

#### **HYVAR® X-L HERBICIDE**

Version 1.0 / USA 102000030321

#### Revision Date: 06/18/2015 Print Date: 06/24/2015

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product identifier** 

Trade name HYVAR® X-L HERBICIDE

Product code (UVP) 84078778

**SDS Number** 102000030321

**EPA Registration No.** 432-1548

Relevant identified uses of the substance or mixture and uses advised against

**Use** Herbicide

**Restrictions on use**See product label for restrictions.

Information on supplier

Supplier Bayer CropScience

2 T.W. Alexander Drive

Research Triangle PK, NC 27709

**United States** 

Responsible Department Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days) 1-800-334-7577

Product Information Telephone Number

1-866-99BAYER (1-866-992-2937)

#### **SECTION 2: HAZARDS IDENTIFICATION**

Classification in accordance with regulation HCS 29CFR §1910.1200

Acute toxicity (Oral): Category 4
Eye irritation: Category 2B
Skin irritation: Category 2
Flammable liquids: Category 3

Specific target organ toxicity - repeated exposure: Category 1

Carcinogenicity: Category 2







Signal word: Danger Hazard statements

Flammable liquid and vapour.



#### **HYVAR® X-L HERBICIDE**

Version 1.0 / USA 102000030321

Revision Date: 06/18/2015 Print Date: 06/24/2015

Causes damage to organs (liver) through prolonged or repeated exposure.

Harmful if swallowed.

Causes skin irritation.

Causes eye irritation.

Suspected of causing cancer.

#### **Precautionary statements**

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

Keep container tightly closed.

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

IF exposed or concerned: Get medical advice/ attention.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Specific treatment (see supplemental first aid instructions on this label).

Get medical advice/attention if you feel unwell.

IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.

Rinse mouth.

If skin irritation occurs: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse.

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.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local regulation.

#### Other hazards

No other hazards known.

#### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Component Name	CAS-No.	Concentration % by weight
Bromacil	314-40-9	21.4
Ethanediol	107-21-1	32.1
Ethanol	64-17-5	6.1
Methanol	67-56-1	3.9



#### **HYVAR® X-L HERBICIDE**

Version 1.0 / USA Revision Date: 06/18/2015 102000030321 Print Date: 06/24/2015

#### **SECTION 4: FIRST AID MEASURES**

Description of first aid measures

General advice When possible, have the product container or label with you when

calling a poison control center or doctor or going for treatment.

**Inhalation** Move to fresh air. If person is not breathing, call 911 or an ambulance,

then give artificial respiration, preferably mouth-to-mouth if possible. Call

a physician or poison control center immediately.

Skin contact Take off contaminated clothing and shoes immediately. Wash off

immediately with plenty of water for at least 15 minutes. Call a physician

or poison control center immediately.

**Eye contact** Hold eye open and rinse slowly and gently with water for 15-20 minutes.

Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center

immediately.

**Ingestion** Call a physician or poison control center immediately. Rinse out mouth

and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim

unattended.

Most important symptoms and effects, both acute and delayed

**Symptoms** To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

**Treatment** Appropriate supportive and symptomatic treatment as indicated by the

patient's condition is recommended. There is no specific antidote.

#### **SECTION 5: FIREFIGHTING MEASURES**

**Extinguishing media** 

**Suitable** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable** High volume water jet

Special hazards arising from the substance or

mixture

Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective equipment for fire-fighters

Firefighters should wear NIOSH approved self-contained breathing

apparatus and full protective clothing.

**Further information** Evacuate personnel to safe areas. Remove product from areas of fire,

or otherwise cool containers with water in order to avoid pressure being built up due to heat. Do not allow run-off from fire fighting to enter drains

or water courses.



#### **HYVAR® X-L HERBICIDE**

Version 1.0 / USA Revision Date: 06/18/2015 102000030321 Print Date: 06/24/2015

Flash point 44 °C

Autoignition temperature410 °C / 770 °FLower explosion limitno data availableUpper explosion limitno data availableExplosivitynot applicable

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Precautions Evacuate and isolate spill area. Remove all sources of ignition. Use

personal protective equipment.

