

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 05/24/2022

Reviewed on 05/24/2022

**1 Identification**

- **Product identifier**
- **Trade name: Flow agent**
- **Article number: Series 700-VMT**
- **Application of the substance / the mixture** Additive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
DECO TECHnology Group Inc.  
PRINTCOLOR SCREEN AG  
TEL (714) 639-3326  
FAX (714) 639-2261
- **Information department:** Product safety department
- **Emergency telephone number:** 800-535-5053

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 3

H226

Flammable liquid and vapor.



GHS08 Health hazard

Aspiration Hazard 1

H304

May be fatal if swallowed and enters airways.



GHS07

Specific Target Organ Toxicity - Single Exposure 3

H335-H336

May cause respiratory irritation. May cause drowsiness or dizziness.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Solvent naphtha (petroleum), light arom.

n-butyl acetate

2-methoxy-1-methylethyl acetate

- **Hazard statements**

Flammable liquid and vapor.

May cause respiratory irritation. May cause drowsiness or dizziness.

May be fatal if swallowed and enters airways.

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**Precautionary statements**

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting/equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Avoid breathing vapours.
- Wash thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves / eye protection.
- If swallowed: Immediately call a poison center/doctor.
- Do NOT induce vomiting.
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- Call a poison center/doctor if you feel unwell.
- In case of fire: Use CO2, powder or water spray to extinguish.
- Store in a well-ventilated place. Keep container tightly closed.
- Store in a well-ventilated place. Keep cool.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**

**NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 3  
Reactivity = 0

**HMIS-ratings (scale 0 - 4)**



HEALTH 0 Health = 0  
FIRE 3 Fire = 3  
REACTIVITY 0 Reactivity = 0

**Other hazards**

**Results of PBT and vPvB assessment**

- PBT:** Not applicable.
- vPvB:** Not applicable.

**3 Composition/information on ingredients**

**Chemical characterization: Mixtures**

- Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 64742-95-6	Solvent naphtha (petroleum), light arom.	≥20-≤25%
CAS: 108-94-1	cyclohexanone	10-25%
CAS: 123-86-4	n-butyl acetate	2.5-10%
CAS: 108-65-6	2-methoxy-1-methylethyl acetate	2.5-10%

**4 First-aid measures**

**Description of first aid measures**

- After inhalation:** Supply fresh air; consult doctor in case of complaints.
- After skin contact:** Generally the product does not irritate the skin.
- After eye contact:** Rinse opened eye for several minutes under running water.
- After swallowing:** If symptoms persist consult doctor.

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- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

CAS: 108-94-1	cyclohexanone	60 ppm
CAS: 123-86-4	n-butyl acetate	5 ppm
CAS: 108-65-6	2-methoxy-1-methylethyl acetate	50 ppm
CAS: 70657-70-4	2-methoxypropyl acetate	50 ppm

· **PAC-2:**

CAS: 108-94-1	cyclohexanone	830 ppm
CAS: 123-86-4	n-butyl acetate	200 ppm
CAS: 108-65-6	2-methoxy-1-methylethyl acetate	1,000 ppm
CAS: 70657-70-4	2-methoxypropyl acetate	1,000 ppm

· **PAC-3:**

CAS: 108-94-1	cyclohexanone	5000* ppm
CAS: 123-86-4	n-butyl acetate	3000* ppm
CAS: 108-65-6	2-methoxy-1-methylethyl acetate	5000* ppm
CAS: 70657-70-4	2-methoxypropyl acetate	5,000 ppm

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## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** 3
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

### CAS: 108-94-1 cyclohexanone

PEL	Long-term value: 200 mg/m <sup>3</sup> , 50 ppm
REL	Long-term value: 100 mg/m <sup>3</sup> , 25 ppm Skin
TLV	Short-term value: 50 ppm Long-term value: 20 ppm Skin, BEI, A3

### CAS: 123-86-4 n-butyl acetate

PEL	Long-term value: 710 mg/m <sup>3</sup> , 150 ppm
REL	Short-term value: 950 mg/m <sup>3</sup> , 200 ppm Long-term value: 710 mg/m <sup>3</sup> , 150 ppm
TLV	Short-term value: 150 ppm Long-term value: 50 ppm

