# Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 01/31/2019 Version: 1.0

# **SECTION 1: Identification**

1.1. Identification

Product form

Product name

#### : Mixture : Natura v2 Black

: Inkiet printing

AstroNova P/N: 30020034, 30020039, 30020043, 14808504

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture Recommended use Restrictions on use

- : Ink and Toners
- : No additional information available

Memjet

#### 1.3. Supplier

Memjet Ltd. 61-62 Fitzwilliam Lane Dublin, Ireland T +353 1 678 0420 - F +1-858-798-3044 msds@memjet.com-www.memjet.com

#### 1.4. Emergency telephone number

Emergency number

: For Hazardous Materials Incidents (spill, leak, fire, exposure, or accident) call: CHEMTREC: U.S. 1-800-424-9300 International: +1-703-527-3887 CHEMTREC (24 HOURS)

10918 Technology Place

T 858 673 3300

www.memjet.com

San Diego, CA 92127 - USA

## SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

#### **GHS US classification**

Skin Sens, 1 H317 May cause an allergic skin reaction STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure

Full text of hazard classes and H-statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

### **GHS US labeling**

Hazard pictograms (GHS US)

Signal word (GHS US) Hazard s

Precauti

| ( /                         | - J   |
|-----------------------------|---|
| statements (GHS US)         | <ul> <li>H317 - May cause an allergic skin reaction</li> <li>H373 - May cause damage to organs through prolonged or repeated exposure</li> </ul>  |
| tionary statements (GHS US) | <ul> <li>P260 - Do not breathe mist, spray.</li> <li>P272 - Contaminated work clothing must not be allowed out of the workplace</li> <li>P280 - Wear protective gloves.</li> <li>P302+P352 - If on skin: Wash with plenty of water</li> <li>P314 - Get medical advice/attention if you feel unwell.</li> <li>P321 - Specific treatment (see supplemental first aid instruction on this label)</li> <li>P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.</li> <li>P363 - Wash contaminated clothing before reuse.</li> </ul> |

#### P501 - Dispose in a safe manner in accordance with local/national regulations

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

2% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)

2% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

: Warning



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**SECTION 3: Composition/Information on ingredients** 

### 3.1. Substances

Not applicable

## 3.2. Mixtures

| Name                         | Product identifier     | %     | GHS US classification                            |
|------------------------------|------------------------|-------|--|
| Water                        | (CAS-No.) 7732-18-5    | <75   | Not classified                                   |
| Ethylene glycol              | (CAS-No.) 107-21-1     | <9    | Acute Tox. 4 (Oral), H302<br>STOT RE 2, H373     |
| Ethoxylated acetylenic diols | (CAS-No.) 1606-85-5    | 1 - 5 | Acute Tox. 4 (Oral), H302<br>Eye Irrit. 2A, H319 |
| Sulfonated azo dye           | (CAS-No.) 1422649-48-6 | 1 - 5 | Skin Sens. 1, H317                               |
| Glycerol                     | (CAS-No.) 56-81-5      | 2     | Not classified                                   |

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

### **SECTION 4: First-aid measures**

## 4.1. Description of first aid measures

| First-aid measures after inhalation             | : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  |
|---|---|
| First-aid measures after skin contact           | Remove affected clothing and wash all exposed skin area with mild soap and water, followed<br>by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention. Wash<br>contaminated clothing before reuse. |
| First-aid measures after eye contact            | : Not expected to be an irritant to eyes. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  |
| First-aid measures after ingestion              | : Not expected to present a significant ingestion hazard under anticipated conditions of normal use. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.   |
| 4.2. Most important symptoms and                | effects (acute and delayed)   |
| Expected Symptoms/Effects, Acute and<br>Delayed | : May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.   |
| Symptoms/effects after skin contact             | : May cause an allergic skin reaction.  |

## 4.3. Immediate medical attention and special treatment, if necessary

All treatments should be based on observed signs and symptoms of distress in the patient.

