

SAFETY DATA SHEET

IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Name: Direct to Film / DTF Adhesive Powder / Polyurethane (TPU)

Material Uses: Powder for use in DTF transfers.

Company Info CALIFORNIA GLOBAL-SIGNS INFORMATION TECHNOLOGY CO INC
Address: 4050 GREYSTONE DR ONTARIO CA 91761
Phone: 626-342-7605
Fax: 626-839-1673
Emergency: 626-342-7605
www.sign-in-global.us

DATE: 11/07/2022

Polyurethane (TPU) / Hotmelt Adhesive

Version: 1 English

Report No.: A2220488098101001

Creation Date: 11/07/2022

Revision Date: 11/07/2022

*Prepared according to American OSHA HCS-2012

1 Identification

| Product identifier

Product Name	Polyurethane (TPU)/ Hotmelt Adhesive
Common Name/Trade Name	Direct to Film/DTF Powder
CAS No.	9009-54-5
EC No.	618-449-1
Molecular Formula	C ₃ H ₈ N ₂ O

| Recommended use of the product and restrictions on use

Relevant identified uses	Powder for use in DTF transfers.
Uses advised against	None.

| Details of the supplier of the Safety Data Sheet

Name of the company	CALIFORNIA GLOBAL-SIGNS INFORMATION TECHNOLOGY CO INC
Address of the company	4050 Greystone Dr Ontario CA 91761
Post code	-
Telephone number	626-342-7605
Fax number	-
E-mail address	sales@sign-in-global.us

| Emergency phone number

Emergency phone number	626-342-7605
------------------------	--------------

2 Hazard(s) identification

| Hazard classification according to GHS

According to OSHA HCS-2012, not classified as a hazardous chemical.

| GHS Label elements

Hazard pictograms	Not applicable
Signal word	Not applicable

| Hazard statements

Hazard statements	Not applicable
-------------------	----------------

| Precautionary statements

u Prevention

Prevention	Not applicable
-------------------	----------------

u Response

Response	Not applicable
-----------------	----------------

u Storage

Storage	Not applicable
----------------	----------------

u Disposal

Disposal	Not applicable
-----------------	----------------

| Other hazards

	Not applicable.
--	-----------------

| Hazard description

u Physical and chemical hazards

	No information available
--	--------------------------

u Health hazards

Inhaled	Inhalation of the product may produce adverse health effects or irritation of the respiratory tract following discomfort.
Ingestion	Accidental ingestion of the product may be harmful to the health of the individual.
Skin Contact	Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Eye	This product may cause temporary discomfort following direct contact with the eye.

u Environmental hazards

	Please refer to 12th chapter of SDS.
--	--------------------------------------

3 Composition/information on ingredients

| Substance/mixture

	Substance
--	-----------

Component	CAS No.	EC No.	Concentration (wt, %)
Polyurethane (TPU)	9009-54-5	618-449-1	100

4 First-aid measures

| Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Skin contact	No harm in general situation. First aid is not needed.
Ingestion	Never give anything by mouth to an unconscious person. Call a physician or

	Poison Control Center immediately.
Inhalation	Move victim into fresh air. If breathing is difficult, give oxygen and consult a physician immediately.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

| Most important symptoms/effects, acute and delayed

1	Please see section 11.
---	------------------------

| Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures**| Extinguishing media**

Suitable extinguishing media	Use extinguishing media suitable for surrounding area.
Unsuitable extinguishing media	There is no restriction on the type of extinguisher which may be used.

| Specific hazards arising from the substance or mixture

1	Development of hazardous combustion gases or vapor possible in the event of fire.
---	---

| Special protective equipment and precautions for fire-fighters

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures**| Personal precautions, protective equipment and emergency procedures**

1	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
2	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3	Use personal protective equipment, do not breathe dust/fume.

| Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

| Methods and materials for containment and cleaning up

1	Cut off the source of the leak as much as possible.
2	Keep leaks in a ventilated place.
3	Isolation of contaminated areas and restrictions on access.
4	It is recommended that emergency personnel wear dust masks.

5	Collect the spill with a clean shovel and place it in a clean, dry, loosely closed container and move the container away from the leak.
6	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7 Handling and storage

| Precautions for safe handling

1	Handling is performed in a well ventilated place.
2	Avoid contact with eyes.
3	Keep away from heat/sparks/open flames/ hot surfaces.

| Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

8 Exposure controls/personal protection

| Control parameters

Occupational Exposure limit values	No relevant regulations
---	-------------------------

u Biological limit values

Biological limit values	No relevant regulations
--------------------------------	-------------------------

u Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2	GBZ/T 300 series standard Determination of toxic substances in workplace air.

| Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Set up emergency exit and necessary risk-elimination area.
4	Handle in accordance with good industrial hygiene and safety practice.

| Personal protection equipment

General requirement	No special requirements, please see the description below.
Eye protection	In general situation, eye protection is not needed. In the production process, when contacting with vapour or dust, tightly fitting safety goggles.
Hand protection	In general situation, hand protection is not needed.
Respiratory protection	In general situation, respiratory protection is not needed. If exposure limits are exceeded or if irritation or other symptoms are experienced, wear dust proof mask

	or gas defence mask.
Skin and body protection	In general situation, skin and body protection are not needed.

