



Adhesive Glossary

Acclimate:

Time (48 hours) for materials to adjust to a new environment.

ACGIH TLV:

The **threshold limit value (TLV)** of a chemical substance is a level to which it is believed a worker can be exposed day after day for a working lifetime without adverse health effects. Strictly speaking, **TLV** is a reserved term of the American Conference of Governmental Industrial Hygienists (**ACGIH**).

Blushing:

Condensation of moisture on a surface that occurs when solvent evaporates from contact adhesive.

Canister:

Self-contained adhesive spray system.

Closed Time:

Interval between the point when a PVA composite is put together and when it is pressed.

Cold Pressing:

A hydraulic or screw press in which the glued members are forced together.

Coverage:

Amount of adhesive that is applied (measured in wet mils for PVA and g/ft² for contacts).

Coverage Rate:

The bonded amount of material that can be produced at a recommended adhesive coverage.

Dead Stack:

Pressure being applied to a laminated panel by only the weight of the core. No mechanical pressure is applied.

Density:

Mass per unit volume.

DOT:

Department of Transportation

Dry Time:

The period of time during which an adhesive needs to dry prior to bonding.

Flatwork:

Also known as non-postforming.

Freeze-Thaw Stable:

A system able to freeze and thaw without losing chemical or physical properties.

Glue Spreader:

A piece of equipment with grooved rollers capable of applying adhesive in wet mils.

Green Strength:

Initial strength of adhesives that prevents laminate from springing back until it cures to full strength.

Heat Strength:

Strength measured at elevated temperature.

Homogenized:

Product will not separate, no need for agitation.

Hot Press:

A single or multi-platen hydraulic press, with plates or platens, heated by steam, for thermo-setting resin adhesives.

IARC:

International Agency for Research on Cancer (IARC) is part of the World Health Organization.



ICAO / IATA:

International Civil Aviation Organization is a specialized agency of the United Nations. It codifies the principles and techniques of international air navigation and fosters the planning and development of international air transport to ensure safe and orderly growth. **International Air Transport Association** is a trade association of the world's airlines. Consisting of around 260 airlines, primarily major carriers, representing 117 countries, the IATA's member airlines account for carrying approximately 83% of total Available Seat Kilometers air traffic. IATA supports airline activity and helps formulate industry policy and standards.

IMDG / IMO:

International Maritime Dangerous Goods Code is accepted as an international guideline to the safe transportation or shipment of dangerous goods or hazardous materials by water on vessel. **International Maritime Organization** - The IMO's primary purpose is to develop and maintain a comprehensive regulatory framework for shipping and its remit today includes safety, environmental concerns, legal matters, technical co-operation, maritime security and the efficiency of shipping. IMO is governed by an assembly of members and is financially administered by a council of members elected from the assembly. The work of IMO is conducted through five committees and these are supported by technical subcommittees. Member organizations of the UN organizational family may observe the proceedings of the IMO.

Joint Assembly:

The junction of two adjacent pieces of wood or veneer.

J-Rolling:

A manual method for applying pressure to a bonded assembly.

MSHA/NIOSH:

Mine Safety and Health Administration / National Institute for Occupational Safety and Health

Mutagenicity:

refers to a chemical or physical agent's capacity to cause mutations (genetic alterations). Agents that damage DNA causing lesions that result in cell death or mutations are genotoxins.

Neoprene:

(also polychloroprene or **pc-rubber**) is a family of synthetic rubbers that are produced by polymerization of chloroprene. **Neoprene** exhibits good chemical stability and maintains flexibility over a wide temperature range.

NFPA / HMIS:

The **National Fire Protection Association (NFPA)** is a United States trade association, albeit with some international members, that creates and maintains private, copyrighted, standards and codes for usage and adoption by local governments. This includes publications from model building codes to the many on equipment utilized by firefighters while engaging in hazardous material (hazmat) response, rescue response, and some firefighting. The **Hazardous Materials Identification System (HMIS)** is a numerical hazard rating that incorporates the use of labels with color developed by the American Coatings Association as a compliance aid for the OSHA Hazard Communication Standard. The HMIS Color Bar is similar to the fire diamond, created by the National Fire Protection Association (NFPA).

It's important to keep in mind, NFPA and HMIS are voluntary systems

Where things start to get tricky between GHS and the NFPA/HMIS systems is in the use of numbers. With GHS, the lower the categorization number, the greater the severity of the hazard. This is opposite of the way numbers and severity relate to each other under NFPA and HMIS. For instance, with NFPA, the higher the number, the greater the severity.