# **SECTION 5: Fire-fighting measures**

| 5.1. Suitable (and unsuitable) ext  | tinguishing media  |
|-------------------------------------|--|
| Suitable extinguishing media        | : Dry powder. Carbon dioxide. Sand. Water spray or fog. Foam.  |
| Unsuitable extinguishing media      | : None known.  |
| 5.2. Specific hazards arising from  | n the chemical   |
| Reactivity                          | : No dangerous reactions known.  |
| 5.3. Special protective equipment   | t and precautions for fire-fighters  |
| Firefighting instructions           | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. |
| Protection during firefighting      | : Do not enter fire area without proper protective equipment, including respiratory protection.            |
| SECTION 6: Accidental release m     | easures  |
| 6.1. Personal precautions, protect  | ctive equipment and emergency procedures   |
| 6.1.1. For non-emergency personnel  |  |
| Protective equipment                | : nitrile rubber gloves.   |
| Emergency procedures                | : Evacuate unnecessary personnel.  |
| 6.1.2. For emergency responders     |  |
| Protective equipment                | : Equip cleanup crew with proper protection. nitrile rubber gloves.  |
| Emergency procedures                | : Stop leak, if possible without risk. Take up small spills with dry chemical absorbent.                   |
| 6.2. Environmental precautions      |  |
| No additional information available |  |

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Methods for cleaning up

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# 6.3. Methods and material for containment and cleaning up

: Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.

# 6.4. Reference to other sections

Section 7: safe handling. Section 8: personal protective equipment. Section 13: disposal information.

# **SECTION 7: Handling and storage**

| Precautions for safe handling        | Wash hands and other exposed areas with mild soap and water before eating, drinking or<br>smoking and when leaving work. Avoid breathing mist, spray. |
|--------------------------------------|---|
| Hygiene measures                     | : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated<br>clothing before reuse.                                  |
| 7.2. Conditions for safe storage, in | cluding any incompatibilities   |
| Storage conditions                   | : Keep only in the original container.  |

| Storage conditions     | : | Keep only in the original container. |
|------------------------|---|--------------------------------------|
| Incompatible products  | : | None known.                          |
| Incompatible materials | : | None known.                          |

# **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

| Glycerol (56-81-5)           |                            |   |  |  |
|------------------------------|----------------------------|---|--|--|
| ACGIH                        | ACGIH TWA (mg/m³)          | 10 mg/m³  |  |  |
| OSHA                         | OSHA PEL (TWA) (mg/m³)     | 15 mg/m³ (total)<br>5 mg/m³ (respirable fraction) |  |  |
| Ethoxylated acetylenic diols | (1606-85-5)                |   |  |  |
| Not applicable               |                            |   |  |  |
| Water (7732-18-5)            |                            |   |  |  |
| Not applicable               |                            |   |  |  |
| Sulfonated azo dye (1422649  | -48-6)                     |   |  |  |
| Not applicable               | Not applicable             |   |  |  |
| Ethylene glycol (107-21-1)   | Ethylene glycol (107-21-1) |   |  |  |
| ACGIH                        | Local name                 | Ethylene glycol                                   |  |  |
| ACGIH                        | ACGIH TWA (ppm)            | 25 ppm  |  |  |
| ACGIH                        | ACGIH STEL (mg/m³)         | 10 mg/m³  |  |  |
| ACGIH                        | ACGIH STEL (ppm)           | 50 ppm  |  |  |
| ACGIH                        | ACGIH Ceiling (mg/m³)      | 100 mg/m³   |  |  |
| ACGIH                        | ACGIH Ceiling (ppm)        | 39.4 ppm  |  |  |
| ACGIH                        | Remark (ACGIH)             | Kidney dam; URT & eye irr                         |  |  |

# 8.2. Appropriate engineering controls

Appropriate engineering controls

ing controls : Avoid creating mist or spray. Avoid splashing.