9 Physical and chemical properties and safety characteristics

| Physical and chemical properties

Appearance	White powder, transparent when melted
Odor	Odorless
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	No information available
Initial boiling point and boiling range(°C)	105~115 (221~239°F)
Flash point(Closed cup,°C)	> 250 (482°F)
Evaporation rate	No information available
Flammability	Combustible but not flammable, if adhesive is overheated, especially using a naked flame it will burn. Excessive fume indicates overheating
Upper/lower explosive limits[% (v/v)]	Upper limit : No information available ; Lower limit : No information available
Vapor pressure	No information available
Vapor density(Air = 1)	No information available
Relative density(Water=1)	1.2
Solubility	Negligible
n-octanol/water partition coefficient	No information available
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Viscosity	No information available

10 Stability and reactivity

| Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	No information available.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	No information available.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

| Acute toxicity

Acute toxicity	No information available
----------------	--------------------------

| Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Polyurethane (TPU)	Category 3	Not Listed

| Others

Polyurethane (TPU)(Component)	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Reproductive toxicity(additional)	Based on available data, the classification criteria are not met

12 Ecological information

| Acute aquatic toxicity

Acute aquatic toxicity	No information available
------------------------	--------------------------

| Chronic aquatic toxicity

Chronic aquatic toxicity	No information available
--------------------------	--------------------------

| Persistence and degradability

Persistence and degradability	No information available
-------------------------------	--------------------------

| Bioaccumulative potential

Bioaccumulative potential	No information available
---------------------------	--------------------------

| Mobility in soil

Mobility in soil	No information available
------------------	--------------------------

| Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
-----------	---

Polyurethane (TPU)	Not available
--------------------	---------------

13 Disposal considerations

| Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

14 Transport information

| Label

Transporting Label	Not applicable
--------------------	----------------

| IMDG-CODE

IMDG-CODE	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
-----------	--

| ICAO/IATA-DG

IATA-DGR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
----------	--

| UN-ADR

UN-ADR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
--------	--

15 Regulatory information

| International chemical inventory

Component	EC invento ry	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIICS	ENCS
Polyurethane (TPU)	x	x	x	x	x	x	x	x	x

[EC inventory]	European Inventory of Existing Commercial Chemical Substances
[TSCA]	United States Toxic Substances Control Act Inventory
[DSL]	Canadian Domestic Substances List
[IECSC]	China Inventory of Existing Chemical Substances
[NZIoC]	New Zealand Inventory of Chemicals
[PICCS]	Philippines Inventory of Chemicals and Chemical Substances
[KECI]	Korea Existing Chemicals Inventory
[AIICS]	Australian. Inventory of Industrial Chemical (AIICS)
[ENCS]	Japan Inventory of Existing & New Chemical Substances

Note:

“√”	Indicates that the substance included in the regulations.
“x”	No data or not included in the regulations.

16 Other information

| Information on revision

Creation Date	2022/11/07
Revision Date	2022/11/07
Reason for revision	-

| Reference

- [1] IPCS: The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>.
- [2] IARC, website: <http://www.iarc.fr/>.
- [3] OECD: The Global Portal to Information on Chemical Substances, website: <https://www.chemportal.org/chemportal/substancesearch/index.action>.
- [4] CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.
- [5] NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.
- [6] EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.
- [7] U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.
- [8] Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

| Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC ₅₀	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD ₅₀	Lethal Dose 50%	NTP	National Toxicology Program
EC ₅₀	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC _x	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P _{OW}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor	HCS	Hazard Communication Standard

Notice to the Reader:

The data in this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.

Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if or where precautions-in addition to those described herein- are required.

Any health hazard and safety information contained herein should be passed on to your customers or employees. The manufacturer must rely on the user to utilize the information provided to develop guidelines and employee instructional programs for safe use. The information in this Safety Data Sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. This information has been prepared to assist those working with or handling this product.

This information is furnished without any warranty, representation or license of any kind. To the best of the manufacturer's knowledge, the information presented by this document is believed to be accurate. The manufacturer does not assume any legal responsibility for the use of the same. Customers are encouraged to conduct their own tests before using any product. Read the label instructions.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.