### CAS: 108-65-6 2-methoxy-1-methylethyl acetate

WEEL	Long-term value: 50 ppm
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- **Ingredients with biological limit values:**

### CAS: 108-94-1 cyclohexanone

BEI	80 mg/L Medium: urine Time: end of shift at end of workweek Parameter: 1.2-Cyclohexanediol (with hydrolysis, nonspecific, nonquantitative)
	8 mg/L Medium: urine Time: end of shift Parameter: Cyclohexanol (with hydrolysis, nonspecific, nonquantitative)

- **Additional information:** The lists that were valid during the creation were used as basis.

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- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
 Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not necessary if room is well-ventilated.
- **Protection of hands:**  
 The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
 The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	According to product specification
- **Odor:** Characteristic
- **pH-value:** Not determined.
- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	124 °C (255.2 °F)
- **Flash point:** 27 °C (80.6 °F) (Abel Pensky)
- **Ignition temperature:** 315 °C (599 °F)
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Explosion limits:**

<b>Lower:</b>	0.7 Vol %
<b>Upper:</b>	9.4 Vol %
- **Vapor pressure at 20 °C (68 °F):** 10.7 hPa (8 mm Hg)
- **Density at 20 °C (68 °F):** 0.94 g/cm<sup>3</sup> (7.84 lbs/gal)

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- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Viscosity:**  
  - Dynamic:** Not determined.
  - Kinematic:** Not determined.
- **Solvent separation test**  
  - VOC content:** ≤49.99 %  
≤469.9 g/l / ≤3.92 lb/gal
  - VOC (EC)** ≤49.99 %
- **Other information** No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

**CAS: 108-94-1 cyclohexanone**

Oral	LD50	1,620 mg/kg (rat)
Dermal	LD50	948 mg/kg (rabbit)
Inhalative	LC50/4 h	8,000 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

CAS: 108-94-1 cyclohexanone

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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Harmful to aquatic organisms  
Water hazard class 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |   |   |
|---|---|
| · <b>UN-Number</b>                          |   |
| · <b>DOT, ADR, IMDG, IATA</b>               | UN1210  |
| · <b>UN proper shipping name</b>            |   |
| · <b>DOT</b>                                | Printing ink related material   |
| · <b>ADR</b>                                | 1210 PRINTING INK RELATED MATERIAL  |
| · <b>IMDG, IATA</b>                         | PRINTING INK RELATED MATERIAL   |
| · <b>Transport hazard class(es)</b>         |   |
| · <b>DOT</b>                                |   |
|   |  |
| · <b>Class</b>                              | 3 Flammable liquids   |
| · <b>Label</b>                              | 3   |
| <hr style="border-top: 1px dashed black;"/> |   |
| · <b>ADR, IMDG, IATA</b>                    |   |
|   |  |
| · <b>Class</b>                              | 3 Flammable liquids   |

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· <b>Label</b>	3
· <b>Packing group</b>	III
· <b>DOT, ADR, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Warning: Flammable liquids
· <b>Hazard identification number (Kemler code):</b>	30
· <b>EMS Number:</b>	F-E,S-D
· <b>Stowage Category</b>	A
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 1210 PRINTING INK RELATED MATERIAL, 3, III

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.

- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

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· **Carcinogen categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

CAS: 108-94-1 cyclohexanone

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Solvent naphtha (petroleum), light arom.

n-butyl acetate

2-methoxy-1-methylethyl acetate

· **Hazard statements**

Flammable liquid and vapor.

May cause respiratory irritation. May cause drowsiness or dizziness.

May be fatal if swallowed and enters airways.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing vapours.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves / eye protection.

If swallowed: Immediately call a poison center/doctor.

Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a poison center/doctor if you feel unwell.

In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Product safety department

· **Contact:** hse@printcolor.ch

· **Date of preparation / last revision** 05/24/2022 / 2

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**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
BEI: Biological Exposure Limit  
Flammable Liquids 3: Flammable liquids – Category 3  
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3  
Aspiration Hazard 1: Aspiration hazard – Category 1

US