Methods and materials for containment and cleaning up

Methods for cleaning up Dike area to prevent runoff. Soak up with inert absorbent material (e.g.

sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Decontaminate tools and equipment following cleanup.

Contaminated soil may have to be removed and disposed.

Additional advice Do not allow to enter soil, waterways or waste water canal.

**Reference to other sections** Information regarding safe handling, see section 7.

Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13.

#### **SECTION 7: HANDLING AND STORAGE**

Precautions for safe handling

Advice on safe handling Maintain exposure levels below the exposure limit through the use of

general and local exhaust ventilation.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition. Vapours may form explosive mixture with air. Take measures to prevent the build up of

electrostatic charge.

**Hygiene measures** Wash hands thoroughly with soap and water after handling and before

eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove contaminated clothing immediately and dispose of safely. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities



### **HYVAR® X-L HERBICIDE**

Version 1.0 / USA 102000030321

Revision Date: 06/18/2015 Print Date: 06/24/2015

### Requirements for storage areas and containers

Store in original container and out of the reach of children, preferably in a locked storage area. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed.

#### **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Bromacil	314-40-9	10 mg/m3 (TWA)	02 2012	ACGIH
Bromacil	314-40-9	10 mg/m3/1 ppm (REL)	2010	NIOSH
Bromacil	314-40-9	10 mg/m3/1 ppm (TWA)	1989	OSHA Z1A
Bromacil	314-40-9	10 mg/m3/1 ppm (TWA)	06 2008	TN OEL
Bromacil	314-40-9	10ug/m3 (AN ESL)	07 2011	TX ESL
Bromacil	314-40-9	1ppb (AN ESL)	07 2011	TX ESL
Bromacil	314-40-9	100ug/m3 (ST ESL)	07 2011	TX ESL
Bromacil	314-40-9	10ppb (ST ESL)	07 2011	TX ESL
Bromacil	314-40-9	10 mg/m3/1 ppm (TWA PEL)	08 2010	US CA OEL
Ethanediol (Aerosol.)	107-21-1	100 mg/m3 (CEILING)	02 2012	ACGIH
Ethanediol (Inhalable fraction and vapor.)	107-21-1	10 mg/m3 (TWA)	02 2014	ACGIH NIC
Ethanediol	107-21-1	125 mg/m3/50 ppm (CEILING)	1989	OSHA Z1A
Ethanediol	107-21-1	125 mg/m3/50 ppm (CEILING)	06 2008	TN OEL
Ethanediol (Vapor.)	107-21-1	260ug/m3 (ST ESL)	02 2013	TX ESL
Ethanediol (Vapor.)	107-21-1	100ppb (ST ESL)	02 2013	TX ESL
Ethanediol	107-21-1	10ppb (AN ESL)	02 2013	TX ESL
Ethanediol (Vapor.)	107-21-1	26ug/m3 (AN ESL)	02 2013	TX ESL
Ethanediol	107-21-1	100ppb (ST ESL)	02 2013	TX ESL