An important difference between NFPA/HMIS systems and GHS/HazCom 2012 is the way they use numbers. The numbers in the GHS system, as adopted by OSHA, do not show up on the label, instead they are used to determine what goes on the label. The numbers do appear on GHS formatted safety data sheets, in Section 2, but OSHA believes the use of numbers there will be less confusing since there is much more contextual information available to help the reader understand the hazard information. In the NFPA and HMIS systems, the numbers themselves appear on the label and are used to communicate information about the hazard.



NTP:

National Toxicology Program (NTP) is part of the U.S. Department of Health and Human Services

Three core federal agencies comprise NTP.

- National Institute of Environmental Health Sciences (NIEHS), part of the National Institutes of Health (NIH). NIEHS administers NTP.
- National Center for Toxicological Research, part of the U.S. Food and Drug Administration (FDA).
- National Institute for Occupational Safety and Health, part of the Centers for Disease Control and Prevention.

Open Time:

This is the window of time that begins when an adhesive is applied to the substrate and ends when the laminate is applied to make an assembly. Temperature and humidity affect open time.

OSHA:

Occupational Safety and Health Administration

OSHA PEL:

Occupational Safety and Health Administration permissible exposure limit

Partition Coefficient:

The ratio of the concentrations of a solute in two immiscible or slightly miscible liquids, or in two solids, when it is in equilibrium across the interface between them.

Pinch Roller:

A mechanized roller which applies precise and continuous pressure over the entire panel.

Postforming:

Postforming describes the process of bending laminate around curves with the application of heat (approximately 325°F). A postforming adhesive has the ability to hold the laminate to the curved substrate while still at postforming temperatures.

Postforming, High-Speed:

This type of application uses highly automated equipment to postform at high line speeds.

Press Time:

The time which the assembly to be bonded remains under the pressure necessary for bonding.

SARA 313:

In 1980, the U.S. enacted a federal law called the Comprehensive Environmental Response, Compensation, and Liability Act or CERCLA to facilitate the cleaning-up of sites contaminated by hazardous chemicals. Enforced by the Environmental Protection Agency (EPA), this law is also commonly known as Superfund. The name Superfund is derived from the special trust fund CERCLA instituted to pay for the clean-up of sites when the responsible party is no longer identifiable.

In 1986, the U.S. made significant changes and additions to Superfund with the passage of the Superfund Amendments and Reauthorization Act or SARA. The law was a direct response to the 1984 chemical disaster in Bhopal, India where methyl isocyanate gas leaked from a tank and killed approximately 3800 people and injured thousands more.

One of the biggest changes instituted under SARA was the passage of the Emergency Planning and Community Right-To-Know Act or EPCRA. A separate law unto itself, it is commonly known as SARA Title III and it sets requirements for local and state emergency planning around hazardous chemicals, the right of the public to access information on chemical hazards in their community, and the reporting responsibilities for facilities that use, store, and/or release hazardous chemicals.

SARA Title III has four provisions:

- Emergency Planning (Sections 301-303)
- Emergency Release Notification (Section 304)
- Hazardous Chemical Storage Reporting Requirements (Section 311-312)
- Toxic Chemical Release Inventory (Section 313)



SBR:

Styrene-butadiene or styrene-butadiene rubber (**SBR**) describe families of synthetic rubbers derived from styrene and butadiene. These **materials** have good abrasion resistance and good aging stability when protected by additives.

Solids Content:

The percentage by weight of nonvolatile material in an adhesive or sealant.

Spray Pot:

A pressurized system which uses compressed air to atomize and spray the adhesive. The compressed air is supplied by a compressor.

STOT:

Specific Target Organ Toxicity

Strength:

The adhesive's bonding power that resists force, strain or wear.

Substrate:

The basic surface upon which the adhesive is applied and to which it is expected to adhere.

Tack:

The property of an adhesive that enables it to form a bond of measurable strength immediately after adhesive and adherent are brought into contact under low pressure.

US TSCA:

The **Toxic Substances Control Act (TSCA)** is a United States law, passed by the United States Congress in 1976 and administered by the United States Environmental Protection Agency, which regulates the introduction of new or already existing chemicals. When the TSCA was put into place, all existing chemicals were considered to be safe for use and subsequently grandfathered in. Its three main objectives are to assess and regulate new commercial chemicals before they enter the market, to regulate chemicals already existing in 1976 that posed an "unreasonable risk to health or to the environment, and to regulate these chemicals' distribution and use.

VHAP (Volatile Hazardous Air Pollutant):

A hazardous air pollutant is one of over 180 specific chemicals identified by the US Government as being detrimental to air quality.

Viscosity:

The resistance of a fluid to flow.

VOC (Volatile Organic Compounds):

Carbon-containing chemicals which contribute to the formation of ground level ozone (smog).