# 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Wear protective gloves. nitrile rubber gloves.

#### Eye protection:

Eye protection should only be necessary where liquid could be splashed or sprayed.

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# Other information:

Do not eat, drink or smoke during use.

# SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |   | nenneur propertiee        |
|---|---|---------------------------|
| Physical state                              | : | Liquid                    |
| Appearance                                  | : | Black. liquid.            |
| Color                                       | : | Black                     |
| Odor  | : | odorless                  |
| Odor threshold                              | : | No data available         |
| рН  | : | 7.5                       |
| Melting point                               | : | No data available         |
| Freezing point                              | : | No data available         |
| Boiling point                               | : | ≈ 100 °C                  |
| Flash point                                 | : | No data available         |
| Relative evaporation rate (butyl acetate=1) | : | No data available         |
| Flammability (solid, gas)                   | : | Non flammable.            |
| Vapor pressure                              | : | No data available         |
| Relative vapor density at 20 °C             | : | No data available         |
| Relative density                            | : | No data available         |
| Solubility                                  | : | No data available         |
| Log Pow                                     | : | No data available         |
| Auto-ignition temperature                   | : | No data available         |
| Decomposition temperature                   | : | No data available         |
| Viscosity, kinematic                        | : | No data available         |
| Viscosity, dynamic                          | : | No data available         |
| Explosive limits                            | : | No data available         |
| Explosive properties                        | : | Product is not explosive. |
| Oxidizing properties                        | : | No oxidizing properties.  |
|   |   |                           |

### 9.2. Other information

No additional information available

# **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

No dangerous reactions known.

### 10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

Carbon oxides (CO, CO2).

# **SECTION 11: Toxicological information**

# 11.1. Information on toxicological effects

Acute toxicity

: Not classified

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| Glycerol (56-81-5)                               |  |  |
|--|--|--|
| 5570 mg/kg                                       |  |  |
| 5570 mg/kg body weight                           |  |  |
| Ethoxylated acetylenic diols (1606-85-5)         |  |  |
| 1230 mg/kg (Based on similar product)            |  |  |
| 1230 mg/kg body weight                           |  |  |
| Sulfonated azo dye (1422649-48-6)                |  |  |
| > 2000 mg/kg body weight No mortality. OECD 423. |  |  |
| > 2000 mg/kg No mortality. OECD 402.             |  |  |
| 5.1 mg/l/4h                                      |  |  |
|  |  |  |
| > 3500 mg/kg mouse                               |  |  |
| > 2.5 mg/l/4h                                    |  |  |
| 500 mg/kg body weight                            |  |  |
| : Not classified                                 |  |  |
| (Not irritating to skin)                         |  |  |
| : Not classified                                 |  |  |
| (Not irritating to eyes)                         |  |  |
| : May cause an allergic skin reaction.           |  |  |
| : Not classified                                 |  |  |
| : Not classified                                 |  |  |
| (No carcinogenic effect)                         |  |  |
|  |  |  |

| Ethoxylated acetylenic diols (1606-85-5)         |  |  |
|--|--|--|
| IARC group                                       | Not listed in carcinogenicity class                                  |  |
| Reproductive toxicity                            | : Not classified   |  |
|  | (Based on available data, the classification criteria are not met)   |  |
| Specific target organ toxicity – single exposure | : Not classified   |  |
|  | (Based on available data, the classification criteria are not met)   |  |
| Specific target organ toxicity – repeated        | : May cause damage to organs through prolonged or repeated exposure. |  |

exposure

| Ethylene glycol (107-21-1)                      |  |  |  |
|---|--|--|--|
| LOAEL (oral,rat,90 days)                        | 1000 mg/kg bodyweight/day  |  |  |
| NOAEL (oral,rat,90 days)                        | 150 mg/kg bodyweight/day kidney  |  |  |
| Aspiration hazard                               | : Not classified<br>(Based on available data, the classification criteria are not met)                       |  |  |
| Likely routes of exposure                       | : Dermal.  |  |  |
| Expected Symptoms/Effects, Acute and<br>Delayed | : May cause an allergic skin reaction. May cause damage to organs through prolonged or<br>repeated exposure. |  |  |
| Symptoms/effects after skin contact             | : May cause an allergic skin reaction.   |  |  |