### **HYVAR® X-L HERBICIDE**

Version 1.0 / USA 102000030321

Revision Date: 06/18/2015 Print Date: 06/24/2015

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Ethanediol (Vapor.)	107-21-1	10ppb (AN ESL)	02 2013	TX ESL
Ethanediol	107-21-1	26ug/m3 (AN ESL)	02 2013	TX ESL
Ethanediol	107-21-1	260ug/m3 (ST ESL)	07 2011	TX ESL
Ethanediol (Vapor.)	107-21-1	100 mg/m3/40 ppm (CEILING)	08 2010	US CA OEL
Ethanediol (Vapor.)	107-21-1	10 ppm (TWA)		OES BCS*
Ethanediol (Aerosol.)	107-21-1	10 mg/m3 (TWA)		OES BCS*
Ethanol	64-17-5	1,000 ppm (STEL)	02 2012	ACGIH
Ethanol	64-17-5	1,900 mg/m3/1,000 ppm (REL)	2010	NIOSH
Ethanol	64-17-5	1,900 mg/m3/1,000 ppm (PEL)	02 2006	OSHA Z1
Ethanol	64-17-5	1,900 mg/m3/1,000 ppm (TWA)	1989	OSHA Z1A
Ethanol	64-17-5	1,900 mg/m3/1,000 ppm (TWA)	06 2008	TN OEL
Ethanol	64-17-5	1010ppb (ST ESL)	02 2013	TX ESL
Ethanol	64-17-5	1880ug/m3 (AN ESL)	07 2011	TX ESL
Ethanol	64-17-5	1000ppb (AN ESL)	07 2011	TX ESL
Ethanol	64-17-5	1910ug/m3 (ST ESL)	02 2013	TX ESL
Ethanol	64-17-5	1,900 mg/m3/1,000 ppm (TWA PEL)	08 2010	US CA OEL
Ethanol	64-17-5	500 ppm (TWA)		OES BCS*
Methanol	67-56-1	200 ppm (TWA)	02 2012	ACGIH
Methanol	67-56-1	250 ppm (STEL)	02 2012	ACGIH
Methanol	67-56-1	260 mg/m3/200 ppm (REL)	2010	NIOSH
Methanol	67-56-1	325 mg/m3/250 ppm (STEL)	2010	NIOSH
Methanol	67-56-1	260 mg/m3/200 ppm (PEL)	02 2006	OSHA Z1
Methanol	67-56-1	325 mg/m3/250 ppm (STEL)	1989	OSHA Z1A
Methanol	67-56-1	260 mg/m3/200 ppm (TWA)	1989	OSHA Z1A



#### **HYVAR® X-L HERBICIDE**

Version 1.0 / USA Revision Date: 06/18/2015 102000030321 Print Date: 06/24/2015

Methanol	67-56-1	325 mg/m3/250 ppm (STEL)	06 2008	TN OEL
Methanol	67-56-1	260 mg/m3/200 ppm (TWA)	06 2008	TN OEL
Methanol	67-56-1	200ppb (AN ESL)	07 2011	TX ESL
Methanol	67-56-1	2000ppb (ST ESL)	07 2011	TX ESL
Methanol	67-56-1	262ug/m3 (AN ESL)	07 2011	TX ESL
Methanol	67-56-1	2620ug/m3 (ST ESL)	07 2011	TX ESL
Methanol	67-56-1	260 mg/m3/200 ppm (TWA PEL)	08 2010	US CA OEL
Methanol	67-56-1	1,000 ppm (CEILING)	08 2010	US CA OEL
Methanol	67-56-1	325 mg/m3/250 ppm (STEL)	08 2010	US CA OEL
Methanol	67-56-1	200 ppm (TWA)		OES BCS*

<sup>\*</sup>OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

#### **Exposure controls**

#### Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Respiratory protection** When respirators are required, select NIOSH approved equipment

based on actual or potential airborne concentrations and in

accordance with the appropriate regulatory standards and/or industry

recommendations.

Hand protection Chemical resistant nitrile rubber gloves

**Eye protection** Safety glasses with side-shields

or

Goggles

**Skin and body protection** Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures Follow manufacturer's instructions for cleaning/maintaining PPE. If

no such instructions for washables, use detergent and warm/tepid

water.

Keep and wash PPE separately from other laundry.



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Version 1.0 / USA 102000030321

#### Revision Date: 06/18/2015 Print Date: 06/24/2015

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance light brown to yellow

Physical State liquid
Odor alcoholic

Odour Threshold no data available

**pH** 11.2 - 12.2

Vapor Pressure no data available
Vapor Density (Air = 1) no data available

**Density** 1.12 g/cm<sup>3</sup>

Evapouration rate no data available

Boiling Point no data available

Melting / Freezing Point no data available

Water solubility soluble

Minimum Ignition Energynot applicableDecompositionno data availabletemperature

Partition coefficient: n-

octanol/water

not applicable

**Viscosity** 

no data available

Flash point 44 °C

Autoignition temperature410 °C / 770 °FLower explosion limitno data availableUpper explosion limitno data availableExplosivitynot applicable

#### **SECTION 10: STABILITY AND REACTIVITY**

Reactivity

Thermal decomposition no data available

Chemical stability Stable under normal conditions.

