SAFETY DATA SHEET

Issuing Date: 30-Jun-2015

Dot Works Ready to Use Developer

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name
Dot Works Ready to Use Developer

Product code
28037-40

Product Use
Developer for Graphic Arts Industry.

Supplier Address
Recognition Systems, Inc.
30 Harbor Park Drive
Port Washington, NY 11050

Company Phone Number
516-625-5000

Emergency Telephone
Transport-CHEMTREC Inside NA: 800-424-9300
Transport CHEMTREC Outside NA: 703-527-3887

2. HAZARDS IDENTIFICATION

Classification

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Warning

Hazard Statements
Causes serious eye irritation
May cause an allergic skin reaction
Suspected of causing genetic defects
Suspected of causing cancer
Suspected of damaging fertility or the unborn child
May cause damage to organs through prolonged or repeated exposure
Precautionary Statements

Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Contaminated work clothing should not be allowed out of the workplace
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection

Response
If exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Storage
Store locked up

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not classified

Other hazards
Causes mild skin irritation
Toxic to aquatic life with long lasting effects
Toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL</td>
<td>111-46-6</td>
<td>1-5%</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>123-31-9</td>
<td>1-5%</td>
</tr>
<tr>
<td>POTASSIUM CARBONATE</td>
<td>584-08-7</td>
<td>0.5-1.5%</td>
</tr>
<tr>
<td>DTPA PENTASODIUM SALT</td>
<td>140-01-2</td>
<td>0.1-1%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First aid measures for different exposure routes

General advice  If symptoms persist, call a physician.
Eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact
IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

Inhalation
Move to fresh air. If symptoms persist, call a physician.

Ingestion
If swallowed, do not induce vomiting - seek medical advice.

Most important symptoms/effects, acute and delayed
May cause redness, itching, and pain. May cause allergic skin reaction.

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
None known.

Specific hazards arising from the chemical
May cause sensitization by skin contact.

Explosion Data
Sensitivity to Mechanical Impact none
Sensitivity to Static Discharge none

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid contact with skin, eyes or clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions
Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains.

Methods and materials for containment and cleaning up
Methods for Containment Prevent further leakage or spillage if safe to do so.
Methods for cleaning up

Use personal protective equipment. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Avoid exposure during pregnancy.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS/PERSOAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL</td>
<td>TWA: 1 mg/m³</td>
<td>TWA: 2 mg/m³</td>
<td>IDLH: 50 mg/m³</td>
<td>10 mg/m³ TWA</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>TWA: 1 mg/m³</td>
<td>TWA: 2 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exposure controls

Engineering Measures

Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection

If splashes are likely to occur, wear: Safety glasses with side-shields.

Skin and body protection

Wear protective gloves/clothing.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations

When using do not eat, drink or smoke. Take off contaminated clothing and wash before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear, pale yellow</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>10.3</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>&gt; 201 °F / &gt; 94 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>Not available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>completely soluble</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor</td>
<td>Physical State @20°C</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>&gt; 212 °F / &gt; 100 °C</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive Property Details</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Density</td>
<td>Not available</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
Stable under recommended storage conditions

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to Avoid
Excessive heat. Freezing.

Incompatible Materials

Hazardous Decomposition Products
None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Acute toxicity
Inhalation Non-irritating during normal use.
Eyes Irritating to eyes. May cause redness and tearing.
Skin May cause itching. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion Ingestion may cause stomach discomfort. May cause adverse kidney effects.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>LC50 (lethal concentration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL</td>
<td>= 12565 mg/kg (Rat)</td>
<td>= 11890 mg/kg (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>= 298 mg/kg (Rat)</td>
<td>= 74800 mg/kg (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>POTASSIUM CARBONATE</td>
<td>= 1870 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Information on toxicological effects
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes.
Corrosivity No information available.
Sensitization May cause sensitization by skin contact.
Mutagenic Effects Contains a known or suspected mutagen.
Reproductive Toxicity
Product is or contains a chemical which is a known or suspected reproductive hazard.