# **SECTION 12: Ecological information**

12.1. Toxicity

| Glycerol (56-81-5)       |  |  |
|--------------------------|--|--|
| LC50 fish 1 68 - 72 mg/l |  |  |
|                          |  |  |

| Ethylene glycol (107-21-1)                 |                           |                              |     |
|--|---------------------------|------------------------------|-----|
| LC50 fish 1 72860 mg/l Pimephales promelas |                           |                              |     |
| EC50 Daphnia 1                             | > 100 mg/l                |                              |     |
| NOEC chronic fish                          | 15380 mg/l Pimephales pro | omelas                       |     |
| NOEC chronic crustacea                     | 8590 mg/l Ceriodaphnia sp |                              |     |
| 01/31/2019                                 | EN (English US)           | SDS ID: Memiet Niagara Black | 5/8 |

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## 12.2. Persistence and degradability

| Natura v2 Black                 |                        |  |
|---------------------------------|------------------------|--|
| Biodegradation                  | 5.9 % 28 days          |  |
| Glycerol (56-81-5)              |                        |  |
| Persistence and degradability   | Readily biodegradable. |  |
|                                 |                        |  |
| Ethylene glycol (107-21-1)      |                        |  |
| Persistence and degradability   | Readily biodegradable. |  |
| 12.3. Bioaccumulative potential |                        |  |
| Natura v2 Black                 |                        |  |
| Bioaccumulative potential       | Not established.       |  |

| Ethylene glycol (107-21-1) |                                |  |
|----------------------------|--------------------------------|--|
| Log Pow                    | - 1.36                         |  |
| Bioaccumulative potential  | Not expected to bioaccumulate. |  |

## 12.4. Mobility in soil

No additional information available

| 12.5.      | Other adverse effects |                                   |
|------------|-----------------------|-----------------------------------|
| Effect on  | the ozone layer :     | None known                        |
| Effect on  | global warming        | None known                        |
| Other info | ormation              | Avoid release to the environment. |
| 0-0-       |                       |                                   |

# **SECTION 13: Disposal considerations**

# 13.1. Disposal methods

| Waste disposal recommendations | : | Dispose in a safe manner in accordance with local/national regulations. |
|--------------------------------|---|---|
| Ecology - waste materials      | : | Avoid release to the environment.                                       |

### **SECTION 14: Transport information**

#### Department of Transportation (DOT)

In accordance with DOT

Not applicable

#### Transportation of Dangerous Goods

Not applicable

#### Transport by sea

Not regulated.

#### Air transport

Not regulated.

# **SECTION 15: Regulatory information**

#### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

| Sulfonated azo dye | CAS-No. 1422649-48-6 | 1 - 5% |
|--------------------|----------------------|--------|
|                    |                      |        |

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

| Ethylene glycol | CAS-No. 107-21-1 | 8% |
|-----------------|------------------|----|
|                 |                  |    |

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| Ethylene glycol (107-21-1) |         |  |
|----------------------------|---------|--|
| CERCLA RQ                  | 5000 lb |  |

### 15.2. International regulations

#### CANADA

#### Glycerol (56-81-5)

Listed on the Canadian DSL (Domestic Substances List)

#### Ethoxylated acetylenic diols (1606-85-5)

Listed on the Canadian DSL (Domestic Substances List)

#### Sulfonated azo dye (1422649-48-6)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

#### Ethylene glycol (107-21-1)

Listed on the Canadian DSL (Domestic Substances List)