Possibility of hazardous

reactions

Vapours may form explosive mixture with air.



#### **HYVAR® X-L HERBICIDE**

Version 1.0 / USA Revision Date: 06/18/2015 102000030321 Print Date: 06/24/2015

**Conditions to avoid** Heat, flames and sparks.

**Incompatible materials** Acids, Amines

**Hazardous decomposition** 

products

Thermal decomposition can lead to release of:

Carbon oxides

Methanol Ethanol

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

**Exposure routes** Ingestion, Skin Absorption, Eye contact

**Immediate Effects** 

**Eye** Causes eye irritation.

**Skin** May be harmful if absorbed through skin.

**Ingestion** Harmful if swallowed.

#### Information on toxicological effects

Acute oral toxicity LD50 (female rat) 1,414 mg/kg

LD50 (male rat) 3,927 mg/kg

Acute inhalation toxicity LC50 (rat) > 5.0 mg/l

Exposure time: 4 h

Acute dermal toxicity LD50 (rat) > 5,000 mg/kg

Skin irritationModerate skin irritation. (rabbit)Eye irritationModerate eye irritation. (rabbit)SensitisationNon-sensitizing. (guinea pig)

#### Assessment repeated dose toxicity

Methanol did not cause specific target organ toxicity in experimental animal studies. Ethanol did not cause specific target organ toxicity in experimental animal studies.

#### Assessment mutagenicity

Methanol was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Ethanol was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

#### Assessment carcinogenicity

Methanol was not carcinogenic in lifetime feeding studies in rats and mice. Sufficient evidence is available for carcinogenicity of alcoholic beverages in humans.

#### **ACGIH**

Bromacil	314-40-9	Group A3
Ethanediol	107-21-1	Group A4
Ethanol	64-17-5	Group A3



#### **HYVAR® X-L HERBICIDE**

Version 1.0 / USA Revision Date: 06/18/2015 102000030321 Print Date: 06/24/2015

**NTP** 

None.

**OSHA** 

None.

#### Assessment toxicity to reproduction

Methanol did not cause reproductive toxicity in a two-generation study in rats.

Ethanol caused reproduction toxicity in generation studies in rats only at dose levels also toxic to the parent animals.

#### Assessment developmental toxicity

Methanol caused developmental toxicity only at dose levels toxic to the dams. Ethanol caused developmental toxicity only at dose levels toxic to the dams.

#### **Further information**

Only acute toxicity studies have been performed on the formulated product.

The non-acute information pertains to the active ingredient(s).

The information is derived from the properties of the individual components.

#### SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish LC50 (Lepomis macrochirus (Bluegill sunfish)) 127 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient bromacil.

LC50 (Oncorhynchus mykiss (rainbow trout)) 36 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient bromacil.

**Toxicity to aquatic** 

EC50 (Daphnia magna (Water flea)) 119 mg/l

**invertebrates** Exposure time: 48 h

The value mentioned relates to the active ingredient bromacil.

Exposure time: 72 h

The value mentioned relates to the active ingredient bromacil.

**Biodegradability** Methanol:

rapidly biodegradable

Ethanol:

rapidly biodegradable

**Koc** Methanol: Koc: 1

**Bioaccumulation** Methanol: Bioconcentration factor (BCF) < 10

Does not bioaccumulate.

Ethanol:

Does not bioaccumulate.



#### **HYVAR® X-L HERBICIDE**

Version 1.0 / USA Revision Date: 06/18/2015 102000030321 Print Date: 06/24/2015

Mobility in soil Methanol: Highly mobile in soils

**Environmental precautions** Do not apply directly to water, to areas where surface water is present

or to intertidal areas below the mean high water mark.

Do not contaminate surface or ground water by cleaning equipment or

disposal of wastes, including equipment wash water. Do not apply when weather conditions favor runoff or drift.

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

Waste treatment methods

**Product** Do not contaminate water, food, or feed by disposal.

Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste

disposal facility.

