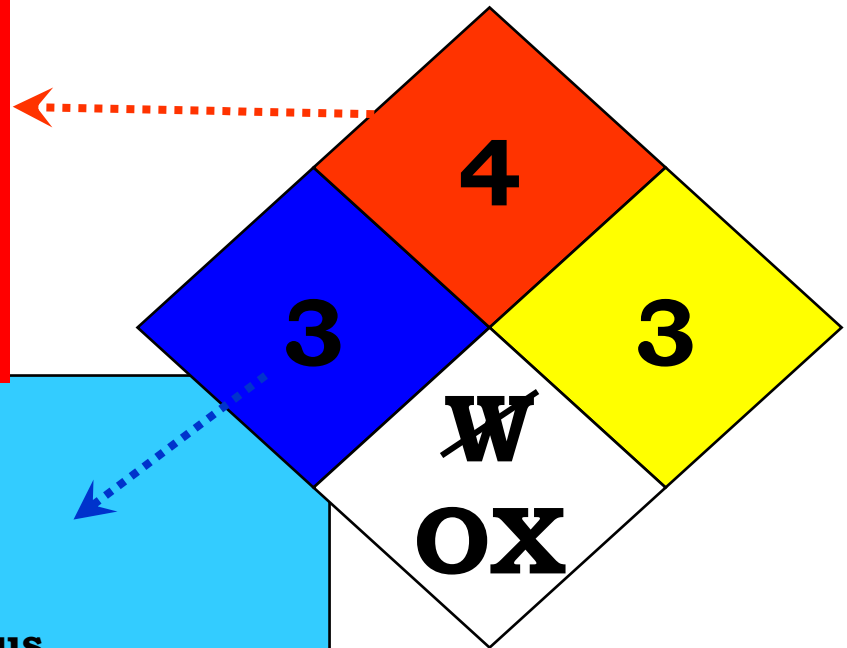
NFPA 704 NUMBERS

FLAMMABILITY

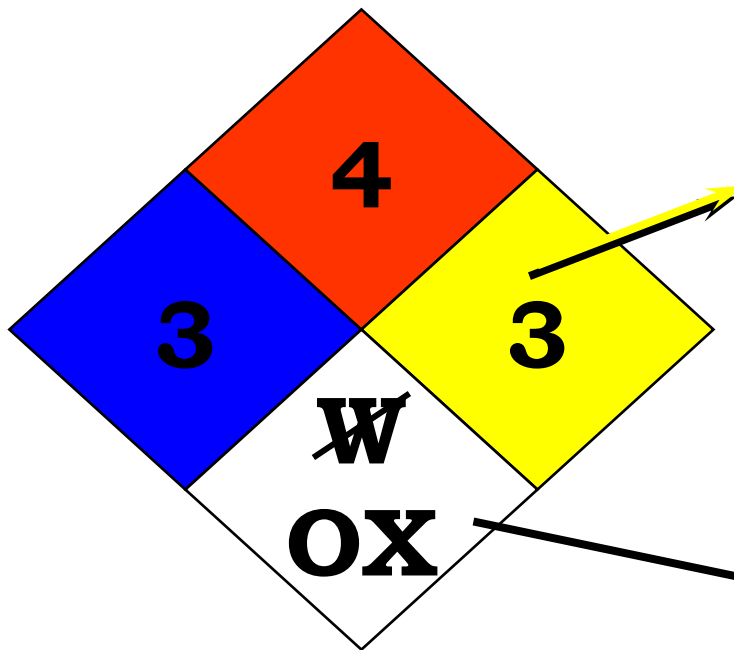
0. Will not burn
1. Must be preheated to burn
2. Ignites when moderately heated
3. Ignites at normal temperatures
4. Extremely flammable

HEALTH

0. Like ordinary material
1. Slightly hazardous
2. Hazardous - use breathing apparatus
3. Extremely dangerous - use full protective clothing w/ breathing apparatus
4. Too dangerous to enter - (vapor or liquid)



NFPA 704 NUMBERS



REACTIVITY

0. Normally stable
1. Unstable if heated - use normal precautions
2. Violent chemical change possible - use hose streams from a distance
3. Strong shock or heat may detonate - use monitors from behind explosion resistant barriers
4. May detonate - evacuate area if materials are exposed to fire

SPECIAL

- W** with line through - Use no water
- OX** or **OXY** - oxidizer
- COR** - corrosive

Chemical/Biological Agents

- Chemical Incidents
 - Rapid onset symptoms
 - Easily observed signatures (colored residue, dead foliage, pungent odor, dead insects/animals)
- Biological Incidents
 - Hours/days onset symptoms
 - No characteristic signatures (usually odorless and colorless)

Miscellaneous

Information to Provide When Calling in HAZMAT Incident

- Your name, call back number
- Location/Nature of problem (spill, fire, etc)
- Name & Placard number of material
- Shipper/consignee/point of origin
- Carrier name, rail car or truck number
- Container type/size
- Quantity of material transported/released
- Local conditions (weather, terrain, proximity schools, hospitals, waterways, etc)
- Injuries and exposures
- Local emergency services that have been identified

Contacts for HAZMAT Incident

- CHEMTREC, 800-424-9300, 703-527-3887
- CHEM-TEL INC, 800-255-3924, 813-248-0585
- INFOTRAC, 800-535-5053, 352-323-3500
- 3E COMPANY, 800-451-8346, 760-602-8703
- MILITARY SHIPMENTS
 - EXPLOSIVES 703-697-0218
 - ALL OTHER 800-851-8061

Contacts for HAZMAT Incident

- Canada, 613-996-6666
- Mexico
 - 0-11-52-5-550-1496/1552
 - 0-11-52-5-550-1485/4885

For each of the following two slides, work through Training Exercises #1 thru #5 on page 2 of the Handout

TRACTOR TRAILER MARKINGS



PLACARDS