#### **EU-Regulations**

Glycerol (56-81-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### Ethylene glycol (107-21-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations

#### Glycerol (56-81-5)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on KECI (Korean Existing Chemicals Inventory)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on Taiwan National Chemical Inventory

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on NZIoC (New Zealand Inventory of Chemicals)

#### Ethylene glycol (107-21-1)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on Taiwan National Chemical Inventory

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on KECI (Korean Existing Chemicals Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

#### 15.3. US State regulations

**WARNING** This product can expose you to ethylene glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

| Ethylene glycol  | (107-21-1)  |   |   |                                     |  |
|--|---|---|---|-------------------------------------|--|
| U.S<br>California -<br>Proposition 65<br>- Carcinogens<br>List | U.S California -<br>Proposition 65 -<br>Developmental<br>Toxicity | U.S California -<br>Proposition 65 -<br>Reproductive<br>Toxicity - Female | U.S California -<br>Proposition 65 -<br>Reproductive Toxicity<br>- Male | No significant risk level<br>(NSRL) | Maximum allowable<br>dose level (MADL) |
| No   | Yes   | No  | No  |                                     | 8700 μg/day (oral)                     |
| U.S California<br>Other information                            | - Proposition 65 -<br>n   | Ingestion   |   |                                     |  |
| Glycerol (56-81-   | Glycerol (56-81-5)  |   |   |                                     |  |

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

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#### Ethylene glycol (107-21-1)

- U.S. Delaware Pollutant Discharge Requirements Reportable Quantities
- U.S. Idaho Non-Carcinogenic Toxic Air Pollutants Acceptable Ambient Concentrations
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. New York Reporting of Releases Part 597 List of Hazardous Substances
- U.S. Pennsylvania RTK (Right to Know) List

#### **SECTION 16: Other information**

Data sources

: ACGIH (American Conference of Government Industrial Hygienists).

Chemical Inspection & Regulation Service; accessed at: <u>http://www.cirs-reach.com/Inventory/Global Chemical Inventories.html</u>.

Component Supplier SDSs.

European Chemicals Agency (ECHA) Registered Substances list. European Standards: Personal Protective Equipment; accessed at: <u>http://ec.europa.eu/enterprise/policies/european-standards/harmonised-</u>standards/personal-protective-equipment/index en.htm.

Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. Manufacturer Information.

National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition.

#### Full text of H-phrases:

| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4                                  |  |
|---------------------|---|--|
| Eye Irrit. 2A       | Serious eye damage/eye irritation Category 2A                     |  |
| Skin Sens. 1        | Skin sensitization, Category 1                                    |  |
| STOT RE 2           | Specific target organ toxicity (repeated exposure) Category 2     |  |
| H302                | Harmful if swallowed  |  |
| H317                | May cause an allergic skin reaction                               |  |
| H319                | Causes serious eye irritation                                     |  |
| H373                | May cause damage to organs through prolonged or repeated exposure |  |

#### Abbreviations and acronyms:

|                    | ATE: Acute To   | xicity Estimate  |
|--------------------|---|--|
|                    | CAS (Chemical Abstracts Service) number   |  |
|                    | CLP: Classification, Labelling, Packaging.  |  |
|                    | EC50: Environmental Concentration associated with a response by 50% of the test population. |  |
|                    | GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).              |  |
|                    | LD50: Lethal D  | ose for 50% of the test population   |
|                    | NOEC: No Ob   | servable Effect Concentration  |
| NFPA health hazard |   | : 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials. |
| NFPA fire hazard   |   | : 1 - Materials that must be preheated before ignition can occur.  |
| NFPA reactivity    |   | : 0 - Material that in themselves are normally stable, even under fire conditions.                                     |

SDS Prepared by: The Redstone Group 6077 Frantz Rd. Suite 206 Dublin, OH USA 43017 T 614-923-7472 www.redstonegrp.com

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product