

DATE: October 22, 1979

SUBJECT: EPA File No. 876-25, Banvel and Tank Mixes with Various other Herbicides.
Caswell Nos. 295, 315, 11, 434A, 188DD

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Conclusion:

These studies were reviewed and found to be Core Minimum or Guidelines.

In general, mixing BANVEL with either LASSO, DUAL 6E, 2,4-D, or SUTAN EC does not result in mixtures that are more acutely toxic by oral, dermal or inhalation routes. For example, the acute toxicity by these routes was always III or IV for the mixtures.

The eye irritation property of BANVEL was apparently diluted out for the mixtures with LASSO, DUAL 6E, or SUTAN EC because no corneal opacity developed with these combinations. BANVEL is CORROSIVE when instilled by itself (see Budd memo Sept. 9, 1976) and this property is still present when mixed with 2,4-D. The instructions on the label should say that the mixture should not get into the users eyes and advise the user to wear goggles when handling the mixture of 2,4-D and BANVEL.

The label for BANVEL (EPA File No. 876-25) submitted has a CAUTION signal word. This is incorrect and the signal word should be changed to DANGER (see Budd memo dated Sept. 9, 1976).

These data provide toxicological information relative to the acute toxicity for BANVEL and the other herbicides when prepared as tank mixes only. The possibility that such mixes react to form compounds that were mutagenic, tumor promoting or carcinogens or any other non acute toxicants could not be evaluated by these data.

Summary Tables of Studies Reviewed*

BANVEL 4S + LASSO 4EC

<u>Test</u>	<u>Results</u>	<u>TOX Cat.</u>	<u>Core Classification</u>
1. Acute Oral LD50-rats (single dose)	>5000 mg/kg (some hypoactivity)	IV	MINIMUM
2. Acute Dermal LD50-rabbits (single dose)	>20,000 mg/kg	IV	MINIMUM
3. Acute Inhalation LC50 -rabbits (single dose) rats	>22.2 mg/l1 (4 hours)	IV	MINIMUM
4. Primary Eye Irritation- -rabbits	No corneal Involvement	IV	GUIDELINES
5. Primary Dermal Irritation-rabbits	Not irritating	IV	GUIDELINES

The test material was identified as BANVEL4S + LASSO 4EC, (0.5 + 3.5) and was a white milky liquid.

All studies by International Research and Development Corporation, dated May 23, 1978 or April 24, 1978 (inhalation).

BANVEL 4S + DUAL 6E

<u>Test</u>	<u>Results</u>	<u>TOX Cat.</u>	<u>Core Classification</u>
1. Acute Oral LD50-rats (single dose)	>5000 mg/kg	IV	MINIMUM
2. Acute Dermal LD50-rabbits (single dose)	>20,000 mg/kg (1 rabbit died)	IV	MINIMUM
3. Acute Inhalation LC50-rats (single dose)	>22.2 mg/l1 (4 hours)	IV	MINIMUM
4. Primary Eye Irritation-rabbits	No corneal Involvement	IV	GUIDELINES
5. Primary Dermal Irritation -rabbits	Only slight irritation	IV	GUIDELINES

The test material was described as BANVEL 4S + DUAL 6E and was an off white, milky liquid.

All studies by International Research and Development Corporation and are dated June 6, 1978 or June 30, 1978 (inhalation).

BANVEL 4S + 2,4-D

<u>Test</u>	<u>Results</u>	<u>TOX Cat.</u>	<u>Core Classification</u>
1. Acute Oral LD50-rats (215, 467, 1,000, 2,150, 4,640)	1,847 mg/kg	III	GUIDELINES
2. Acute Dermal LD50-rabbits (2,500, 5,000, 10,000 and > 20,000 mg/kg applied)	11,892 mg/kg	III	GUIDELINES
3. Acute Inhalation LC50-rats (single dose)	>21.1 mg/li (4 hours) (some weight loss)	IV	MINIMUM
4. Primary eye-rabbits (0.1 ml applied)	CORROSIVE (irreversible opacity in all rabbits)	I	GUIDELINES
5. Primary skin Irritation (500 mg applied)	Draize = 1.5	III	GUIDELINES

The product tested was identified as "BANVEL 4S + 2,4-D amine + ester, 750 grams lbs. active ingredient per acre: 2.0 + 6.0 gal. of water/acre" and was an amber liquid.

All tests were conducted by International Research and Development Corporation and are dated August 22, 1978 or June 27, 1978 (inhalation).

BANVEL 4S + SUTAN 6.7 EC

<u>Test</u>	<u>Results</u>	<u>TOX Cat.</u>	<u>Core Classification</u>
1. Acute Oral LD50-rats (single dose)	>5000 mg/kg (mottled kidneys 6/10 rats)	IV	MINIMUM
2. Acute Dermal LD50-rabbits (single dose)	>20,000 mg/kg (no toxic signs)	IV	MINIMUM
3. Acute Inhalation LC50-rats (82% of particles respirable)	>22.3 mg/li/4 hours (3/10 rats red patchy lungs)	IV	MINIMUM
4. Eye Irritation-rabbits (0.1 ml test material)	No corneal involvement	IV	GUIDELINES
5. Dermal Irritation-rabbits	Not irritating	IV	GUIDELINES

The test material was identified as BANVEL 4S + SUTAN 6.7 EC and was a milky white liquid.

*For these studies, CORE MINIMUM was assigned for acute oral, dermal or inhalation when only 1 test level was used. Otherwise the studies would be CORE GUIDELINES.

W. Butler