Dispose of contents/container in accordance with local regulation.

**Contaminated packaging** Empty residue into application equipment.

Dispose of empty container in a sanitary landfill or by incineration, or, if

allowed by State/Provincial and local authorities, by burning.

If burned, stay out of smoke.

Follow advice on product label and/or leaflet.

**RCRA Information** Characterization and proper disposal of this material as a special or

hazardous waste is dependent upon Federal, State and local laws and

are the user's responsibility. RCRA classification may apply.

#### **SECTION 14: TRANSPORT INFORMATION**

49CFR

NA-Number 1993 Packaging group III

Proper shipping name COMBUSTIBLE LIQUID, N.O.S.

(ETHANOL, METHANOL)

RQ Reportable Quantity is reached with 15,576 lb of product.

**IMDG** 

UN number 1993
Class 3
Packaging group III
Marine pollutant NO

Proper shipping name FLAMMABLE LIQUID, N.O.S.

(ETHANOL, METHANOL SOLUTION)

IATA

UN number 1993
Class 3
Packaging group III

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12/14

#### **HYVAR® X-L HERBICIDE**

 Version 1.0 / USA
 Revision Date: 06/18/2015

 102000030321
 Print Date: 06/24/2015

Environm. Hazardous Mark NO

Proper shipping name FLAMMABLE LIQUID, N.O.S.

(ETHANOL, METHANOL SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

#### SECTION 15: REGULATORY INFORMATION

**EPA Registration No.** 432-1548

**US Federal Regulations** 

**TSCA list** 

 Ethanediol
 107-21-1

 Ethanol
 64-17-5

 Methanol
 67-56-1

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

 Bromacil
 314-40-9
 25,000lbs

 Ethanediol
 107-21-1
 1.0%

 Methanol
 67-56-1
 1.0%

**US States Regulatory Reporting** 

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product contains a chemical known to the State of California to cause birth defects or other

reproductive harm.

Methanol 67-56-1 Developmental toxin.

**US State Right-To-Know Ingredients** 

 Bromacil
 314-40-9
 CA, MN, NJ, RI

 Ethanediol
 107-21-1
 CA, IL, MN, NJ, RI

 Ethanol
 64-17-5
 CA, CT, MN

Methanol 67-56-1 CA, CT, IL, MN, NJ, RI

**Canadian Regulations** 

**Canadian Domestic Substance List** 

None.

Environmental CERCLA

Ethanediol 107-21-1

Methanol 67-56-1 5,000 lbs

**Clean Water Section 307 Priority Pollutants** 

None.

**Safe Drinking Water Act Maximum Contaminant Levels** 



#### **HYVAR® X-L HERBICIDE**

 Version 1.0 / USA
 Revision Date: 06/18/2015

 102000030321
 Print Date: 06/24/2015

Ethanediol 107-21-1 Methanol 67-56-1

#### **EPA/FIFRA Information:**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

**Hazard statements:** Harmful if swallowed or absorbed through skin.

Causes eye irritation.

Avoid contact with skin, eyes and clothing.

#### **SECTION 16: OTHER INFORMATION**

Abbreviations and acronyms

49CFR Code of Federal Regulations, Title 49
ACGIH US. ACGIH Threshold Limit Values
CAS-Nr. Chemical Abstracts Service number

EINECS European inventory of existing commercial substances

ELINCS European list of notified chemical substances

IARC US. IARC Monographs on Occupational Exposures to Chemical Agents

IATA International Air Transport Association
IMDG International Maritime Dangerous Goods

N.O.S. Not otherwise specified

NTP US. National Toxicology Program (NTP) Report on Carcinogens
OECD Organization for Economic Co-operation and Development

TDG Transportation of Dangerous Goods

TWA Time weighted average

UN United Nations

WHO World health organisation

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 2 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1 Flammability - 2 Physical Hazard - 0 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Safety Data Sheet.

**Revision Date: 06/18/2015** 

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are



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Version 1.0 / USA 102000030321

Revision Date: 06/18/2015 Print Date: 06/24/2015

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