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.
Contains a known or suspected carcinogen.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROQUINONE</td>
<td>A3</td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ACGIH: (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
A4 - Not Classifiable as a Human Carcinogen

IARC: (International Agency for Research on Cancer)
Group 1: Carcinogenic to humans
Group 2A: Probably carcinogenic to humans
Group 2B: Possibly carcinogenic to humans
Group 3: Not classifiable as to its carcinogenicity to humans

NTP: (National Toxicity Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA: (Occupational Safety & Health Administration)
X - Present

STOT - single exposure
No information available.

STOT - repeated exposure
Diethylene glycol: Can induce kidney, liver, central nervous system and gastrointestinal effects if swallowed.

Target Organ Effects
Skin, Blood, Eyes, Reproductive system, Kidney.

Aspiration hazard
No information available.

Numerical measures of toxicity - Product Information
The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral) 5491 mg/kg
ATEmix (dermal) 37383 mg/kg

ATE: Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic life with long lasting effects

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae toxicity</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL</td>
<td></td>
<td>Pimephales promelas: 75200 mg/L at 96 h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td></td>
<td>Pimephales promelas: 0.1 - 0.18 mg/L at 96 h</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pimephales promelas: 0.044 mg/L at 96 h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DTPA PENTASODIUM SALT</td>
<td></td>
<td>Pimephales promelas: 300 mg/L at 96 h</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability
No information available.

Bioaccumulation

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Octanol Water Partition Coefficient (log pow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL</td>
<td>-1.98</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>0.5</td>
</tr>
<tr>
<td>DTPA PENTASODIUM SALT</td>
<td>-3.05</td>
</tr>
</tbody>
</table>

Mobility

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Page 6 / 9
No information available.

**Other adverse effects**

No information available

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods**

Dispose of in accordance with local regulations.

**Contaminated packaging**

Do not re-use empty containers.

### 14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
<th>Regulated Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>Not regulated</td>
<td></td>
</tr>
<tr>
<td>TDG</td>
<td>Not regulated</td>
<td></td>
</tr>
<tr>
<td>MEX</td>
<td>Not regulated</td>
<td></td>
</tr>
<tr>
<td>ICAO</td>
<td>Not regulated</td>
<td></td>
</tr>
<tr>
<td>IATA</td>
<td>Not regulated</td>
<td></td>
</tr>
<tr>
<td>IMDG</td>
<td>Not regulated</td>
<td></td>
</tr>
<tr>
<td>ADR/RID</td>
<td>Not regulated</td>
<td></td>
</tr>
<tr>
<td>ADN</td>
<td>Not regulated</td>
<td></td>
</tr>
</tbody>
</table>

### 15. REGULATORY INFORMATION

**International Inventories**

- **TSCA**: Yes
- **DSL/NDSL**: Yes
- **PICCS**: Yes
- **EINECS/ELINCS**: Yes
- **ENCS**: No
- **IECSC**: Yes
- **KECL**: Yes
- **AICS**: Yes

*Yes - All component(s) of this product are included or are exempt from listing on the inventory.*

*No - Indicates the component(s) of this product are either not listed or have not been determined to be listed on the inventory.*

_TSCA - United States Toxic Substances Control Act Section 8(b) Inventory_  
_DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List_
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

TSCA Sections 4, 5 and 12(b)
This product does not contain any chemicals regulated by TSCA Sections 4, 5 or 12(b).

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>SARA 313 - Threshold Values %</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROQUINONE</td>
<td>123-31-9</td>
<td>1.0</td>
<td>1-5%</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories
Acute Health Hazard: Yes
Chronic Health Hazard: Yes
Fire Hazard: no
Sudden Release of Pressure Hazard: no
Reactive Hazard: no

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROQUINONE</td>
<td>100</td>
<td>100 lb</td>
<td>RQ 100 lb final RQ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RQ 45.4 kg final RQ</td>
</tr>
</tbody>
</table>

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

International Regulations

Canada - NDSL
This product does not contain any NDSL chemicals.

Mexico - Grade
No information available

Mexico - Carcinogen Status and Exposure Limits
Other Regulations
No information available

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and chemical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2*</td>
<td>1</td>
<td>0</td>
<td>C</td>
</tr>
</tbody>
</table>

*Indicates a chronic health hazard.

Revision Date 30-Jun-2015
Revision Note No information available
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